EPA's Mission

The mission of the Environmental Protection Agency (EPA) is to protect human health and safeguard the environment. The Fiscal Year (FY) 2010 Budget request represents the highest level of funding for EPA in its 39 year history. EPA's Budget supports innovation, investment, and technologies to advance a green economy, and a green environment.

Annual Performance Plan and Congressional Justification

The EPA's FY 2010 Annual Performance Plan and Congressional Justification requests $10.5 billion in discretionary budget authority and 17,384.3 Full Time Equivalents (FTE) to accomplish EPA's efforts to build a greener economy, move into a clean energy future, and protect the human health and environment in communities across the nation. The FY 2010 Budget provides a substantial increase, reflecting greater opportunity for the Agency to address public health and environmental challenges that can no longer be postponed, in vital areas such as water infrastructure, protecting our freshwater resources, laying the foundation to address climate change and addressing gaps in research as well as chemical management. Below are funding highlights of the 2010 Budget.

Invests in Water Infrastructure

The FY 2010 Budget requests $3.9 billion for the Clean Water and Drinking Water State Revolving Funds (SRFs) to fund water infrastructure projects for states, tribes, and territories. This 157% increase will help states and communities meet the challenges of updating our nation's water infrastructure. The Clean Water and Drinking Water SRFs provide grants to States to capitalize their own revolving funds, making water infrastructure more efficient and supporting green jobs in the 21st century. Because repayments and interest are recycled back into the program, SRFs generate funding for loans even without Federal capitalization. EPA estimates that for every Federal dollar invested, approximately two dollars in financing is provided to municipalities.

This historic investment will support urgently needed projects to rebuild and enhance America's aging clean and drinking water facilities. Combined with $6 billion provided through the American Reinvestment and Recovery Act in FY 2009, a total of nearly $10 billion will be invested through Federal capitalization grants into the Clean Water and Drinking Water SRFs over the course of two years. This investment will encourage efficient water delivery and "green infrastructure" projects to further promote clean water. In addition, the Administration will pursue program reforms that will put resources for these program's ongoing needs on a firmer foundation. EPA will continue to work with state and local partners to develop a sustainability policy, including management and pricing for future infrastructure, encourage conservation, provide adequate long-term funding for future capital needs, and provide equitable consideration of small system customers.

Accelerates Great Lakes Restoration

The Great Lakes basin, which is home to 34 million people in the U.S. and Canada, holds 20 percent of the world's fresh surface water, has 10,000 miles of coastline, and contains a diverse array of biological communities. The FY 2010 Budget requests $475 million for programs and

projects that strategically target the most significant problems in the region, such as aquatic invasive species, nonpoint source pollution, toxics and contained sediment, and habitat and species loss. This Initiative represents the federal government's commitment to significantly advance Great Lakes protection and restoration. Consequently, the Initiative will use outcome-oriented performance goals and measures to target the most significant problems and track progress in addressing them. EPA and its Federal partners will coordinate state, Tribal, local, and industry actions to protect, maintain, and restore the chemical, biological, and physical integrity of the Great Lakes.

Initiates a Comprehensive Approach to Slow Global Warming

The FY 2010 Budget includes a $19 million increase for EPA to work on a Greenhouse Gas (GHG) emissions inventory and work with industry sectors to report high-quality GHG emission data. This increase will also be used to develop environmentally sound methodological approaches needed to implement a possible cap and trade program, including offsets, and to strengthen climate partnership programs. FY 2010 funding supports the Administration's effort to develop a comprehensive energy and climate change plan to support America's transition to a clean energy economy, and slow global warming.

Enhances Vital Research Efforts

The FY 2010 Budget requests an additional $17.5 million for research to help advance the deployment of green infrastructure for water treatment, make continued progress on the computational toxicology models, increase the annual assessments and updates of IRIS data and support further development of biofuels lifecycle and sustainability information. New research will assess, develop and compile scientifically rigorous tools to assist in incorporating green infrastructure into existing practices. IRIS and Comptox work will help improve the management of risks from exposure to chemicals in the environment, and the biofuels research will provide decision-makers with better information on the trade offs and opportunities associated with increased production.

Continues Superfund Cleanup

The FY 2010 Budget requests an overall annual appropriation of over $1.3 billion for Superfund. The Budget request for the Superfund Remedial program is approximately $605 million, sustaining the FY 2009 Enacted level. EPA will continue to devote more resources toward post-construction activities, as well as beginning construction at new sites and continuing to fund large and complex ongoing construction projects. In FY 2010, EPA estimates it will achieve 22 site construction completions for a cumulative total of 1,102 (69 percent) National Priorities List (NPL) sites. These construction completions will contribute to the increase in EPA's target from 30 sites to 65 sites.

Strengthens Enforcement

The FY 2010 Budget includes approximately $600 million for EPA's Enforcement and Compliance Assurance program, representing the highest enforcement budget ever, and a $32 million increase over the FY 2009 Enacted level. The Budget reflects this Administration's strong commitment to vigorous enforcement of our nation's environmental laws and ensures that

EPA will have the resources necessary to maintain a robust and effective criminal and civil enforcement program. Specifically, the request includes an increase of nearly 30 FTE to hire additional civil and criminal enforcement staff, enhance efforts to integrate environmental justice considerations in EPA's programs and policies as well as fulfill environmental requirements with respect to other federal agencies' projects funded by the American Recovery and Reinvestment Act.

Protects Our Nation's Water Supply

The FY 2010 Budget provides $24 million to fully fund five Water Security Initiative (WSI) pilot cooperative agreements and Water Alliance for Threat Reduction Activities. The WSI was launched in 2006 to demonstrate, test, and evaluate contamination warning systems at drinking water utilities. Adoption of effective water security guidance on contamination systems will be issued upon completion of these projects.

Moves EPA Forward

The FY 2010 Budget includes $3.9 billion for EPA's operating budget. The operating budget supports the heart of EPA research, regulation, and enforcement activities that are the foundation for science based decisions necessary to meet the 21st century challenges of climate change, public health protection, and environmental preservation. Additionally, $1.1 billion is requested in grants for States and Tribes to invest in environmental programs that support cleaner air, water, and land where Americans live, work, play, and learn.

The FY 2010 Budget proposes an increase to EPA's FTE ceiling by approximately 132 FTE bringing the total ceiling to 17,384 FTE. This workforce adjustment will allow EPA to achieve its revitalized stewardship responsibilities for the American people. EPA will use workforce planning strategies to attract, reward, and retain a highly skilled and innovative staff essential to fulfill its mission. The goal of this workforce effort is to ensure EPA has a performance driven, results-oriented staff with the right mix of technical expertise, professional experience, and leadership capability.

Organization of the Annual Performance Plan and Congressional Justification

The FY 2010 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 EPA's resource needs, the Budget contains annual performance goals and performance measures that EPA uses to achieve its results.

Annual Performance Plan and Congressional Justification

Chapters include:

Resource Summary Tables
- Appropriation Summary ($)
- Appropriation Summary (FTE)

Goal Overview (Goals 1-5)
- Goal, Appropriation Summary ($)
- Goal, Appropriation Summary (FTE)

Program Project by Appropriation (EPM, S&T, STAG, IG, B&F, SF, LUST & OIL)
- Resources for Appropriation
  - Resource Table by Appropriation, Program Area, Program Project
  - Program Project Fact Sheets (the following included within each factsheet)
- Resource Chart ($, FTE)
- Program Project Description
- FY 2010 Activities and Performance Plan
- Performance Information
- FY 2010 Change from FY 2009 President's Budget
- Statutory Authority

Program Performance and Assessment
- Performance
  - 4-year array of APGs, PMs and Baselines
  - 4-year array of APGs, PMs and Baselines for Enabling Support Programs
- Supplemental Performance Information
- OMB Program Assessment Follow-up Actions
- Verification and Validation

Appendix
- Coordination with other Federal Agencies by Goal/Objective – Environmental Programs
- Coordination with other Federal Agencies – Enabling Support Programs
- Major Management Challenges – Organized by Goal/Objective
- User Fees
- Working Capital Fund
- Acronyms for Statutory Authority
- STAG – Statutory Authority and Eligible Uses
- Program Projects by Appropriation
- Program Projects by Program Area (detailed)
- Discontinued Programs
- E-Government Summaries

ARRA Supplemental Performance Information
- Summary of Draft EPA Program Plans

ENVIRONMENTAL PROTECTION AGENCY
2010 Annual Performance Plan and Congressional Justification

Table of Contents - Resource Summary Tables

APPROPRIATION SUMMARY 3
Budget Authority 3
Full-time Equivalents (FTE) 4

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

APPROPRIATION SUMMARY

Budget Authority
(Dollars in Thousands)

	FY 2008 Actuals		FY 2009 Enacted		FY 2010 Pres Bud
Science & Technology	$763,442.3		$790,051.0		$842,349.0
Environmental Program & Management	$2,362,491.2		$2,392,079.0		$2,940,564.0
Inspector General	$41,896.5		$44,791.0		$44,791.0
Building and Facilities	$36,307.4		$35,001.0		$37,001.0
Oil Spill Response	$17,325.3		$17,687.0		$18,379.0
Superfund Program	$1,385,080.3		$1,248,632.0		$1,271,732.0
IG Transfer	$12,037.8		$9,975.0		$9,975.0
S&T Transfer	$28,470.7		$26,417.0		$26,834.0
Hazardous Substance Superfund	$1,425,588.8		$1,285,024.0		$1,308,541.0
Leaking Underground Storage Tanks	$108,093.9		$112,577.0		$113,101.0
State and Tribal Assistance Grants	$3,237,929.7		$2,976,464.0		$5,191,274.0
SUB-TOTAL, EPA	*$7,993,075.1*		*$7,653,674.0*		*$10,496,000.0*
Rescission of Prior Year Funds					
Rescission of Prior Year Funds	($5,000.0)		($10,000.0)		($10,000.0)
TOTAL, EPA	$7,993,075.1		$7,643,674.0		$10,486,000.0

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

APPROPRIATION SUMMARY
Full-time Equivalents (FTE)

	FY 2008 Actuals		FY 2009 Enacted		FY 2010 Pres Bud
Science & Technology	2,407.9		2,432.5		2,442.5
Science and Tech. - Reim	1.8		3.0		3.0
Environmental Program & Management	10,605.2		10,786.2		10,892.6
Envir. Program & Mgmt - Reim	34.4		0.0		0.0
Inspector General	224.6		271.4		296.0
Oil Spill Response	92.1		102.2		102.2
Oil Spill Response - Reim	9.3		0.0		0.0
Superfund Program	2,904.6		3,031.7		3,017.5
IG Transfer	62.5		60.4		65.8
S&T Transfer	99.3		110.0		110.0
Hazardous Substance Superfund	3,066.4		3,202.1		3,193.3
Superfund Reimbursables	97.8		75.5		75.5
Leaking Underground Storage Tanks	65.6		75.3		75.3
FEMA - Reim	1.5		0.0		0.0
WCF-REIMB	115.2		136.1		136.1
Rereg. & Exped. Proc. Rev Fund	136.9		167.8		167.8
Pesticide Registration Fund	57.7		0.0		0.0
TOTAL, EPA	16,916.4		17,252.1		17,384.3

ENVIRONMENTAL PROTECTION AGENCY
2010 Annual Performance Plan and Congressional Justification

Table of Contents - Goal and Objective Overview

GOAL, APPROPRIATION SUMMARY 7
Budget Authority 7
Authorized Full-time Equivalents (FTE) 9
Clean Air and Global Climate Change 11
Clean and Safe Water 16
Land Preservation and Restoration 19
Healthy Communities and Ecosystems 25
Compliance and Environmental Stewardship 36

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

GOAL, APPROPRIATION SUMMARY

Budget Authority
(Dollars in Thousands)

	FY 2008 Actuals		FY 2009 Enacted		FY 2010 Pres Bud
Clean Air and Global Climate Change	$984,806.8		$1,037,151.9		$1,069,772.9
Environmental Program & Management	$457,849.3		$453,274.0		$488,859.8
Science & Technology	$224,788.0		$234,932.7		$255,662.4
Building and Facilities	$8,124.2		$7,882.6		$8,343.2
State and Tribal Assistance Grants	$284,897.9		$330,454.0		$307,954.0
Inspector General	$5,990.8		$7,050.9		$4,815.4
Hazardous Substance Superfund	$3,156.5		$3,557.7		$4,138.0
Clean and Safe Water	$3,119,201.2		$2,879,615.5		$5,137,301.6
Environmental Program & Management	$476,274.1		$478,249.3		$480,611.6
Science & Technology	$152,683.6		$148,259.3		$157,653.4
Building and Facilities	$5,535.1		$5,185.8		$5,463.6
State and Tribal Assistance Grants	$2,463,043.0		$2,225,802.0		$4,466,612.0
Inspector General	$21,665.5		$22,119.1		$26,961.0
Land Preservation and Restoration	$1,852,645.6		$1,732,403.0		$1,761,418.6
Environmental Program & Management	$216,201.3		$214,034.7		$224,776.6
Science & Technology	$12,722.3		$15,477.9		$15,645.6
Building and Facilities	$4,257.0		$4,456.7		$4,607.8
State and Tribal Assistance Grants	$108,294.1		$111,846.0		$108,846.0
Leaking Underground Storage Tanks	$108,093.9		$112,577.0		$113,101.0
Oil Spill Response	$17,325.3		$17,687.0		$18,379.0
Inspector General	$2,742.8		$3,114.4		$2,089.0
Hazardous Substance Superfund	$1,383,008.8		$1,253,209.2		$1,273,973.7
Healthy Communities and Ecosystems	$1,296,975.2		$1,254,336.0		$1,738,429.6
Environmental Program & Management	$650,795.3		$666,029.9		$1,131,330.2
Science & Technology	$330,187.3		$349,835.1		$373,222.5
Building and Facilities	$13,211.1		$12,183.8		$12,926.2

	FY 2008 Actuals		FY 2009 Enacted		FY 2010 Pres Bud
State and Tribal Assistance Grants	$276,548.2		$209,859.0		$204,409.0
Inspector General	$7,594.7		$8,153.6		$7,877.8
Hazardous Substance Superfund	$18,638.5		$8,274.5		$8,663.8
Compliance and Environmental Stewardship	$739,446.2		$750,167.6		$789,077.2
Environmental Program & Management	$561,371.2		$580,491.0		$614,985.7
Science & Technology	$43,061.0		$41,545.9		$40,165.2
Building and Facilities	$5,179.9		$5,292.1		$5,660.1
State and Tribal Assistance Grants	$105,146.5		$98,503.0		$103,453.0
Inspector General	$3,902.6		$4,353.0		$3,047.7
Hazardous Substance Superfund	$20,785.0		$19,982.6		$21,765.5
Sub-Total	*$7,993,075.1*		*$7,653,674.0*		*$10,496,000.0*
Rescission of Prior Year Funds	*($5000.0.0)*		*($10,000.0)*		*($10,000.0)*
Total	*$7,988,075.1*		*$7,643,674.0*		*$10,486,000.0*

(Totals may not sum due to rounding)

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

GOAL, APPROPRIATION SUMMARY
Authorized Full-time Equivalents (FTE)

	FY 2008 Actuals		FY 2009 Enacted		FY 2010 Pres Bud
Clean Air and Global Climate Change	2,607.3		2,675.2		2,673.1
Environmental Program & Management	1,856.8		1,856.2		1,865.3
Science & Technology	672.1		724.6		724.6
Inspector General	32.1		42.7		31.8
Hazardous Substance Superfund	15.3		18.2		18.5
Envir. Program & Mgmt - Reim	3.1		0.0		0.0
Science and Tech. - Reim	1.4		3.0		3.0
FEMA - Reim	0.7		0.0		0.0
WCF-REIMB	25.8		30.5		30.0
Clean and Safe Water	2,815.1		2,878.7		2,892.7
Environmental Program & Management	2,182.1		2,239.1		2,209.7
Science & Technology	494.8		484.4		484.3
Inspector General	116.1		134.0		178.2
Envir. Program & Mgmt - Reim	3.6		0.0		0.0
WCF-REIMB	18.5		21.2		20.5
Land Preservation and Restoration	4,448.9		4,576.1		4,564.8
Environmental Program & Management	1,162.5		1,157.2		1,160.4
Science & Technology	49.3		59.2		59.2
Leaking Underground Storage Tanks	65.6		75.3		75.3
Oil Spill Response	92.1		102.2		102.2
Inspector General	14.7		18.9		13.8
Hazardous Substance Superfund	2,932.4		3,071.5		3,062.6
Envir. Program & Mgmt - Reim	11.8		0.0		0.0
Oil Spill Response - Reim	9.3		0.0		0.0
FEMA - Reim	0.8		0.0		0.0
Superfund Reimbursables	97.8		75.5		75.5
WCF-REIMB	12.6		16.3		15.8

	FY 2008 Actuals		FY 2009 Enacted		FY 2010 Pres Bud
Healthy Communities and Ecosystems	3,750.0		3,719.4		3,846.9
Environmental Program & Management	2,400.2		2,426.7		2,539.0
Science & Technology	1,035.2		1,001.9		1,011.9
Inspector General	40.7		49.4		52.1
Rereg. & Exped. Proc. Rev Fund	136.9		167.8		167.8
Hazardous Substance Superfund	28.0		27.0		27.3
Envir. Program & Mgmt - Reim	9.8		0.0		0.0
Science and Tech. - Reim	0.4		0.0		0.0
Pesticide Registration Fund	57.7		0.0		0.0
WCF-REIMB	41.1		46.7		48.7
Compliance and Environmental Stewardship	3,295.1		3,402.8		3,406.8
Environmental Program & Management	3,003.7		3,107.1		3,118.2
Science & Technology	156.5		162.5		162.5
Inspector General	20.9		26.4		20.1
Hazardous Substance Superfund	90.7		85.4		84.9
Envir. Program & Mgmt - Reim	6.2		0.0		0.0
WCF-REIMB	17.2		21.4		21.1
Total	16,916.4		17,252.1		17,384.3

(Totals may not sum due to rounding)

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 emissions by enhancing partnerships with businesses and other sectors.

STRATEGIC OBJECTIVES:

- Through 2014, 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 2014, working with partners, reduce human health risks by reducing exposure to indoor air contaminants through the promotion of voluntary actions by the public.
- Through 2014, continue efforts to restore the earth's stratospheric ozone layer and protect the public from the harmful effects of UV radiation.
- Through 2014, working with partners, minimize unnecessary releases of radiation and be prepared to minimize impacts to human health and the environment should unwanted releases occur.
- Through 2014, continue to reduce greenhouse gas emissions through voluntary climate protection programs that accelerate the adoption of cost-effective greenhouse gas reducing technologies and practices.
- By 2013, meet or exceed expectations of an independent expert review assessment of the utility of EPA research for protecting the air and reducing risks to human health.

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

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Clean Air and Global Climate Change	**$984,806.8**	**$1,037,151.9**	**$1,069,772.9**	**$32,621.0**
Healthier Outdoor Air	$646,703.1	$689,404.9	$703,302.3	$13,897.4
Healthier Indoor Air	$49,839.8	$44,530.4	$45,607.3	$1,076.9
Protect the Ozone Layer	$17,456.1	$18,224.9	$18,729.8	$504.9
Radiation	$40,234.9	$41,463.0	$43,582.6	$2,119.6
Reduce Greenhouse Gas Emissions	$137,117.3	$143,511.1	$155,750.7	$12,239.6
Enhance Science and Research	$93,455.6	$100,017.7	$102,800.1	$2,782.4
Total Authorized Workyears	2,607.3	2,675.2	2,673.1	-2.1

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

EPA implements the Clean Air and Global Climate Change goal through national, state, Tribal, local and Regional programs designed to provide healthier outdoor and indoor air for all Americans, reduce greenhouse gases, protect the stratospheric ozone layer, minimize the risks from radiation releases, 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 six common "criteria" pollutants: particulate matter, ozone, lead, sulfur dioxide, nitrogen dioxide, and carbon monoxide; 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

Cleaner cars, industries and consumer products have contributed to cleaner air for much of the U.S. Since 1990, nationwide air quality for the six criteria air pollutants, for which there are national ambient air quality standards, has improved significantly. Despite this progress, millions of Americans still live in areas that exceed one or more of the national standards. Ground-level ozone and particle pollution still present challenges in many areas of the country. In 2008, EPA promulgated more protective standards for ozone and lead. In FY 2010, the Agency will continue to work with state agencies to ensure active progress toward meeting these new standards. In FY 2010, EPA will promulgate nitrogen dioxide and sulfur dioxide primary standards and propose secondary standards for those criteria pollutants, and the Agency will consider further strengthening the standards for particle pollution.

EPA's NO_x SIP Call, Clean Air Interstate Rule, and Acid Rain Program have contributed to significant improvements in air quality and environmental health. The required reductions in sulfur dioxide and oxides of nitrogen have reduced ozone and particle pollution, improved visibility in our treasured national parks, and led to significant decreases in atmospheric deposition. The decreases in deposition have contributed to improved water quality in lakes and streams. Specifically, between the 1989-1991 and 2005-2007 time periods, wet sulfate deposition decreased by more than 30 percent and wet inorganic nitrogen decreased by approximately 15 percent in the eastern U.S. Scientists have observed measurable improvements and signs of recovery in a number of water bodies. Lake and stream water acidity is decreasing in three of the four acid-sensitive regions being monitored. A critical load analysis shows that emission reductions achieved by the Acid Rain Program have resulted in improved environmental conditions and increased ecosystem protection in the Adirondack Mountain region.

From 1990 to 2005, emissions of air toxics declined by 42 percent – the result of a number of regulations on industrial and transportation sources. EPA has issued 96 industrial air toxics standards, affecting 174 categories of industry. When fully implemented, these standards will reduce 1.7 million tons of air toxics every year. In FY 2010, EPA will continue to review and revise, as necessary, stationary air toxic standards to address any legal deficiencies within these rules, as well as address risk and technology developments. EPA will complete initial air toxics monitoring and analysis work at 50-100 schools nationwide. In FY 2010, EPA will analyze the initial results from this assessment and determine how best to proceed, which could involve additional monitoring.

EPA also will continue efforts, begun in 2009, to set air toxic standards for utilities, in light of the 2008 vacature of the Clean Air Mercury Rule. EPA also will continue to fulfill its obligation to set toxic standards for area sources. To date, EPA has promulgated rules for 51 of the 70 listed area source categories. EPA estimates that in 2030 the Mobile Source Air Toxics Rule would reduce total emissions of mobile source air toxics from vehicles and fuels by 330 thousand tons and VOC emissions (precursors to ozone and PM2.5) by over 1 million tons. In FY 2010, EPA will continue its ongoing program to review and revise, as necessary, new source performance standards (NSPS) for criteria pollutant emissions from stationary sources.

In FY 2010, EPA will promulgate more stringent nitrogen oxide and particulate matter emission standards for ocean-going vessels. The designation of U.S. coastal areas as Emission Control Areas (ECA) pursuant to MARPOL Annex VI fuel sulfur provisions also will be critical to achieving particulate matter reductions from ocean-going vessels. In FY 2010, EPA will establish standards for U.S. emissions control areas while working with the International Maritime Organization (IMO).

In FY 2010, EPA also will continue to implement comprehensive certification and compliance programs for existing vehicle, engine, and fuel regulations including the Tier II light-duty (LD) vehicle program, the Mobile Sources Air Toxics (MSAT) programs, the 2007-2010 Clean Heavy-Duty (HD) Diesel standards, and the Clean Non-Road Diesel Tier 4 standards (and earlier nonroad standards) in order to ensure the public health and environmental benefits of these clean air programs.

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. 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. The Agency's Clean Automotive Technology program develops cost-effective advanced clean and low greenhouse gas emitting engines and hybrid technologies. Through this program, EPA transfers innovations and know-how to automotive and truck companies wanting to commercialize significant elements of these practical low-GHG innovations. 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 2010, EPA will complete development of the Greenhouse Gas mandatory reporting rule and start the implementation activities necessary for the rule. The purpose of the rule is to collect accurate and comprehensive emissions data to inform future policy decisions. In addition, funding also is included to allow for work on the necessary steps to address greenhouse gases under the Clean Air Act and toward implementing a comprehensive climate bill.

Energy

EPA, under the Energy Independence and Security Act (EISA) of 2007, is responsible for implementing regulations to ensure that gasoline sold in the United States contains a minimum volume of renewable fuel. In FY 2010, EPA will continue work on establishing new Renewable Fuel Standards (RFS2) and will implement several other actions required by the Energy Policy Act (EPAct) of 2005 and EISA. The RFS2 program aims to increase the volume of renewable fuel required to be blended into gasoline from 9 billion gallons in 2008 to 36 billion gallons by 2022. In FY 2010, EPA will invest increased resources to upgrade its vehicle and fuel testing capability at the National Vehicle and Fuel Emissions Laboratory (NVFEL) to certify and assess the emissions and fuel economy performance of vehicles and engines using increased volumes of renewable fuel. EPA also will invest resources in other EISA implementation activities, including information technology to establish and manage a renewable fuels credit trading system. EPA estimates that the RFS program could cut petroleum use by up to 3.9 billion gallons and greenhouse gas emissions by up to 13.1 million metric tons annually by 2012—the equivalent of eliminating the greenhouse gas emissions of 2.3 million cars.

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. 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.

Stratospheric Ozone – Domestic and Montreal Protocol

In FY 2010, EPA's 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 (ODS) in the U.S. EPA will continue to lower health risks to the American public associated with exposure to UV radiation, including preventing an estimated 6.3 million cases of fatal skin cancer in the U.S. 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 six thousand activities in 148 countries, and when fully implemented, will prevent annual emissions of more than 431 thousand metric tons of ODS. Additional projects will be considered and approved in accordance with Multilateral Fund guidelines.

Radiation

In FY 2010, 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. Deployable monitors will be maintained in ready condition so that during emergencies or unusual events they can be quickly transported to monitor radiation levels at locations near and downwind from the initial point of release. The Agency will continue to upgrade laboratory response capacity and capability for radiological incidents. EPA also will continue to improve the readiness of the Radiological Emergency Response Team (RERT) to support Federal response and recovery operations.

Research

EPA, in accordance with the Administration's policy of scientific integrity, 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 sets limits on how much tropospheric ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen oxides, and lead, are allowed in the atmosphere. EPA also conducts research on hazardous air pollutants, also known as air toxics.

In FY 2010, 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 2010, 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 and air pollution mixtures in the atmosphere and the frequency and progression of pulmonary and cardiovascular diseases. In FY 2010, EPA requests $83.2 million for the Clean Air Research program to continue studying Americans' exposure to air pollution, and the links between sources of pollution and health outcomes.

Climate Change Research is discussed in the Goal 4 overview section.

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 2014, 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Clean and Safe Water	**$3,119,201.2**	**$2,879,615.5**	**$5,137,301.6**	**$2,257,686.1**
Protect Human Health	$1,329,226.1	$1,192,479.9	$1,827,503.2	$635,023.3
Protect Water Quality	$1,658,310.4	$1,546,946.2	$3,168,933.8	$1,621,987.6
Enhance Science and Research	$131,664.7	$140,189.5	$140,864.7	$675.2
Total Authorized Workyears	2,815.1	2,878.7	2,892.7	14.0

EPA achieves its Clean and Safe Water goal through programs designed to secure our national drinking water and to protect and improve surface waters, such as our rivers, lakes, and coastal waters. In FY 2010, EPA will collaborate with states and tribes to achieve clean and safe water objectives. The Agency also will support additional water initiatives, including carbon sequestration, water security, and sustainable infrastructure.

In FY 2010, EPA has increased its commitment toward upgrading drinking water and wastewater infrastructure with a substantial combined investment of $3.9 billion for the Clean Water and Drinking Water State Revolving Fund programs. This investment will both facilitate continued

progress toward drinking water and clean water goals, and result in increased job opportunities at the local level. In conjunction with this investment, EPA will develop a sustainability policy including management and pricing to encourage conservation and adequate long-term funding for future capital needs.

The National Water Program will continue to place emphasis on sustainable infrastructure, watershed stewardship, full cost pricing, watershed based approaches, water efficiencies, and best practices through Environmental Management Systems. EPA will specifically focus on innovative financing and leveraging for infrastructure sustainability, green infrastructure, banking for wetlands conservation, and trading among point sources and non-point sources for water quality upgrades. In FY 2010, 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 2010, EPA, the states and community water systems will build on past successes while working toward the FY 2010 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 2010, 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 $1.5 billion, nearly doubling prior year funding, for the Drinking Water State Revolving Fund.

Clean Water

In FY 2010, EPA will continue to collaborate with states and tribes to make progress toward EPA's clean water goals. EPA will implement core clean water programs and apply promising innovations on a watershed basis to accelerate water quality improvements. Building on 30 years of clean water successes, EPA, in conjunction with states and tribes, will implement the Clean Water Act by focusing on: TMDLs and NPDES permits built upon scientifically sound water quality standards, effective water monitoring, strong programs for controlling nonpoint sources of pollution, stringent discharge permit programs, and revolving fund capitalization grants to our partners to build, revive, and "green" our aging infrastructure. Green infrastructure research will be expanded to assess, develop and compile scientifically rigorous tools and models that will be used by OW, States, and municipalities.

The Agency's FY 2010 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) to enable EPA partners to improve wastewater treatment, non-point sources of pollution, and estuary revitalization. Realizing the long-term benefits derived from CWSRF, EPA is roughly tripling its CWSRF commitment to $2.4 billion in FY 2010.

Nutrients

Monitoring data shows that excessive nutrients (nitrogen and phosphorous) remain one of the top causes of water quality impairment in the U.S. This request includes a $5.0 million increase to accelerate the development and adoption of numeric nutrient standards by delegated states/tribes water quality programs, thereby boosting the efficiency and effectiveness of both point source techniques (NPDES permitting and TMDL development) and non-point source plans using watershed-based strategies.

Developing numeric water quality criteria and effectively translating them into TMDLs and NPDES permits is critical to preventing and remediating hypoxia and other problems caused by excessive nutrients. Current narrative nutrient standards are more difficult to interpret and implement. While states are charged with developing water quality criteria for achieving and maintaining designated beneficial uses of surface water, twenty-five states do not have numeric standards. The remaining twenty-five states have very limited numeric standards. Recent litigation and the resulting determination by EPA to craft numeric nutrient standards for the State of Florida underscores the importance of this FY 2010 request.

Homeland Security

EPA has a major role in supporting the protection of the nation's critical water infrastructure from terrorist threats. In FY 2010, 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 2010 budget request provides $31.5 million for water security efforts. This includes a request of $22.4 million for WSI and $1.3 million for 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 2010, 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.

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 2014, 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 2014, 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 2014, 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Land Preservation and Restoration	**$1,852,645.6**	**$1,732,403.0**	**$1,761,418.6**	**$29,015.6**
Preserve Land	$208,260.7	$241,275.0	$251,575.5	$10,300.5
Restore Land	$1,597,505.0	$1,437,803.4	$1,453,867.6	$16,064.2
Enhance Science and Research	$46,880.0	$53,324.5	$55,975.5	$2,651.0
Total Authorized Workyears	4,448.9	4,576.1	4,564.8	-11.3

Land is one of America's most valuable resources. 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 protect the land, human health and the environment, 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. EPA's Land Research program, in accordance with

the Agency's policy of scientific integrity1, provides the scientific foundation for actions to protect America's land.

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 2010, the Agency requests $1,705.4 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 2010, 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.[2]

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), known as Superfund, and the Resource Conservation and Recovery Act (RCRA) provide legal authority for EPA's work to restore and 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. 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 2010, 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 2010: 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 Emergency Response and Removal, RCRA Corrective

[1] For more information, see http://www.whitehouse.gov/the_press_office/Memorandum-for-the-Heads-of-Executive-Departments-and-Agencies-3-9-09/.

[2] Additional information on these programs can be found at: http://www.epa.gov/superfund/, http://www.epa.gov/oem/content/er_cleanup.htm, http://www.epa.gov/epaoswer/hazwaste/ca/, http://www.epa.gov/swerust1/, http://www.epa.gov/swerffrr/ and http://www.epa.gov/swerrims/landrevitalization/.

Action, and Underground Storage Tanks) and their partners are taking proactive steps to facilitate the cleanup and revitalization of contaminated properties. In FY 2010, the Agency requests $943.3 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 has adopted a series of acres-based, cross-program revitalization measures (CPRMs) to help document progress in cleaning up and promoting the productive and protective use of previously contaminated land. Building upon its successful land revitalization and reuse efforts, in FY 2008 EPA launched the RE-Powering America's Land initiative[3] and partnered with the Department of Energy to develop an interactive Google Earth Mapping application that shows the potential of thousands of environmentally impaired properties across the country to host solar, wind, or biomass energy facilities. These sites offer appropriate location, existing infrastructure, such as transmission lines and roads and rail, and are often zoned for this type of development. Finding suitable environmentally impaired lands to site renewable energy facilities is one significant way EPA and the States can help the Administration meet its goals of 10 percent renewable energy by 2010 and 25 percent by 2025.

- Recycling, Waste Minimization and Energy Recovery: EPA requests $10.6 million in FY 2010 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 2010, 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[4] 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[5] which implement the UST provisions of the EPAct. In FY 2010, EPA requests $49.4 million to provide assistance to states to help them meet their EPAct responsibilities, which include: (1) mandatory inspections every three years for all underground storage tanks; (2) operator training; (3) prohibition

[3] Additional information on this initiative can be found on http://www.epa.gov/renewableenergyland/.

[4] 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).

[5] For more information, refer to http://www.epa.gov/OUST/.

of delivery for non-complying facilities[6]; and (4) secondary containment or financial responsibility for tank manufacturers and installers.

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 2010, the Agency requests $51.5 million to improve its capability to respond effectively to incidents that may involve harmful chemical, biological, and radiological substances. The Agency will provide training to build the cadre of volunteers in the Response Support Corps (RSC) and members of an Incident Management Team (IMT), and will continue to participate in multi-agency training and exercises.

In FY 2010, EPA will continue to operate and expand the Environmental Response Laboratory Network (ERLN). Activities include the improvement of an electronic data deliverable (EDD) for use by all ERLN laboratories. The EDD enables laboratories to report analytical data electronically rather than manually via hard copy reports, which will support and potentially expedite decision-making. 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 continue to maintain and improve the Emergency Management Portal (EMP). EPA will continue to manage, collect, and validate new information for new and existing Weapons of Mass Destruction (WMD) agents as decontamination techniques are developed or as other information emerges from the scientific community.

Enforcement

EPA's Superfund enforcement program ensures prompt site cleanup and uses an "enforcement first" approach that maximizes the participation of liable and viable parties in performing and paying for cleanups in both remedial and removal programs. The Superfund enforcement program includes nationally significant or precedential civil, judicial and administrative site remediation cases, and provides legal and technical enforcement support on Superfund enforcement actions and emerging issues. The Superfund enforcement program also develops waste cleanup enforcement policies, and provides guidance and tools that clarify potential environmental cleanup liability, with specific attention to the reuse and revitalization of contaminated properties, including Brownfield properties.

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 2010, the Agency requests $183.6 million to support enforcement activities at Federal and non-Federal Superfund

[6] 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.

sites. EPA's "enforcement first" approach ensures that sites with financially 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, 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. In FY 2008, the Superfund Enforcement program secured private party commitments that exceeded $1.8 billion. Of this amount, PRPs have committed to future response work with an estimated value of approximately $1,575 million; PRPs have agreed to reimburse the Agency for more than $232 million in past costs; and PRPs have been billed by the EPA for approximately $75 million in oversight costs. These results can be directly linked to Goal 3. 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.

In FY 2010, 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 (or both). When appropriated dollars are used to clean up sites, the program will recover the associated cleanup costs from the PRPs. If future work remains at a site, recovered funds could be placed in a site-specific special account. Special accounts are sub-accounts within the Trust Fund which 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. The Agency also will continue its efforts to establish and use special accounts to facilitate cleanup, improve tracking and plan the use of special account funds. Through the end of FY 2008, more than 860 site-specific special accounts have been established and over $2.7 billion have been deposited into special accounts (including earned interest). Approximately $1.4 billion from special accounts has been used by EPA for site response 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 addition, EPA ensures that Federal entities are held accountable for the commitments made in Federal Facility Agreements. EPA also is evaluating the enforcement approach for formerly-utilized Defense sites and mine sites with Federal ownership.

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

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

Enhancing Science and Research to Restore and Preserve Land

EPA's Land Research program, in accordance with the Administration's policy of scientific integrity[9], provides the scientific foundation for the Agency's actions to protect America's land. The FY 2010 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 2010, EPA requests $55.9 million in support of EPA's efforts to enhance science and research for land preservation and restoration. Research activities in FY 2010 will focus on materials management, land reuse and revitalization issues, emerging research topics, 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 to 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 continue. Groundwater research will focus on the transport of contaminants in that medium and the subsequent intrusion of contaminant vapors into buildings, as well as the development of applications for permeable reactive barriers.

Oil spill remediation research will continue on physical, chemical, and biological risk management methods for petroleum and non-petroleum oil spills in 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 2010. 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 work with the states to optimize operations and monitoring of several landfill bioreactors and to determine their potential to provide alternative energy in the form of landfill gas while increasing the nation's landfill capacity.

In FY 2010, research will continue in the area of nanotechnology fate and transport as part of the Land Research program efforts to address emerging issues and strategic EPA issues. The goal of this research is to lead the Federal government in addressing key science questions on the persistence and movement of nanomaterials in the environment.

[9] For more information, see http://www.whitehouse.gov/the_press_office/Memorandum-for-the-Heads-of-Executive-Departments-and-Agencies-3-9-09/.

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 2014, 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 2014, 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Healthy Communities and Ecosystems	**$1,296,975.2**	**$1,254,336.0**	**$1,738,429.6**	**$484,093.6**
Chemical and Pesticide Risks	$394,785.0	$394,141.0	$420,544.6	$26,403.6
Communities	$305,252.4	$246,550.7	$245,987.1	($563.6)
Restore and Protect Critical Ecosystems	$224,338.0	$225,395.4	$659,037.0	$433,641.6
Enhance Science and Research	$372,599.7	$388,248.9	$412,860.9	$24,612.0
Total Authorized Workyears	3,750.0	3,719.4	3,846.9	127.5

In FY 2010, 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 has a responsibility to ensure that efforts to reduce these potential environmental risks are based on the best available scientific information.

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. Continuing Environmental Justice (EJ) efforts address the environmental and public health concerns of minority, low income, Tribal, and other disproportionately burdened communities and focus on improving environmental and public health protection in these communities. The Agency's efforts ensure that EPA actions do not unfairly burden these or other communities facing disproportionate environmental or public health challenges.

In managing risk and in ensuring that environmental rules protect all Americans, EPA directs its efforts toward identifying and mitigating exposures and other factors in our communities, homes, and workplaces that might negatively impact human health and environmental quality. To do so, EPA conducts research to understand both how specific groups of people may differ in their inherent biological susceptibility to adverse impacts of pollutants and whether certain groups may be disproportionately exposed based on where they live and how they behave. For example, in comparison with adults, children may be disproportionately exposed to certain contaminants because of their unique behavior patterns such as crawling on the floor and putting things into their mouths and because of their unique diets.

Children and older Americans may be inherently more sensitive to certain exposures. For children, sensitivity can be based on developmental stage, which can determine how they metabolize (absorb and detoxify) chemicals. People living in communities near certain industrial sources of pollution and/or roadways with high traffic volume may be disproportionately impacted. And Native Americans, or other Americans who rely on traditional sources of food, may consume more fish or other locally gathered foods and may be disproportionately exposed to contaminants in those foods.

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 $137.5 million in Pesticides Licensing programs in FY 2010. 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 2010, 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 their pesticide exposure 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 for urban watersheds, EPA will monitor the impact of our regulatory decisions for four pesticides of concern—diazinon, chlorpyrifos, malathion, and cabaryl—and consider whether any additional action is necessary.10 In FY 2010, the Agency will continue to work with USGS to develop sampling plans and refine goals, and the Agency 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 Eligibility Decisions implementation, registration review, risk reduction implementation, rulemaking and program management. Many of these actions involve reduced-risk pesticides which, once registered, will result in increased societal benefits. 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 2010, EPA will address threatening viruses and other emerging pathogens in environmental media. EPA will continue to 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 2010.

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

[10] 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/.

antimicrobial agents, and an understanding of biofilm environments are also key factors in evaluating the efficacy of decontamination tools. This work is taking place in the Homeland Security: Preparedness, Response and Recovery program. The FY 2010 request level for this area is $5.7 million.

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, and new chemical nanoscale materials prior to their entry into 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 246 chemicals to date.

In addressing chemicals that have entered the market before the inception of the New Chemical Review program, EPA is revising and strengthening its chemicals management and risk assessment programs investing $8 million in FY 2010 to accelerate assessing the safety of thousands of un-reviewed existing chemicals and deploying the full arsenal of TSCA regulatory authorities to quickly and effectively eliminate or significantly reduce identified risks. The enhanced toxics program draws on chemical hazard data developed through the High Production Volume (HPV) Chemicals program for approximately 2,100 HPV chemicals in conjunction with new exposure data obtained through the expanded TSCA Inventory Update Rule to produce Risk-Based Prioritizations (RBPs) that will guide subsequent risk management actions such as TSCA Section 6 use prohibitions and Significant New Use Rules. The program also will expand on EPA's work on HPV chemicals to assess approximately 3,900 moderate production volume chemicals (those chemicals produced or imported in excess of 25 thousand pounds per year), for which Hazard-Based Prioritizations (HBPs) will be developed.

In FY 2010 EPA expects to bring the pilot phase of the Voluntary Children's Chemical Evaluation program (VCCEP) to a conclusion by ensuring that data needs decisions for the 20 pilot chemicals are completed. Most were completed by the end of FY 2008. Future VCCEP chemicals will be identified through the RBPs and HBPs, and the VCCEP framework will become an integral component of the enhanced chemical risk management strategy. The Agency also 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 2010, 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. In FY 2010 the EPA is requesting an increase of $1 million for lead grants to accelerate the program's certification and training of contractors to provide additional support for the Department of Housing and Urban Development's work under the Lead Hazard Reduction Program provided in the American Recovery and Reinvestment Act of 2009. 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 2010, EPA will lead the implementation of a new Great Lakes Restoration Initiative. The Initiative identifies $475 million for programs and projects strategically chosen to target the most significant environmental problems in the Great Lakes ecosystem. EPA will collaborate closely with its federal partners in the Great Lakes Interagency Task Force to implement the Initiative. The Initiative will use outcome-oriented performance goals and measures to direct Great Lakes protection and restoration funding to the following areas:

- Toxic Substances and Areas of Concern
- Invasive Species
- Nearshore Health and Nonpoint Source
- Habitat and Wildlife Protection and Restoration
- Accountability, Monitoring, Evaluation, Communication, and Partnerships

Funds will be used to strategically implement both federal projects and prioritized/competitive grants. These funds will not be directed toward water infrastructure programs that are addressed under the Clean Water or Drinking Water State Revolving Fund program. Funding will be distributed directly by EPA or through the transfer of funds to other federal agencies for subsequent use and distribution.

In FY 2010, EPA will continue cooperation with Federal, state and Tribal governments and other stakeholders toward achieving the national goal of an overall increase in the acreage and condition of wetlands. FY 2010 funding supports and monitors all 28 National Estuary programs (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 2010 budget for NEPs and coastal watersheds is $26.6 million.

The $35.1 million Chesapeake Bay program FY 2010 budget request will enable EPA 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 thousand acres of submerged aquatic vegetation (SAV). The FY 2010 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 2010, EPA is investing $2.2 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.

The strategic targets for the South Florida program, in the 2009-2014 Strategic Plan, 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.

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 2010, the Agency is investing $2.4 million in the program to award approximately 14 new grants, provide technical resources and training to approximately 89 communities, and work with other federal agencies to coordinate support for communities.

Brownfields

EPA works collaboratively with state, Tribal, and local partners to promote the assessment, cleanup, and sustainable reuse of brownfields and other contaminated properties. EPA's enforcement program plays an essential role in supporting the Agency's land reuse priorities by clarifying potential environmental cleanup liability and providing greater certainty for parties seeking to reuse contaminated properties.

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 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. EPA assists in the coordination of its international and domestic environmental policies in order that U.S. international obligations are informed by domestic policy and expertise, that domestic programs fulfill international obligations, and that actions by other countries needed to reach domestic goals are catalyzed and promoted. 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, by all parties, 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 of all trade agreements by providing information regarding potential domestic and transboundary environmental effects resulting from trade liberalization. In addition, the Agency helps negotiate environmental cooperation mechanisms to advance the objectives of each trade agreement, and provide technical expertise to implement these cooperation mechanisms.

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 addressing the environmental and public health concerns of communities disproportionately burdened by environmental harms and risks by focusing on efforts to improve environmental and public health protection for these communities. These efforts will ensure that EPA actions do not adversely affect these or other communities facing disproportionate environmental or public health burdens.

Toward that end, the Agency continues to integrate Environmental Justice (EJ) in its programs, policies, and activities to improve environmental and public health protection for minority, low income, Tribal, and other disproportionately burdened communities. Environmental justice activities will continue to focus on eight national priorities including the following:

- Reducing asthma attacks,
- Reducing exposure to air toxics,
- 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.

In addition, the Agency will focus efforts to make a tangible difference in enabling access of communities to green jobs. The Agency supports proactive and meaningful approaches to encouraging informed public participation particularly among traditionally underrepresented groups in EPA's decision-making process. EPA provides financial and technical assistance to build the long-term capacity for communities to protect and improve the conditions in their own environments. Finally, the Agency will continue to provide leadership and assistance to other Federal agencies to support their efforts to integrate environmental justice and to leverage opportunities to foster economic, environmental, public health and safety and other benefits to communities disproportionately burdened.

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, human health risk assessment, and homeland security. EPA also conducts research through its Science to Achieve Results (STAR) grants program, which is competitive and peer-reviewed and is integrated with EPA's overall research efforts. The Agency proposes $10.9 million for the Fellowships research program in FY 2010 which will allow EPA to award approximately 131 new fellowships.

In FY 2010, the Human Health Research program is working to maintain its success with characterizing and reducing uncertainties in exposure and risk assessment as well as developing improved tools for predicting the safety of chemicals and products. The program is orienting this work toward understanding linkages along the source-exposure-effects-disease continuum and demonstrating reductions in human risk. This strategic shift is designed to include research that addresses limitations, gaps, and health-related challenges articulated in the health chapter of the EPA Report on the Environment (2007). Research includes development of sensitive and predictive methods to identify viable bio-indicators of exposure, susceptibility, and effect that could be applied to evaluate public health impacts at various geospatial and temporal scales. The Agency is requesting $82 million in FY 2010 for Human Health research.

In FY 2010, the Agency's Human Health Risk Assessment (HHRA) program will continue to 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). The program will deliver final ISAs for particulate matter and carbon monoxide and release external review draft ISAs for ozone and lead. 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 FY 2010, EPA requests $45 million for the Human Health Risk Assessment program, which includes an increase of $5.0 million and 10 work years to allow the Integrated Risk Information System (IRIS) program to increase the annual output of new IRIS assessments and updates of existing assessments.

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, to measure, monitor and map those services at multiple scales over time, to develop predictive models for quantifying the changes in ecosystem services, and to develop decision platforms for decision makers to protect and restore ecosystem services through informed decision making. The Agency is requesting a total of $76 million in FY 2010 to support Ecosystems research. The Ecosystem Services research program has transitioned to focus on advancing the science of ecosystems services and its application to decision making. For FY 2010, the program will focus on the following:

- Defining ecosystem services and their implications for human well-being and economic valuation;
- Measuring, monitoring and mapping ecosystem services at multiple scales over time;
- Developing predictive models for quantifying and forecasting the changes in ecosystem services under alternative management scenarios; and
- Developing a decision support framework that enables decision makers to integrate, visualize, and maximize diverse data, models and tools.

Over the last decade, the endocrine disruptor research program conducted the underlying research, developed and standardized protocols, prepared background materials for transfer to EPA's Office of Prevention, Pesticides, and Toxic Substances and the Organization for Economic Cooperation and Development, briefed Agency advisory committees, participated on international committees on harmonization of protocols, and participated in the 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 program (EDSP). In FY 2010, EPA is requesting $11.4 million for the continued development, evaluation, and application of innovative tools for endocrine disrupting chemicals. Research efforts will continue to achieve the following:

- Develop novel *in vitro* assays as improved alternatives that may further reduce the quantity of animals used;
- Finalize the Tier 2 amphibian developmental/reproductive assay and the fish 2 generation study for validation;
- Provide the underlying science that will help in the interpretation of studies submitted to the Agency under EDSP; and

- Determine the impact of EDCs on the environment and develop methods for preventing and mitigating exposures.

In FY 2010, the National Center for Computational Toxicology (NCCT) will play a critical role in coordinating and implementing these activities across the Agency. In addition, greater emphasis will be placed on using systems biology-based approaches to advance health-based assessments. In FY 2010, EPA is requesting $19.6 million to support application of mathematical and computer models to help assess chemical risk to human health and the environment. 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 prioritizing of chemicals under regulatory review; and
- Enhancing quantitative risk assessment.

In FY 2010, continued pesticides and toxics research will focus on characterizing toxicity and pharmacokinetic profiles of perfluoroalkyl chemicals, examining the potential for selected perfluorinated telomers to degrade to perfluoroctanoic acid or its precursors, and developing 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. In FY 2010, EPA requests $27.8 million for continued pesticides and toxics research to support the scientific foundation for addressing the risks of exposure to pesticides and toxic chemicals in humans and wildlife.

EPA will continue to investigate nanotechnology's environmental, health, and safety implications in FY 2010. This research will examine which processes govern the environmental fate of nanomaterials and what data are available and needed to enable nanomaterial risk assessment. Research will continue to improve our measurement, understanding, and control of mercury, with a research focus on the fate and transport of mercury and mercury compounds. The Agency also will 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 is requesting $17.8 million for the Nanomaterials Research program in FY 2010 to expand the availability of information to ensure the safe development, use, recycling and disposal of products that contain nanoscale materials.

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 adaptation and 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 changing climate conditions. In FY 2010, EPA requests $20.9 million for the Global Change Research program to enhance understanding of the effects of global change on the environment.

In FY 2010, the Agency will continue to enhance the nation's preparedness, response and recovery capabilities for homeland security incidents through research, development, and technical support activities in the areas of decontamination, water infrastructure protection, and safe buildings. The FY 2010 request level for this area is $35.6 million.

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:

- Address environmental problems, promote compliance and deter violations, by achieving goals for national priorities and programs including those with potential environmental justice concerns and those in Indian country.
- 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, and sustainable systems. The products of this research will provide critical and key evidence in informing Agency policies and decisions and solving complex multimedia problems for the Agency and its partners and stakeholders.

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

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Compliance and Environmental Stewardship	**$739,446.2**	**$750,167.6**	**$789,077.2**	**$38,909.6**
Achieve Environmental Protection through Improved Compliance	$496,562.3	$512,260.5	$539,951.0	$27,690.5
Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices	$112,770.5	$110,361.6	$116,834.5	$6,472.9
Improve Human Health and the Environment in Indian Country	$76,996.6	$75,824.5	$81,551.1	$5,726.6
Enhance Societies Capacity for	$53,116.9	$51,720.9	$50,740.6	($980.3)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Sustainability through Science and Research				
Total Authorized Workyears	3,295.1	3,402.8	3,406.8	4.0

(Totals may not sum due to rounding)

Protecting the public and the environment from risks posed by violations of environmental regulations is central to the Environmental Protection Agency's mission. Many of America's historic environmental improvements are attributable to a strong set of environmental laws and an assurance of compliance with those laws. EPA's strong and aggressive enforcement program has been the centerpiece of efforts to ensure compliance, and has achieved significant improvements in the protection of human health and the environment. To help the Agency meet its mission, EPA will employ a mixture of effective monitoring, enforcement and compliance 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

To be effective, EPA requires a strong enforcement and compliance program, one 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. In order to meet the Agency's goals, the program 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 efforts, and innovative problem-solving approaches address significant environmental issues and achieve environmentally beneficial outcomes. The total proposed FY 2010 budget to support compliance and environmental stewardship is $789.1 million.

EPA's enforcement and compliance program uses compliance assistance to educate the regulated community and promote compliance with regulatory requirements to reduce adverse public health and environmental problems. To achieve compliance, the regulated community must first understand its obligations and how to comply with regulatory obligations. The Compliance Assistance program is especially important for small businesses and other entities that might not have substantial expertise in the area of environmental compliance. In FY 2010, the Compliance Assistance and Centers program's proposed budget is $26.1 million.

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, and to determine whether conditions presenting imminent and substantial endangerment exist. FY 2010 Compliance Monitoring activities will be both environmental media- and sector-based. The traditional media-based inspections complement those performed by states and tribes, and are a key part of our strategy for meeting the long-term and annual goals established for the air, water, pesticides, toxic substances, and hazardous waste. To ensure that wastes are properly handled in accordance with international agreements and Resource Conservation and Recovery Act regulations, the Agency reviews and responds to 100 percent of the notices for trans-boundary movement of hazardous waste. In FY 2010, the Compliance Monitoring program's proposed budget is $101.1 million.

Maximum compliance requires the active efforts of the regulated community. EPA provides a series of compliance incentives to complement its enforcement of environmental violations. 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. 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 2010, 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. In FY 2010, the Compliance Incentives program's proposed budget is $10.7 million.

The Enforcement program addresses violations to ensure that violators come into compliance with Federal laws and regulations and reduce pollution. In FY 2010, the program will achieve these environmental goals through consistent, fair, and focused enforcement of all environmental statutes. 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 FY 2010, we will continue to build upon our achievements. Our enforcement cases have resulted in commitments to reduce, treat, or eliminate over 8.6 billion pounds of pollutants from 2002 to 2008. Also in FY 2010, EPA 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.

A strong 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 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 2010, the Agency will aggressively implement its core Civil Enforcement program, as well as the National Compliance and Enforcement Priorities established for calendar years 2008-2010. The nation's top priorities for enforcement include 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 Financial Responsibility requirements for the RCRA, Safe Drinking Water Act, and Toxic Substances Control Act programs, and ensuring compliance in Indian Country. 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. In FY 2010, the Civil Enforcement program's proposed budget is $145.2 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 2010, the criminal enforcement program will continue to expand its identification and investigation of cases with significant environmental, human health, and deterrence impact while balancing its overall case load of "core" cases across all pollution statutes (e.g., traditional cases involving wastewater; hazardous waste; the Federal Insecticide, Fungicide, and Rodenticide Act; the Toxic Substances Control Act, etc.). The program will increase the number of agents to complete its three-year hiring strategy of raising its special agent workforce to 200 criminal investigators. With these resources, the program will expand its capacity in supporting efforts to address complex environmental cases. In FY 2010, the Criminal Enforcement program's proposed budget is $57.7 million.

NEPA Federal Review

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), making the comments available to the public, and allowing public input. 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. A focal point in the near term will be implementing the Agency's NEPA responsibilities with respect to projects funded under the American Recovery and Reinvestment Act (ARRA). In FY 2010, additional personnel resources will enable EPA to meet these increased environmental review responsibilities, which will help with the expeditious approval and implementation of Federal economic stimulus projects. EPA will continue to work with other Federal agencies to streamline and to improve their NEPA processes. Work also will focus on a number of key areas such as review and comment on 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 2010, the NEPA program's proposed budget is $18.3 million.

Improving Environmental Performance through Innovation and Pollution Prevention and Stewardship

In FY 2010, with a budget of approximately $23.8 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.

- **Partnering with Businesses and Consumers:** In FY 2010, through the Pollution Prevention (P2) program, EPA will promote technology transfer and technical assistance and to spur development of greener chemicals, processes and products through eight programs: Green Chemistry, Design for the Environment, Green Suppliers Network, Regional Grants, Pollution Prevention Resource Exchange, Partnership for Sustainable Healthcare, Green Engineering, and Environmentally Preferable Purchasing. Also in FY 2010, EPA will continue to encourage, empower, and assist government and business to adopt source reduction practices and promote strong collaboration among Regions to promote geographically specific approaches to address unique local problems. P2 grants to states and tribes enable them to provide technical assistance, education, and outreach to assist businesses.

  In FY 2010, through the Environmentally Preferable Purchasing Program (EPP), the Agency also will implement the Federal Electronics Challenge and 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, and monitors based on environmental attributes. In addition, EPA's innovative Green Suppliers Network Program works with large manufacturers to engage their small and medium-sized suppliers in low-cost technical reviews that focus on process improvements and waste reduction. Finally, through the Green Chemistry and Design for the Environment Program (DfE), EPA works to promote and recognize greener chemicals, synthetic pathways, and formulations. DfE has incorporated green formulations into over 1,000 recognized products to date.

- **Promoting Innovation and Stewardship:** In FY 2010, 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 FY 2010, 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 rigorous evaluations. Specific consideration will be given to evaluations that support the Government Performance and Results Act, provide evidence-based assessments of

performance and outcomes for a wide range of current EPA programs, and allow EPA to improve and invest in promising environmental program innovations.

The Sector Strategies program will engage industry, non governmental organizations, state, and Federal stakeholders in policy dialogue and strategic planning, including a dialogue with states on data templates and climate analysis. In addition, EPA plans to initiate discussions with states on the design and implementation of sector-specific strategies and performance improvement projects that will address GHG reductions (sectors represent 29 percent of total GHG emissions), toxic air emissions (34 percent of national releases), hazardous waste (80 percent of hazardous waste releases), and water impact issues.

In FY 2010, the Smart Growth program 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.

Improve Human Health and the Environment in Indian Country

Since adopting the EPA Indian Policy in 1984, EPA has worked with Federally recognized tribes on a government-to-government basis, in recognition of the Federal government's trust responsibility to Federally recognized tribes. 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 2010, EPA will provide $62.9 million in GAP grants to help 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.

Research

The Agency proposes $24.1 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. EPA's Science and Technology for Sustainability (STS) research program, in accordance with the Agency's policy of scientific integrity,[11] provides the scientific foundation for the Agency's actions for the integrated management of air, water, and land resources, as well as changes in traditional methods of creating and distributing goods and services. 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.

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.

The FY 2010 EPA budget request includes a $5.0 million increase for a biofuels research initiative to help decision–makers better understand the risk tradeoffs associated with biofuels production and use. The work will inform the life-cycle analysis and mandatory reporting requirements contained in the Energy Independence and Security Act.

EPA's STS research program will continue efforts 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, including the implementation and tracking of sustainability metrics across the biofuels system. 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.

[11] For more information, see http://www.whitehouse.gov/the_press_office/Memorandum-for-the-Heads-of-Executive-Departments-and-Agencies-3-9-09/.

ENVIRONMENTAL PROTECTION AGENCY
2010 Annual Performance Plan and Congressional Justification

Table of Contents - Science and Technology

Resource Summary Table **45**
Program Projects in S&T **45**
Program Area: Air Toxics And Quality **49**
- **Clean Air Allowance Trading Programs** 50
- **Federal Support for Air Quality Management** 53
- **Federal Support for Air Toxics Program** 56
- **Federal Vehicle and Fuels Standards and Certification** 58
- **Radiation: Protection** 63
- **Radiation: Response Preparedness** 65

Program Area: Climate Protection Program **67**
- **Climate Protection Program** 68

Program Area: Enforcement **71**
- **Forensics Support** 72

Program Area: Homeland Security **74**
- **Homeland Security: Critical Infrastructure Protection** 75
- **Homeland Security: Preparedness, Response, and Recovery** 79
- **Homeland Security: Protection of EPA Personnel and Infrastructure** 85

Program Area: Indoor Air **86**
- **Indoor Air: Radon Program** 87
- **Reduce Risks from Indoor Air** 89

Program Area: IT / Data Management / Security **91**
- **IT / Data Management** 92

Program Area: Operations and Administration **94**
- **Facilities Infrastructure and Operations** 95

Program Area: Pesticides Licensing **97**
- **Pesticides: Protect Human Health from Pesticide Risk** 98
- **Pesticides: Protect the Environment from Pesticide Risk** 100
- **Pesticides: Realize the Value of Pesticide Availability** 103

Program Area: Research: Clean Air **106**
- **Research: Clean Air** 107
- **Research: Global Change** 112

Program Area: Research: Clean Water **117**
- **Research: Drinking Water** 118
- **Research: Water Quality** 124

Program Area: Research: Human Health And Ecosystems **130**
- **Human Health Risk Assessment** 131
- **Research: Computational Toxicology** 135
- **Research: Endocrine Disruptor** 139
- **Research: Fellowships** 143
- **Research: Human Health and Ecosystems** 147

Program Area: Research: Land Protection **159**

Research: Land Protection and Restoration 160
Program Area: Research: Sustainability **164**
Research: Sustainability 165
Program Area: Toxic Research and Prevention **170**
Research: Pesticides and Toxics 171
Program Area: Water: Human Health Protection **176**
Drinking Water Programs 177

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

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

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology				
Budget Authority	$763,442.3	$790,051.0	$842,349.0	$52,298.0
Total Workyears	2,407.9	2,432.5	2,442.5	10.0

Bill Language: Science and Technology

For science and technology, including research and development activities, which shall include research and development activities under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended; necessary expenses for personnel and related costs and travel expenses; procurement of laboratory equipment and supplies; and other operating expenses in support of research and development, [$790,051,000] $842,349,000, to remain available until September 30, [2010] 2011.

Program Projects in S&T
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Air Toxics and Quality				
Clean Air Allowance Trading Programs	$9,253.9	$9,152.0	$9,979.0	$827.0
Federal Support for Air Quality Management	$12,676.0	$11,133.0	$11,542.0	$409.0
Federal Support for Air Toxics Program	$2,907.9	$2,279.0	$2,339.0	$60.0
Federal Vehicle and Fuels Standards and Certification	$70,463.2	$76,445.0	$91,990.0	$15,545.0
Radiation: Protection	$2,069.1	$2,156.0	$2,242.0	$86.0
Radiation: Response Preparedness	$3,780.3	$3,967.0	$4,164.0	$197.0
Subtotal, Air Toxics and Quality	$101,150.4	$105,132.0	$122,256.0	$17,124.0
Climate Protection Program				
Climate Protection Program	$17,156.3	$16,828.0	$18,975.0	$2,147.0
Enforcement				
Forensics Support	$14,042.7	$15,087.0	$15,946.0	$859.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
Water Sentinel	$26,547.5	$14,982.0	$23,726.0	$8,744.0
Homeland Security: Critical Infrastructure Protection (other activities)	$6,109.2	$4,478.0	$4,603.0	$125.0
Subtotal, Homeland Security: Critical Infrastructure Protection	$32,656.7	$19,460.0	$28,329.0	$8,869.0
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	$19,964.2	$26,407.0	$25,430.0	($977.0)
Laboratory Preparedness and Response	$507.9	$494.0	$500.0	$6.0
Safe Building	$2,794.4	$1,976.0	$2,000.0	$24.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$17,540.8	$14,794.0	$14,479.0	($315.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$40,807.3	$43,671.0	$42,409.0	($1,262.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	$1,428.1	$587.0	$594.0	$7.0
Subtotal, Homeland Security	$74,892.1	$63,718.0	$71,332.0	$7,614.0
Indoor Air				
Indoor Air: Radon Program	$437.8	$403.0	$422.0	$19.0
Reduce Risks from Indoor Air	$702.9	$717.0	$735.0	$18.0
Subtotal, Indoor Air	$1,140.7	$1,120.0	$1,157.0	$37.0
IT / Data Management / Security				
IT / Data Management	$3,762.6	$3,969.0	$4,073.0	$104.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$35,398.9	$34,521.0	$33,947.0	($574.0)
Utilities	$17,894.3	$18,547.0	$19,177.0	$630.0
Security	$9,609.6	$11,989.0	$10,260.0	($1,729.0)
Facilities Infrastructure and Operations (other activities)	$6,336.4	$8,778.0	$9,498.0	$720.0
Subtotal, Facilities Infrastructure and Operations	$69,239.2	$73,835.0	$72,882.0	($953.0)
Subtotal, Operations and Administration	$69,239.2	$73,835.0	$72,882.0	($953.0)
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide	$3,346.9	$3,215.0	$3,663.0	$448.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Risk				
Pesticides: Protect the Environment from Pesticide Risk	$1,998.2	$2,011.0	$2,292.0	$281.0
Pesticides: Realize the Value of Pesticide Availability	$442.4	$445.0	$508.0	$63.0
Pesticides: Registration of New Pesticides	$222.6	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$169.1	$0.0	$0.0	$0.0
Subtotal, Pesticides Licensing	$6,179.2	$5,671.0	$6,463.0	$792.0
Research: Clean Air				
Research: Air Toxics	$1,192.3	$0.0	$0.0	$0.0
Research: Clean Air	$57,575.5	$80,541.0	$83,164.0	$2,623.0
Research: Global Change	$17,423.9	$17,886.0	$20,909.0	$3,023.0
Research: NAAQS	$17,428.3	$0.0	$0.0	$0.0
Subtotal, Research: Clean Air	$93,620.0	$98,427.0	$104,073.0	$5,646.0
Research: Clean Water				
Research: Drinking Water	$48,228.2	$46,873.0	$47,909.0	$1,036.0
Research: Water Quality	$53,343.0	$59,291.0	$62,454.0	$3,163.0
Subtotal, Research: Clean Water	$101,571.2	$106,164.0	$110,363.0	$4,199.0
Research / Congressional Priorities				
Congressionally Mandated Projects	$1,034.0	$5,450.0	$0.0	($5,450.0)
Research: Human Health and Ecosystems				
Human Health Risk Assessment	$34,569.9	$39,350.0	$45,133.0	$5,783.0
Research: Computational Toxicology	$13,987.1	$15,156.0	$19,602.0	$4,446.0
Research: Endocrine Disruptor	$11,158.9	$11,486.0	$11,442.0	($44.0)
Research: Fellowships	$9,721.8	$9,651.0	$10,894.0	$1,243.0
Research: Human Health and Ecosystems				
Human Health	$45,199.1	$77,942.0	$82,071.0	$4,129.0
Ecosystems	$57,965.6	$75,818.0	$76,239.0	$421.0
Research: Human Health and Ecosystems (other activities)	$43,706.5	$0.0	$0.0	$0.0
Subtotal, Research: Human Health and Ecosystems	$146,871.2	$153,760.0	$158,310.0	$4,550.0
Subtotal, Research: Human Health and Ecosystems	$216,308.9	$229,403.0	$245,381.0	$15,978.0
Research: Land Protection				

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Research: Land Protection and Restoration	$11,212.5	$13,586.0	$13,782.0	$196.0
Research: Sustainability				
Research: Economics and Decision Science(EDS)	$1,877.3	$0.0	$0.0	$0.0
Research: Sustainability	$22,346.0	$21,157.0	$24,107.0	$2,950.0
Subtotal, Research: Sustainability	$24,223.3	$21,157.0	$24,107.0	$2,950.0
Toxic Research and Prevention				
Research: Pesticides and Toxics	$24,616.7	$26,949.0	$27,839.0	$890.0
Water: Human Health Protection				
Drinking Water Programs	$3,292.5	$3,555.0	$3,720.0	$165.0
Subtotal, Drinking Water Programs	$3,292.5	$3,555.0	$3,720.0	$165.0
TOTAL, EPA	$763,442.3	$790,051.0	$842,349.0	$52,298.0

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$19,774.8	$19,993.0	$20,548.0	$555.0
Science & Technology	***$9,253.9***	***$9,152.0***	***$9,979.0***	***$827.0***
Total Budget Authority / Obligations	$29,028.7	$29,145.0	$30,527.0	$1,382.0
Total Workyears	88.9	88.6	88.6	0.0

Program/Project Description:

The Clean Air Interstate Rule (CAIR), promulgated in May 2005, must be revised, but may remain in operation in the interim, according to the U.S. Court of Appeals for the District of Columbia Circuit Court's decision in December 2008 to "allow CAIR to remain in effect until it is replaced by a rule consistent with [the Court's July 11, 2008] opinion" so as to "at least temporarily preserve the environmental values covered by CAIR."[1] CAIR uses a multi-pollutant control approach to provide states with a solution to the problem of transported ozone and fine particulate matter ($PM_{2.5}$) -- pollution that drifts into one state from sources in downwind states. Using a market-based approach, CAIR is projected to achieve significant cuts in sulfur dioxide (SO_2) and nitrogen oxide (NO_x) emissions.

CAIR is a component of EPA's plan to help over 450 counties in the eastern U.S. meet and maintain health-based protective air quality standards for ozone and $PM_{2.5}$. All the affected states are achieving the mandated reductions primarily by controlling power plant emissions through an EPA-administered interstate cap-and-trade program. Under CAIR, Phase [1], annual SO_2 and NO_x emissions are capped and there is an additional seasonal NO_x cap for states that contribute significantly to transported ozone pollution. The CAIR annual NO_x trading program began on schedule on January 1, 2009. The CAIR ozone-season NOx trading program will start on May 1, 2009. For additional information on CAIR, please visit http://www.epa.gov/oar/interstateairquality/.

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

1 U.S. Court of Appeals for the D.C. Circuit, No. 05-1244, page 3 (decided December 23, 2008).

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.

Surface water chemistry is a direct indicator of the environmental effects of acid deposition and enables assessment of how water bodies and aquatic ecosystems are responding to reductions in sulfur and nitrogen emissions. Two EPA-administered programs, the Temporally Integrated Monitoring of Ecosystems (TIME) program and the Long-Term Monitoring (LTM) program, were specifically designed to assess whether the 1990 Clean Air Act Amendments have been effective in reducing the acidity of surface waters in sensitive areas. Both programs are operated cooperatively with numerous partners in state agencies, academic institutions, and other Federal agencies.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will:

- Develop and propose the CAIR replacement rule: Conduct legal, technical, and economic analyses to support the new CAIR proposal; continue assessing regulatory impacts on the U.S. economy, environment, small businesses, and local communities. Review and evaluate public comment.

- Continue implementation and operation of the CAIR annual and seasonal programs: This will be consistent with the decision made by the U.S. Court of Appeals for the District of Columbia Circuit in December 2008. The CAIR annual SO_2 trading program is expected to commence January 1, 2010, as intended.

- Continue to assist states with CAIR implementation: Provide technical assistance to states in implementing state plans and rules for CAIR annual and seasonal programs. 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 control program.

- Continue operating infrastructure for CAIR: Effective and efficient operation of CAIR depends critically upon further development of the e-GOV infrastructure supporting the Acid Rain electronic allowance trading and emissions reporting systems.

- 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 will continue on performance specifications and investigating monitoring alternatives and methods to improve the efficiency of monitor certification and emissions data reporting.

- Assist states with 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).

In FY 2010, 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 2010, the program will continue to manage the Clean Air Status and Trends Network (CASTNET), a deposition monitoring network. The FY 2010 request level for CASTNET is $3.95M. For additional information on CASTNET, please visit http://www.epa.gov/CASTNET/. In addition, the program will begin managing the TIME and LTM programs for monitoring surface water chemistry and aquatic ecosystem response in sensitive areas of the U.S. In FY 2010, the responsibility for managing the TIME and LTM programs will be transferred from the Research and Development program to the Air and Radiation program. The FY 2010 request level for TIME/LTM is $0.72M.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Tons of sulfur dioxide emissions from electric power generation sources	Avail. 2009	8,000,000	8,000,000	8,450,000	Tons Reduced

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 in the air. Emissions of SO_2 can be chemically transformed into sulfates that are very tiny particles which, when inhaled, can cause serious respiratory problems and may lead to premature mortality. Sulfates can be carried, by winds, hundreds of miles from the emitting source. These same small particles also are a main pollutant that impairs visibility across large areas of the country, particularly damaging in 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$720.0) This increase supports the additional responsibilities the Air and Radiation program will be undertaking due to having the financial responsibility for maintaining the TIME-LTM network beginning in FY 2010. This activity was previously funded through the Research: Human Health and Ecosystems program. The focus of the research in the TIME/LTM programs was on the design of the monitoring program, development of indicators to measure changes, and reporting on those changes as a means of verifying the intended results. The defined goal for both of these research programs has been completed. In FY 2010, the Air and Radiation program will assume monitoring responsibility for the programs.

- (+$107.0) This increase provides support for implementation of monitoring networks.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$94,556.0	$96,480.0	$100,510.0	$4,030.0
Science & Technology	***$12,676.0***	***$11,133.0***	***$11,542.0***	***$409.0***
Total Budget Authority / Obligations	$107,232.0	$107,613.0	$112,052.0	$4,439.0
Total Workyears	691.5	709.7	714.7	5.0

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 2010 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 2010, EPA will continue to ensure national consistency in how conformity determinations are conducted across the United States. 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 2008, basic and/or enhanced vehicle Inspection/Maintenance testing was being performed in over 30 states with technical and programmatic guidance from EPA. In FY 2010, EPA will continue to assist states in enhancing operating programs 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/.

EPA is working to implement improvements to the National Ambient Air Quality Standards (NAAQS) Federal program, 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 will be improved by working to update current grant allocation processes to ensure resources are properly targeted and developing program efficiency measures.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	Avail. 2009	4	5	6	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline.	Avail. 2009	8	10	11	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Cumulative percent reduction in the number of days to process State Implementation Plan revisions, weighted by complexity.	Avail. Spring 2009	-1.2	-2.4	-2.9	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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$358.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$51.0) This increase supports additional analytical support needed to update air modeling capabilities to assist states with the development of clean air plans.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$25,208.5	$22,836.0	$24,960.0	$2,124.0
Science & Technology	***$2,907.9***	***$2,279.0***	***$2,339.0***	***$60.0***
Total Budget Authority / Obligations	$28,116.4	$25,115.0	$27,299.0	$2,184.0
Total Workyears	135.9	141.8	146.8	5.0

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 from toxics in the air 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.[2]

FY 2010 Activities and Performance Plan:

In FY 2010, 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.

2 More information available at: http://www.epa.gov/ttn/atw/rrisk/residriskpg.html

EPA will work with partners to develop improved emission factors and inventories, including a better automated, higher-quality 2008 National Emissions Inventory (NEI) with an expected completion date of December 2010. 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 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	Data Avail 2011	35	36	36	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 baseline.	Avail. 2011	59	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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$39.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$21.0) Funding is requested for increased analytical support to help states address air toxics issues.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$70,463.2***	***$76,445.0***	***$91,990.0***	***$15,545.0***
Total Budget Authority / Obligations	$70,463.2	$76,445.0	$91,990.0	$15,545.0
Total Workyears	288.1	306.2	306.2	0.0

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, and educates consumers on the ways their actions affect the environment.

Primary responsibilities include: developing and implementing 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 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 2010 Activities and Performance Plan:

In FY 2010, EPA plans to promulgate a final rule establishing new Renewable Fuel Standards (RFS2) and implement several other actions required by the Energy Policy Act (EPAct) of 2005 and the Energy Independence and Security Act (EISA) of 2007. EISA dramatically expanded the renewable fuels provisions of EPAct and requires additional EPA studies in various areas of renewable fuel use. In FY 2010, EPA will complete a multi-year testing program started in late 2007 aimed at evaluating the environmental impacts of renewable fuels. The results from this program will be used to update the Agency's fuel effects model used to support regulations.

In FY 2010, in support of its proposed RFS2 regulations, EPA is requesting increased resources to upgrade its vehicle and fuel testing capability at the National Vehicle and Fuel Emissions Laboratory (NVFEL) to certify and assess the emissions and fuel economy performance of vehicles and engines using increased volumes of renewable fuel. The expected increase in new renewable fuels introduced into commerce also will require additional effort by NVFEL personnel to measure and monitor critical properties and compounds to assure these new fuels will not cause detrimental emissions or vehicle performance impacts. In FY 2010, the Agency also will continue to implement its real-time reporting system to ensure compliance with

proposed RFS2 provisions. In addition, the Agency will continue to develop and update lifecycle models to allow assessment of new biofuel technologies and to evaluate feedstocks and fuel pathways for future fuels and processes.

In FY 2010, the Agency also expects to be engaged in work to address greenhouse gas emissions from the transportation sector for light-duty and heavy-duty vehicles. In addition, the Agency will be evaluating several petitions filed with the Agency in 2007 and 2008 requesting that EPA propose and adopt GHG emission standards for aircraft, ocean-going marine vessels, and nonroad engines and equipment.

In FY 2010, EPA will promulgate more stringent nitrogen oxide (NOx) and particulate matter (PM) emission standards for ocean-going vessels. The designation of U.S. coastal areas as Emission Control Areas (ECA) pursuant to the International Convention for the Prevention of Pollution from Ships (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 2010, EPA will establish standards for U.S. emissions control areas while working with the International Maritime Organization (IMO). This effort will include analysis of air quality data and estimation of benefits and economic impact.

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 2010. In addition, EPA will promulgate a rule establishing an in-use compliance testing program for nonroad diesel engines to be conducted by diesel engine manufacturers per a consent decree. This program is vital to ensuring that new engine standards are actually met in-use under real-world conditions. Other new regulatory programs include: a proposal for a new harmonized test cycle for highway motorcycles; a rulemaking (in response to court remand) justifying and updating the 2012 model year standards for snowmobiles; and the promulgation of new jet aircraft engine emission standards that would align Federal rules with international standards and propose other controls and program upgrades under Clean Air Act (CAA) authority. In addition, the Agency will evaluate the need to control lead in aviation gasoline and its use in piston engines.

EPA will continue to support implementation of existing vehicle, engine, and fuel regulations including the Tier II light-duty (LD) vehicle program, the Mobile Sources Air Toxics (MSAT) programs, 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 essential element of EPA's regulatory programs ensuring that emission 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.

Other FY 2010 implementation activities include continued evaluation and development of the Agency's new fuel economy labelling program and ongoing assessment and analysis of emissions and fuel economy compliance data. 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 continue implementation activities for the Locomotives/Marine rule finalized in 2008, as well as for small gasoline engine standards that began with model year 2009.

EPA's emission models provide the overarching architecture that supports EPA's regulatory programs, generating emission factors and inventories needed to quantify emission reductions. EPA continues to improve in this area with the development of the new mobile source emission model, MOVES. MOVES is greatly improving 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. In 2010, EPA will finalize the highway component and incorporate nonroad sources into MOVES.

EPA's National Vehicle and Fuel Emissions Laboratory (NVFEL) will continue to conduct 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 2010, 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.

In FY 2010, EPA anticipates reviewing and approving approximately 5,000 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 for marine and small spark-ignited engines. Certification and compliance of advanced technologies such as plug-in hybrid electric vehicles, light-duty diesel applications, and advanced after-treatment for heavy-duty highway compliance to meet standards taking effect for 2010 models also will be a major focus in FY 2010. 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. EPA will continue to be responsible for vehicle CAFE and gas guzzler fuel economy testing and for providing the fuel economy data to the Department of Transportation, Department of Energy, and Internal Revenue Service.

In FY 2010, 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 Agency's Mobile Sources program is collecting data to better monitor efficiency improvements, and is systematically analyzing and evaluating regulations to ensure it is effectively achieving the greatest benefits.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Tons of particulate matter (PM-10) Reduced since 2000 from Mobile Sources	Avail. 2009	99,458	111,890	124,322	Tons

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Tons of fine particulate matter (PM-2.5) Reduced since 2000 from Mobile Sources	Avail. 2009	97,947	110,190	122,434	Tons

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Limit the increase of CO emissions (in tons) from mobile sources compared to a 2000 baseline.	Avail. 2009	1.35M	1.52M	1.69M	Tons

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Millions of Tons of Volatile Organic Compounds (VOCs) Reduced since 2000 from Mobile Sources	Avail. 2009	1.37M	1.54M	1.71M	Tons

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Millions of Tons of Nitrogen Oxides (NOx) Reduced since 2000 Reduced from Mobile Sources	Avail. 2009	2.71M	3.05M	3.39M	Tons

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Tons of pollutants (VOC, NOx, PM, CO) reduced per total emission reduction dollars spent (both EPA and private industry).	Avail. 2009	0.010M	0.011M	0.011M	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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$13,227.0) This increase is to upgrade the Agency's vehicle and fuel testing capability at the National Vehicle and Fuel Emissions Laboratory (NVFEL). These upgrades enhance EPA's ability to certify and assess the emissions and fuel economy performance of vehicles and engines using increased volumes of renewable fuel. This funding request is linked to EPA's proposed RFS2 program, which seeks to implement provisions of the Energy Independence and Security Act of 2007. This increase also will support increased NVFEL capabilities to measure and monitor critical properties and compounds to assure that these new fuels will not cause detrimental emissions or vehicle performance impacts.

- (+$2,318.0) This reflects an increase for payroll and cost of living for existing 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.

Radiation: Protection
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air; Radiation

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$10,820.8	$10,957.0	$11,272.0	$315.0
Science & Technology	***$2,069.1***	***$2,156.0***	***$2,242.0***	***$86.0***
Hazardous Substance Superfund	$2,165.0	$2,295.0	$2,596.0	$301.0
Total Budget Authority / Obligations	$15,054.9	$15,408.0	$16,110.0	$702.0
Total Workyears	85.8	88.6	88.6	0.0

Program Project Description:

This program supports the 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.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA, in cooperation with states, tribes, and other Federal agencies, will provide ongoing site characterization and analytical support for site assessment activities, remediation technologies, and measurement and information systems. EPA also will provide training and direct site assistance including: field survey and monitoring, laboratory analysis, health and safety, and risk assessment support at sites with actual or suspected radioactive contamination.

EPA's laboratories will continue to support EPA Regional Superfund Remedial Project Managers (RPMs) and On-Scene Coordinators (OSCs), providing laboratory and field-based radioanalytical and mixed waste analyses, technical services, guidance, and standardized procedures.

EPA recently developed several outcome-oriented strategic and annual performance measures for this program in response to OMB recommendations. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	92	85	90	95	Percentage

EPA expects to be on track through its ongoing work to accomplish its FY 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.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$80.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$6.0) This reflects additional resources to support site assessment activities.

Statutory Authority:

Atomic Energy Act (AEA) of 1954, as amended, 42 U.S.C 2011 et seq. (1970), and Reorganization Plan #3 of 1970; Clean Air Act (CAA) Amendments of 1990; Comprehensive Evnrionmental Response, Compensation, and Liability Act (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; National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300; Nuclear Waste Policy Act (NWPA) of 1982; Public Health Service Act (PHSA), as amended, 42 U.S.C 201 et seq.; Safe Drinking Water Act (SDWA); Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978; Waste Isolation Pilot Plant (WIPP) Land Withdrawal Act. of 1992.

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

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$2,899.4	$2,997.0	$3,087.0	$90.0
Science & Technology	***$3,780.3***	***$3,967.0***	***$4,164.0***	***$197.0***
Total Budget Authority / Obligations	$6,679.7	$6,964.0	$7,251.0	$287.0
Total Workyears	39.7	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 2010 Activities and Performance Plan:

In FY 2010, EPA's RERT, a component of the Agency's emergency response program, will continue to improve the level of readiness to support Federal radiological emergency response and recovery operations under the National Response Framework (NRF) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). 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. Laboratory staff also will support field operations with fixed laboratory analyses and provide rapid and accurate radionuclide analyses in environmental matrices.[3]

Also in FY 2010, 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.

3 Additional information can be accessed at: http://www.epa.gov/radiation/rert/

EPA recently developed several outcome-oriented strategic and annual performance measures for this program in response to OMB recommendations. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets.

Performance Targets:

EPA expects to be on track through its ongoing work to accomplish its FY2011 strategic plan goal of protecting public health and the environment from unwanted releases of EPA regulated radioactive material and to minimize impacts to public health from radiation exposure. Measures can be seen in the EPM Appropriation for same program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$175.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$22.0) This increase is associated with increased programmatic laboratory fixed costs.

Statutory Authority:

Atomic Energy Act (AEA) of 1954, as amended, 42 U.S.C 2011 et seq. (1970), and Reorganization Plan #3 of 1970; Clean Air Act (CAA) Amendments of 1990; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300; 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; Homeland Security Act of 2002; Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA); Public Health Service Act (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.; Safe Drinking Water Act (SDWA); and Title XIV of the Natural Disaster Assistance Act (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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$97,364.3	$94,271.0	$111,634.0	$17,363.0
Science & Technology	***$17,156.3***	***$16,828.0***	***$18,975.0***	***$2,147.0***
Total Budget Authority / Obligations	$114,520.6	$111,099.0	$130,609.0	$19,510.0
Total Workyears	217.2	213.0	223.0	10.0

Program Project Description:

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

The emphasis of CAT program work is 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.

EPA has installed its unique hydraulic hybrid technology in 5 different types of demonstration chassis/vehicles (for different vocations) which are being used by EPA to lead technology transfer efforts necessary to bring about the initial commercial introduction of significant elements of EPA's cost-effective low greenhouse gas technologies by vehicle manufacturers. EPA's goal is to achieve initial commercialization of urban delivery trucks in 2010.

FY 2010 Activities and Performance Plan:

In FY 2010, 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. In addition, the program will continue the transfer of EPA's advances in clean diesel combustion technologies and promote the adoption of technology and technical assistance by 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, low GHG, clean combustion E-85/M-85 alcohol engine in a series hydraulic hybrid vehicle.

- Demonstrate the effectiveness of the Clean Automotive Technology Program's high-efficiency, clean combustion gasoline homogeneous-charge compression ignition (HCCI) engine when used with a series hydraulic hybrid vehicle.

In FY 2010, 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:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	1.6	1.5	2.6	4.3	MMTCE

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the buildings sector.	Data Avail. 2009	32.4	35.5	39.0	MMTCE

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the industry sector.	Data Avail. 2009	67.7	72.9	82.9	MMCTE

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 measures for the Clean Automotive Technologies program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$272.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$1,875.0) The increase will be used in the next phase of our hydraulic hybrid / clean engine demonstration partnership with the California South Coast Air Quality Management District. The work will demonstrate the low greenhouse gas potential possible from a shuttle bus equipped with series hydraulic hybrid technology and powered by the world's first gasoline homogeneous-charge, compression-ignition (HCCI) engine which gets diesel efficiency from gasoline fuel without the need for costly diesel aftertreatment. The partnership will also begin its initial work on ways to demonstrate the use of clean low greenhouse gas renewable fuel with hydraulic hybrid vehicles.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$14,042.7***	***$15,087.0***	***$15,946.0***	***$859.0***
Hazardous Substance Superfund	$2,629.1	$2,378.0	$2,471.0	$93.0
Total Budget Authority / Obligations	$16,671.8	$17,465.0	$18,417.0	$952.0
Total Workyears	96.8	105.8	105.2	-0.6

Program Project Description:

The Forensics Support program provides specialized scientific and technical support for the nation's most complex civil and criminal enforcement cases as well as technical expertise for Agency compliance efforts. This work is key to establishing non-compliance and building viable enforcement cases and is carried out by EPA's National Enforcement Investigations Center (NEIC). NEIC is a fully accredited environmental forensics center under International Standards Organization (ISO) 17025, the main standard used by testing and calibration laboratories. NEIC's Accreditation Standard has been customized to cover both laboratory and field activities.

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. 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.[4]

FY 2010 Activities and Performance Plan:

Efforts to stay at the forefront of environmental enforcement in FY 2010 include focusing on the refinement of single and multi-media compliance monitoring investigation approaches, use of customized laboratory methods to solve unusual enforcement case challenges, and applied research and development in 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. Additionally, NEIC will apply its technical resources in support of the Agency's national enforcement priorities.

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

In FY 2010, NEIC will continue to function under stringent 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.

Performance Targets:

Currently, there are no specific performance measures for this program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$790.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$69.0) This change reflects an increase in support cost for the forensics laboratory at the National Enforcement Investigations Center.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$4,814.4	$6,837.0	$7,014.0	$177.0
Science & Technology	***$32,656.7***	***$19,460.0***	***$28,329.0***	***$8,869.0***
Hazardous Substance Superfund	$1,766.3	$1,736.0	$1,824.0	$88.0
Total Budget Authority / Obligations	$39,237.4	$28,033.0	$37,167.0	$9,134.0
Total Workyears	47.3	49.0	49.0	0.0

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. 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 2010 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 2010 request includes $22.4 million for WSI and $1.3 million for WATR. The FY 2010 requested increase will allow EPA to complete funding for cooperative agreements to support pilots four and five. The request also 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.

Water Security Initiative

EPA's goal is 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.

Water Security Initiative (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 award a total of five pilots for the WSI as outlined below:

- The first pilot was funded in FY 2006 and was operational in FY 2007. It is the first comprehensive and integrated drinking water contamination warning system at a public water system in the world.
- Pilots two and three were awarded in FY 2007 and fully funded in the second quarter of FY 2008.
- Pilots four and five were awarded in FY 2008. Phased funding was provided for pilots four and five during FY 2008 and FY 2009.

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. For example, EPA has published several documents which address designing a contamination warning system, operating the system, and developing consequence management plans. Evaluation efforts will be carried out in collaboration with other Federal agencies and a users group consisting of the pilots and other progressive utilities.

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, EPA has

established a national alliance of laboratories harnessed from the range of existing lab resources from the local (e.g., water utility) to the Federal levels (e.g., CDC's Laboratory Response Network) into a Water Laboratory Alliance (WLA). 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 is progressing through the establishment of 11 Regional networks consisting of state public health and environmental laboratories, drinking water utilities, and EPA Regional laboratories that collectively compose Regional laboratory response preparedness systems. By FY 2010, EPA will have integrated the 11 Regional Laboratory Response Plans into a single National Plan. In addition, EPA will continue to support the Regional laboratory networks by providing 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.

Under the WLA, EPA also will validate methods for contaminants of high concern in drinking water, about 90 percent 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 2010, 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

EPA is the sector-specific Agency "responsible for infrastructure protection activities" for the water sector (drinking water and wastewater utilities). EPA is responsible for developing and providing tools and training on improving security to the 52,000 community water systems and 16,000 publicly-owned treatment works.

In FY 2010, 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 the Department of Homeland Security (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;
- 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;
- Support the establishment of mutual aid agreements among utilities to improve recovery times;

- Develop consequence management guidance in coordination with stakeholders to enable water utilities to respond to all-hazards;
- Create a consequence analysis tool to estimate the public health and economic costs which could be incurred as a result of a contamination event, natural disaster, or other type of significant incident;
- Develop guidance for water utilities on how to dispose of large amounts of contaminated water; and
- Develop annual assessments, as required under the National Infrastructure Protection Plan, to describe existing water security efforts and progress in achieving the sector's key metrics.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$185.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$8,000.0) This increase completes funding for all Water Security Initiative pilot cooperative agreements begun in response to the Bioterrorism Act of 2002.

- (+$684.0) This increase will assist the Agency in fulfilling its responsibilities and commitments under the National Infrastructure Protection Plan (NIPP), which includes the Water Laboratory Alliance and metric development.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$4,105.3	$3,378.0	$3,443.0	$65.0
Science & Technology	***$40,807.3***	***$43,671.0***	***$42,409.0***	***($1,262.0)***
Hazardous Substance Superfund	$45,283.2	$53,641.0	$53,543.0	($98.0)
Total Budget Authority / Obligations	$90,195.8	$100,690.0	$99,395.0	($1,295.0)
Total Workyears	176.5	174.2	174.2	0.0

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 evaluate tools and capabilities so that cost effective response and recovery approaches can be identified for future use by the response community, elected and appointed decision makers, and risk managers. Research will further state-of-the-art approaches to address all phases of emergency response and recovery to ensure public and worker safety, protect property, and facilitate recovery. The Agency also continues to work with other Federal agencies and organizations, through collaborative research efforts, to strengthen remediation capabilities.

FY 2010 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. EPA has unique knowledge and expertise related to decontamination and disposal of contaminated materials. Additionally, the Agency has demonstrated results meeting the needs of decision makers and emergency responders across government and industry.

FY 2010 Homeland Security Research Program funds will be used 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. Customer needs, identified jointly, are the primary consideration used in prioritizing research activities. Key customers include EPA's Water, Solid Waste and Emergency Response, and Air and Radiation programs, among others. EPA's research program provides support and assistance in interactions with water utilities to

help ensure the nation's water systems are secure and drinking water is acceptable. The Agency's research program also is 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 focus 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 communication throughout EPA's Homeland Security program and the Regional offices to improve collaboration and to ensure that needs are met.

Decontamination Research: EPA's decontamination research program directly supports the Agency's National Response Plan (NRP) as well as its homeland security responsibilities. 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, materials decontamination and disposal, threat assessment, sampling, and analytical methods. Activities in FY 2010 include the following:

- Threat and consequence assessment research will continue to focus on products and information to aid decision-makers in assessing risks to human health from biological and chemical agents and to further identify research gaps. The information to be collected, generated, and evaluated includes data on the toxicity, infectivity, mechanism of action, fate, transport, and exposure consequences for Chemical, Biological, and Radiological (CBR) contaminants. It also will be used to develop relationships of human response to varying doses of biological organisms 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.

- Technology testing and evaluation research will continue to develop innovative methods and test commercially-available technologies. These efforts will enhance the Nation's ability to detect and decontaminate CBR contaminants resulting from terrorist attacks on infrastructure and outdoor areas such as urban centers.

- Response capability enhancement research will continue to support the development of the Environmental Response Laboratory Network (ERLN). 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 ERLN that are required to document safe restoration exposure levels. Reference Laboratories serve as an authoritative source in the ERLN for method development, verification, and validation.

- Decontamination and consequence management research will continue to develop and improve decontamination and disposal techniques and technologies for CBR contaminants. This research includes the remediation and clean-up of building exteriors and infrastructure (e.g., subways, bridges, stadiums, airports, train stations, rail lines, highways, drinking water and wastewater systems). It also involves the clean-up of various outdoor areas (e.g., walks, streets, parks) in both urban and non-urban areas, as well as the safe disposal of contaminated materials and decontamination residue.

Decontamination research will produce many science and engineering products in FY 2010 to support EPA's National Response Plan and first responders in carrying out their homeland security missions. The following are several key products to be completed in FY 2010:

- Methods for rapid determination of CBR contaminant viability on surfaces and in environmental media;
- Improved understanding of the ability of anthrax to re-aerosolize from various indoor and outdoor surfaces;
- Methods to combine infectivity and exposure assessments into a scientifically defensible characterization of risk of humans exposed to anthrax;
- Data on the persistence of CB contaminants in the indoor and outdoor environments and in landfills;
- Evaluations of and improvements to methods for removal of radioactive contaminants from outdoor urban surfaces;
- Improvements in methods for decontamination of CB contaminants, including low-tech methods for clean-up after wide-area releases;
- Data on materials compatibility for various decontamination methods;
- Demonstration of scaled-up decontamination technologies shown to be efficacious in laboratory studies;
- Provisional Advisory Levels (PALs) for 15 chemicals to guide responders on human health risk of exposure to toxic industrial chemicals and chemical warfare agents. PALs apply to exposure durations ranging from 24 hours to two years. They complement the Acute Exposure Guideline Levels (AEGLs) program, which derives limits for exposure durations of up to eight hours; and
- Expanded *Disposal Decision Support Tool* to include additional options for the 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 2010 to support EPA's Water Program and water utilities in carrying out their homeland security missions. The following are several key products to be completed in FY 2010:

- Computer tools to assess water utility vulnerabilities, to optimally place sensors, and to manage consequences of both terror and non-terror events;
- Cost-effective online water quality monitors (i.e. pH, TOC, chlorine, etc) essential to real-time monitoring of distribution systems;
- Decontamination approaches for water distribution systems;
- Distribution system flushing options for reducing spread of contaminants;
- Treatment approaches for dealing with contaminated water; and
- 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 contaminants. 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 2010 to support EPA's National Response Plan and first responders in carrying out their homeland security missions, including:

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

Radiation Monitoring: Maintenance and enhancement of the RadNet air monitoring network supports EPA's responsibilities under the Nuclear/Radiological Incident Annex to the National Response Framework (NRF). The network includes deployable monitors and near real-time stationary monitors.

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 2010, EPA expects to install at least 130 monitors providing near real-time radiation monitoring coverage for over 95 of the 100 most populous U.S. cities. As the RadNet air monitoring network is upgraded and expanded, average 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 Laboratory Capacity and Capability: In FY 2010, EPA will continue 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. Recently, EPA awarded grants to state laboratories in Connecticut, Texas, and Washington. 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 continue to address critical gaps in efficacy test methodology and knowledge of microbial resistance. In addition to vegetative bacteria, EPA also will continue efforts to 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 remain a priority in FY 2010. Finally, EPA will continue to work with the USDA to evaluate the efficacy of disinfectants against highly pathogenic Foreign Animal Disease (FAD) agents that pose a significant threat to U.S. agriculture and the human food production system.

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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of water security initiatives.	83	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of efficient and effective clean-ups and safe disposal of contamination wastes.	92	100	100	100	Percent

Work under this program supports multiple strategic objectives. In FY 2010, the program plans to meet its targets of completing and delivering 100 percent 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 FY 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 addition, the program developed an efficiency measure that demonstrates that the program utilizes total resources efficiently.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,000.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$683.0) This represents a realignment of funds associated with equipment purchases and repairs across Agency research programs.

- (+$89.0) This increase will support efforts related to increasing the Agency's radiological laboratory capability/capacity and evaluating the efficacy of antimicrobial products.

- (-$1,668.0) This change reflects a shift in priorities from the evaluation and testing of decontamination and disposal techniques and the assessment of human health risks associated with CBR agents to focus on performing decontamination and water security research. This research will address gaps in the Agency's ability to effectively respond to and recover from threats, attacks, and large-scale catastrophic incidents.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$5,462.5	$6,292.0	$6,414.0	$122.0
Science & Technology	***$1,428.1***	***$587.0***	***$594.0***	***$7.0***
Building and Facilities	$8,225.9	$8,070.0	$8,070.0	$0.0
Hazardous Substance Superfund	$585.0	$1,194.0	$1,194.0	$0.0
Total Budget Authority / Obligations	$15,701.5	$16,143.0	$16,272.0	$129.0
Total Workyears	2.9	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 (NVFEL).

FY 2010 Activities and Performance Plan:

In FY 2010, the Agency will continue to provide enhanced physical security for the NVFEL and its employees. This funding supports the incremental cost of security enhancements required as part of an Agency security assessment review.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$7.0) This increase supports security for EPA's NVFEL.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$5,269.5	$5,383.0	$5,576.0	$193.0
Science & Technology	***$437.8***	***$403.0***	***$422.0***	***$19.0***
Total Budget Authority / Obligations	$5,707.3	$5,786.0	$5,998.0	$212.0
Total Workyears	38.8	39.4	39.4	0.0

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 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 2010 Activities and Performance Plan:

In FY 2010, 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 percent 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 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of additional homes (new and existing) with radon reducing features	Avail. 2010	225,000	265,000	280,000	Homes

In FY 2010, EPA's goal is to add 280,000 homes with radon reducing features, bringing the cumulative number of U.S. homes with radon reducing features to over two million. EPA estimates that this cumulative number will prevent over 900 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 2010.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$17.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$2.0) This reflects an increase to support radon test kit analysis and distribution efforts.

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.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$24,009.8	$20,512.0	$21,073.0	$561.0
Science & Technology	***$702.9***	***$717.0***	***$735.0***	***$18.0***
Total Budget Authority / Obligations	$24,712.7	$21,229.0	$21,808.0	$579.0
Total Workyears	63.9	63.8	63.8	0.0

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 2010 Activities and Performance Plan:

In FY 2010, 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. 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Estimated annual number of schools establishing indoor air quality programs based on EPA's Tools for Schools guidance.	Avail. 2009	1,100	1,000	1,000	Number

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percentage of public that is aware of the asthma program's media campaign.	Avail. 2009	>20	>20	>30	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	Avail. 2009	2,000	2,000	2,000	Number

EPA will continue to work towards its long term 2014 goal to educate 7.2 million people with asthma in how to take the actions essential to reduce their exposure to the environmental triggers of asthma, including environmental tobacco smoke. EPA's goal is to have an additional 400,000 people with asthma take these actions in 2010, bringing the total number to approximately 5.7 million people who have been exposed to EPA's outreach and education programs. As part of this goal, EPA will continue to work to reduce existing disparities between disproportionately impacted populations and the overall population. EPA also will 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.

EPA will continue to focus on making efficiency improvements and track progress against the efficiency measures included in the tables above triennially with the next planned report date in FY 2009.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$14.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$4.0) This reflects additional resources to support IAQ intervention and remediation training courses.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$91,928.2	$93,171.0	$103,305.0	$10,134.0
Science & Technology	***$3,762.6***	***$3,969.0***	***$4,073.0***	***$104.0***
Leaking Underground Storage Tanks	$178.0	$162.0	$162.0	$0.0
Oil Spill Response	$15.0	$24.0	$24.0	$0.0
Hazardous Substance Superfund	$15,929.7	$16,896.0	$17,124.0	$228.0
Total Budget Authority / Obligations	$111,813.5	$114,222.0	$124,688.0	$10,466.0
Total Workyears	492.2	503.1	503.1	0.0

Program Project Description:

The Information Technology/Data Management (IT/DM) program 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. IT/DM provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access. IT/DM manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines. IT/DM supports regional information technology infrastructure, administrative and environmental programs, and telecommunications.

The work performed under IT/DM encompasses more than 30 distinct activities. For descriptive purposes activities can be categorized into the following major functional areas: information access; geospatial information and analysis; Envirofacts; IT/information management (IT/IM) policy and planning; electronic records and content management; internet operations and maintenance (IOME); information reliability and privacy; and IT/IM infrastructure. IT/IM and IOME activities are provided to the programs funded under Science and Technology (S&T).

Resources under this program also fund the Agency-wide Quality Program. The Quality Program is a key management system that ensures the quality of all services provided by EPA, including, for example, all of the science and technology underpinning all of EPA's environmental work, all of EPA's data, and all of EPA's documents for public distribution.

FY 2010 Activities and Performance Plan:

For FY 2010, the following IT/DM activities will continue to be provided for the S&T funded programs:

- **Internet Operations and Maintenance (IOME**) – FY 2010 activities in this area implement and maintain the EPA Home Page (www.EPA.gov) and over 200 top-level pages that facilitate access to the many information resources available on the EPA Web site. In addition, IOME provides the funding to support Web hosting for all of the Agency's Web sites and pages. The EPA Web site is the primary delivery mechanism for environmental information to EPA staff, partners, stakeholders and the public, and is becoming a resource for emergency planning and response. (In FY 2010, IOME activities will be funded at $0.49 million, under the S&T appropriation)
- **IT/IM Infrastructure** – FY 2010 activities in this area support the information technology infrastructure, administrative and environmental programs, and telecommunications for all EPA employees and other on-site workers at over 100 locations, including EPA Headquarters, all ten regions, and the various labs and ancillary offices. More specifically, these activities provide what is known as "workforce support," which includes desktop equipment, network connectivity, e-mail, application hosting, remote access, telephone services and maintenance, web and network servers, IT related maintenance, IT security, and electronic records and data. (In FY 2010, funding for IT/IM Infrastructure will be funded at $0.13 million, under the S&T appropriation)
- **Policy and Planning -** FY 2010 activities will ensure that all due steps are taken to reduce redundancy among information systems and data bases, streamline and systematize the planning and budgeting for all IT/IM activities, and monitor the progress and performance of all IT/IM activities and systems. EPA's Quality Program has consistently played a major role in each of these areas. In FY 2010, the Quality Program will initiate a number of revisions to comply with the new Quality Policy (CIO Policy 2106, issued October 1, 2009). (In FY 2010, Quality Program activities will be funded at $3.45 million under the S&T appropriation, $2.5 million of which is allotted to payroll.)

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$89.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$15.0) This reflects an increase for IT, telecommunications and other support costs.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$296,235.0	$303,884.0	$320,612.0	$16,728.0
Science & Technology	***$69,239.2***	***$73,835.0***	***$72,882.0***	***($953.0)***
Building and Facilities	$28,081.5	$26,931.0	$28,931.0	$2,000.0
Leaking Underground Storage Tanks	$890.3	$902.0	$903.0	$1.0
Oil Spill Response	$498.6	$596.0	$498.0	($98.0)
Hazardous Substance Superfund	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Total Budget Authority / Obligations	$467,188.5	$482,398.0	$502,423.0	$20,025.0
Total Workyears	400.4	410.6	411.1	0.5

Program Project Description:

Science & Technology (S&T) resources in the Facilities Infrastructure and Operations Program are used to fund rent, utilities, 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, safety, 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, energy conservation, greenhouse gas reduction, sustainable buildings programs, Headquarters security, space planning, shipping and receiving, property management, printing and reproduction, mail management, and transportation services.

FY 2010 Activities and Performance Plan:

The Agency will also continue to manage its lease agreements with GSA 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. (For FY 2010, the Agency is requesting a total in the S&T appropriation of $33.95 million for rent; $19.18 million for utilities; $10.26 million for security; $.93 million for transit subsidy; and $.25 million for Regional moves.)

These resources also help to improve building and transportation 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. EPA will also continue with energy audits, commissioning, renewable energy, water conservation, and green buildings. Work in both these areas is required under EO 13423[5], *Greening the Government through Efficient Energy Management*.

Lastly, EPA will provide transit subsidy to eligible applicants as directed by Executive Order (EO) 13150[6] *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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$574.0) This decrease in rent reflects the rebalancing of cost allocation methodologies between the S&T, Environmental Program Management, Superfund, and Oil Spill appropriations.

- (+$630.0) This change reflects an increase in utility costs.

- (-$1,729.0) This decrease in security costs reflects the rebalancing of cost allocation methodologies between the S&T and EPM appropriations.

- (+$671.0) This change reflects an increase in transit subsidy.

- (+$49.0) This change reflects an increase in Facility Operations contracts that support Research Triangle Park facilities.

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); Energy Policy Act of 2005; Energy Independence and Security Act of 2007.

[5] Information available at http://www.epa.gov/fedsite/eo13123.htm
6 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$59,536.1	$60,103.0	$61,747.0	$1,644.0
Science & Technology	***$3,346.9***	***$3,215.0***	***$3,663.0***	***$448.0***
Total Budget Authority / Obligations	$62,883.0	$63,318.0	$65,410.0	$2,092.0
Total Workyears	497.4	467.9	467.9	0.0

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 for 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 at Fort Meade, MD, and an environmental chemistry laboratory at Stennis Space Center, Bay St. Louis, MS. These laboratories develop and validate environmental chemistry, analytical chemistry, and genetically modified organism plant incorporated protectant (PIP) 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 pesticide 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 2010 Activities and Performance Plan:

In 2010, the Agency will protect human health by evaluating residue analytical methods for detecting pesticide residues in food and feed, ensuring suitability for monitoring pesticide residues, and enforcing 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 the Food and Drug Administration) 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 provide quality assurance and technical support and training to EPA regional offices, state laboratories, and other Federal agencies that implement FIFRA. The laboratories will evaluate registered products that are most crucial to infection control (sterilants, tuberculocides, and hospital-level disinfectants). Under the 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$419.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$29.0) This reflects an increase for laboratory support costs.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; FQPA.

Pesticides: Protect the Environment from Pesticide Risk

Program Area: Pesticides Licensing
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$37,443.3	$41,236.0	$42,318.0	$1,082.0
Science & Technology	***$1,998.2***	***$2,011.0***	***$2,292.0***	***$281.0***
Total Budget Authority / Obligations	$39,441.5	$43,247.0	$44,610.0	$1,363.0
Total Workyears	316.4	301.4	301.4	0.0

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).[7] 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.[8] 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, a microbiology laboratory at the Environmental Science Center at Fort Meade, MD, and an environmental chemistry laboratory at Stennis Space Center, Bay St. Louis, MS. These laboratories develop and validate environmental and analytical chemistry methods and genetically modified organism plant-incorporated protectant (PIP) methods to ensure the United States Department of Agriculture, the United States Geological Survey, EPA offices, and states have reliable methods to measure and monitor pesticide residues in food and in the environment. The pesticide 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.

7 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.

8 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.

FY 2010 Activities and Performance Plan:

In 2010, 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 (NPSR) to support Federal and state laboratories involved in enforcement activities. Under the 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 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 and other persistent contaminants of environmental concern, to support Agency environmental risk assessments;

3) Conducting product performance evaluations of antimicrobials to remove inefficacious products from the market. 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 and environmental chemistry methods for food, feed, soil and water on the EPA web site. These methods are frequently the only resource available to Regional offices, state laboratories and other Federal agencies 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, the Agency responds to approximately 90 requests per year for method information. These requests primarily come from state FIFRA laboratories.
The laboratories are 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 laboratories involved in residue monitoring and enforcement activities.

The pesticides program operates the EPA NPSR which provides pesticide reference materials to Federal and state laboratories for enforcement activities. The NPSR shipped approximately 6,000 analytical reference standards to enforcement laboratories in FY 2007 and approximately 6,500 in FY 2008. In FY 2009, the NPSR is expected to provide approximately 7,000 standards. As the project comes to an end in FY 2010, the annual rate will return to approximately 6,500.

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

In the area of quality assurance, the Agency's laboratories 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 with the Food and Drug Administration (FDA) and the Department of Defense (DoD); 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 (TSM) 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 TSM. The TSM 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$258.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$23.0) This reflects an increase for laboratory support costs.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$11,529.6	$12,984.0	$13,372.0	$388.0
Science & Technology	***$442.4***	***$445.0***	***$508.0***	***$63.0***
Total Budget Authority / Obligations	$11,972.0	$13,429.0	$13,880.0	$451.0
Total Workyears	87.7	89.7	89.7	0.0

Program Project Description:

Within the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), the definition of "unreasonable adverse effects on the environment" expands 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…"

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,[9] 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 for pesticide registration within three years.

FIFRA 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 – those 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 $1.8 billion in termite damage is avoided each year through the availability of effective termiticides.[10] 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 pesticide laboratories support the pesticide program by providing data that are used by EPA to inform regulatory decisions that recognize societal benefits: an analytical chemistry

9 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.
10 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).

laboratory and a microbiology laboratory at the Environmental Science Center at Fort Meade, MD, and an environmental chemistry laboratory 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 2010 Activities and Performance Plan:

In FY 2010, the Agency will realize the benefits of pesticides by operating the National Pesticide Standard Repository (NPSR) 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 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 pesticide laboratories support the program by evaluating analytical methods for detecting pesticide residues in food and feed ensuring suitability for monitoring pesticide residues and enforcement of tolerances. The NPSR also distributes analytical standards to Federal and state laboratories involved in enforcement activities. The laboratories 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 are then used by the program office to estimate human health risks. The laboratories 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 products. They also develop data to support FIFRA section 18 uses for new chemicals where efficacy data are non-existent (particularly biothreat agents, including *B. anthracis*, or emerging hospital pathogens) and evaluate the product performance of antimicrobials used to control infectious pathogens in hospital environments. The laboratories 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$59.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$4.0) This reflects an increase for laboratory support costs.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; FQPA.

Program Area: Research: Clean Air

Research: Clean Air

Program Area: Research: Clean Air
Goal: Clean Air and Global Climate Change
Objective(s): Radiation; Enhance Science and Research

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$57,575.5***	***$80,541.0***	***$83,164.0***	***$2,623.0***
Total Budget Authority / Obligations	$57,575.5	$80,541.0	$83,164.0	$2,623.0
Total Workyears	239.4	269.5	269.5	0.0

Program Project Description:

EPA's Clean Air Research Program provides the scientific foundation for the Agency's actions to protect the air Americans breathe. The program provides the underlying research to support the Agency's implementation of the Clean Air Act (CAA), which mandates promulgation and enforcement of the National Ambient Air Quality Standards (NAAQS)[11] as well as the evaluation of risks associated with Hazardous Air Pollutants (HAPs).[12]

The program is primarily focused on particulate matter (PM),[13] but in FY 2008, EPA integrated its air research activities around a multi-pollutant approach. Thus, the research addresses ozone and other criteria as well as HAPs. This reorganization was guided by recommendations from the National Academy of Sciences and the Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of independent expert scientists and engineers— as well as the emerging research needs of EPA's Air and Radiation program. In moving toward the multi-pollutant theme, the program will increasingly focus on how to address specific source sectors contributing to air pollution, a holistic approach that will result in more effective and efficient air quality management strategies. The program currently is guided by a series of NAS reports[14] and a multi-year plan[15] that outlines research needs and plans to meet those needs, and establishes milestones for evaluating the program's progress. However, Climate – Air Quality interactions will very likely play a larger role in the context of ambient air health assessments in the future, emphasizing the importance of a multi-pollutant perspective in addressing the possible change to air pollution profiles and effects. To meet this challenge, the program is working closely with the Global Change Research Program to develop a framework for research that will be useful to stakeholders charged with public and environmental health.

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

11 The NAAQS set limits for criteria pollutants regulating levels of tropospheric ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen oxides, and lead. For more information, see http://www.epa.gov/air/criteria.html.

12 For more information, see http://www.epa.gov/ttn/atw/188polls.html

13 For more information, see http://www.epa.gov/pmresearch/.

14 2004 reports is: NRC, *Research Priorities for Airborne Particulate Matter: IV. Continuing Research Progress*. Washington, DC: http://books.nap.edu/catalog/10957.html and *Air Quality Management in the United States*, http://www.nap.edu/catalog.php?record_id=10728 National Academies Press (2004).

15 For more information, see http://www.epa.gov/ord/npd/pdfs/Air-MYP-narrative-final.pdf

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 in identifying and designing effective strategies to meet the NAAQS. The research program is integrated with complementary research on the impacts of climate change and mercury conducted under the Research: Global Change and Research: Human Health and Ecosystems programs respectively.

A subcommittee of EPA's BOSC conducted an evaluation of the PM and tropospheric ozone research programs in calendar year 2005. A subcommittee also conducted a mid-cycle review of the program in September 2007, and noted in their final report that "the quality of the science was high, [and] that it was relevant to Agency and user clients." The BOSC also found that the science was highly informative to the science community itself, and that there was evident progress and program evolution with the advancement of the respective science fields.[16]

FY 2010 Activities and Performance Plan:

In FY 2010, 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.[17] 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. In addition, the program will develop ambient air sampling techniques; and conduct research to correlate ambient measurements of emissions with both their sources and with levels of human exposure.

EPA will continue its research to understand air pollution near roads attempting to link roadway emissions with health outcomes.[18] EPA has selected Near-Roadway (FY 2010 Request, $3.1M) as a model of how EPA can best approach source-based studies to draw direct relationships between the source and atmospheric concentrations of pollution; and how these ambient levels relate to exposure and ultimately health outcomes. EPA is conducting studies in Las Vegas and Detroit through 2010 in collaboration with the Federal Highways Administration, to measure and characterize emissions near roads and to understand potential exposures associated with vehicle and roadway "emissions." Exposure models will be developed for individual and multiple pollutants and will be used to develop risk estimates of health effects. The effectiveness of prevention and mitigation options (e.g., natural and man-made barriers) will be evaluated. Research addressing other sectors (e.g., pulp and paper, petroleum refineries, cement kilns), will also employ, like Near-Roadway, a holistic and integrated approach.

FY 2010 funding will continue support for research to inform Agency, state and Tribal air quality managers about the sources of air pollution and methods for managing emissions.[19] The

16 The final report is available at: http://www.epa.gov/osp/bosc/pdf/pmmc080331rpt.pdf

17 For more information, see http://www.epa.gov/nerl/goals/air/.

18 For more information, see http://www.epa.gov/nerl/goals/air/linkages.html.

19 For more information, see http://www.epa.gov/appcdwww/.

program will investigate and apply advanced methods to measure the quantity and chemical composition of airborne toxics and particulate matter emissions from man-made and natural sources. These data support development of improved emission inventories, which provide essential data for trend analysis; Regional, and local scale air quality modeling; regulatory strategies and impact assessments; and human exposure modeling.[20] These methods also support source apportionment, which traces pollutants measured in ambient air to specific sources based on the unique chemical or structural markers in the pollutants. In addition, the program 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 to develop advanced air quality models, such as the Community Multi-scale Air Quality (CMAQ) model (FY 2010 Request, $4.6M), that simulate transport and fate of pollutants in the atmosphere. These models are used by EPA and National Oceanic and Atmospheric Administration, 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 2010 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.[21] In FY 2010, a priority area for the program's health effects research will be improving scientific understanding of how particle size and composition as related to specific sources influences particulate matter–associated health effects. 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.

The program makes extensive use of the Science to Achieve Results (STAR) program's competitive, peer-reviewed grants.[22] In FY 2010, to reflect the shift towards a multi-pollutant program, the program will hold a new competition for Air Pollution Research Centers (previously Particulate Matter Centers). The new centers (FY 2010 funding, $8.2 million) will address multi-pollutant air problems such as health effects of air pollution mixtures.[23] The program also will continue to fund a ten-year grant (the largest in EPA's history) to the Multi-

20 For more information, see http://www.epa.gov/ttn/chief/eiinformation.html.

21 For more information, see http://www.epa.gov/nheerl/research/cleanair.html.

22 For more information, see: http://es.epa.gov/ncer/science/pm/.

23 For more information, see http://cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/outlinks.centers/centerGroup/19/.

Ethnic Study of Atherosclerosis (MESA)–Air Pollution Study.[24] In FY 2010, MESA will report interim findings on cardiovascular disease associations with PM and co-pollutants. STAR also will continue to fund a five-year grant to the Health Effects Institute (HEI),[25] a nonprofit research organization cosponsored by EPA and the automotive industry to conduct independent research on the health effects of air pollution. In addition, the program 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. These studies link to climate-air quality relationships and interactions to develop realistic and forward-thinking models.

Finally, the program's exposure research, done in collaboration with EPA's Human Health research program and HEI, will emphasize development of a framework for assessing the effectiveness of air pollution regulations and control strategies. The framework will be especially important in assessing loss of benefits associated with air quality changes due to changes in climate.

EPA has finalized 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. The program continues working to improve 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of NAAQS program publications rated as highly cited papers		No Target Established (Biennial)	33.9	No Target Established (Biennial)	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 decisions.	100%	100	100	100	Percent

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.

24 For more information, see http://depts.washington.edu/mesaair/.

25 For more information, see http://www.healtheffects.org/.

The program gauges its annual and long-term success by assessing its progress on several key measures. In FY 2010, 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 2010.

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 similar publications. In FY 2010, the program aims to further increase its percentage of "highly cited" publications, with a target of 34.9% in FY 2011 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$645.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

- (+$206.0) These resources would fund work in the air research program, such as studying emission sources and investigating air pollutants health effects.

- (+$104.0) This represents a realignment of funds associated with equipment purchases and repairs across Agency research programs.

- (+$50.0) This is an increase in laboratory fixed costs, including maintenance, operations, utilities, and security costs.

- (+$1,618.0) This reflects an increase for payroll and cost of living for all FTE.

Statutory Authority:

CAA; ERDDA.

Research: Global Change
Program Area: Research: Clean Air
Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$17,423.9***	***$17,886.0***	***$20,909.0***	***$3,023.0***
Total Budget Authority / Obligations	$17,423.9	$17,886.0	$20,909.0	$3,023.0
Total Workyears	31.7	35.5	35.5	0.0

Program Project Description:

EPA's Global Change research program is assessment-oriented, with primary focus 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. EPA also has begun to develop decision support tools to help decision-makers evaluate alternative strategies for reducing greenhouse gas emissions and the environmental implications of those strategies.

The program also partners with Program and Regional Offices to understand how climate change affects the Agency's ability to fulfill its statutory, regulatory, and programmatic requirements, and identifies opportunities within the provisions of the statutes to address the anticipated impacts of a changing climate. Climate – Air Quality interactions will likely play a larger role in the context of ambient air health assessments in the future. To meet this challenge, the Clean Air Research Program is working closely with the Global Program to envision a framework for the research that will be most useful to stakeholders charged with public and environmental health.

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.[26] EPA's program priorities are consistent with those of the CCSP, which coordinates and integrates climate change research among thirteen Federal departments and agencies, and CCSP's Strategic Plan[27]. The program also is guided by a multi-year research plan developed by EPA, which is currently under revision.

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

26 For more information, see http://www.climatescience.gov/.

27 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/

to the nation and that it is on course to make significant further contributions."[28] The subcommittee completed a mid-cycle review of the program in 2008 and reaffirmed its assessment of the program.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA research will focus on four areas: (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, (3) evaluating alternative strategies for reducing greenhouse gas emissions and the environmental implications of those strategies, and (4) supporting the statutory mandates of the CCSP to produce periodic assessments of the effects of climate change. Research and assessments will continue to improve understanding of the implications of climate change for human health, and the human health impacts of alternative adaptation and mitigation strategies in all four areas.

The Global Change research program will continue 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. FY 2010 funding will continue research to: 1) develop, in collaboration with EPA's Water program, detailed watershed-based, stakeholder-driven studies focused on local issues and specific management solutions for addressing global change, and 2) in collaboration with EPA's Air and Radiation program, assess the linkages between global climate change, regional air quality and health effects. This research will be the basis for key comprehensive assessments of how climate change will affect U.S. air quality and water quality and particular areas of vulnerability. These assessments will help EPA's Air and Water programs, 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.

As recommended in a recently released National Research Council report,[29] the program will continue decision support efforts by inventorying and assessing the climate-sensitive 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. In FY 2009, EPA supported the stakeholder-oriented process by the Alaska Department of Environmental Conservation to develop a Climate Change Strategy. EPA will continue to assist the State of Alaska as it implements its adaptation strategy and expects that this will serve as a model for future state strategies. This research responds to the BOSC recommendation that the program develop a new strategy for place-based adaptation decision support activities that recognizes the importance of engaging local stakeholders while ensuring that the results of the investment have extended applicability of national significance.

28 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.

29 For more information, see http://www.nap.edu/catalog.php?record_id=12626

In FY 2010, the program will continue to develop computer models that simulate how global change may affect U.S. air quality,[30] continuing progress toward the program 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.[31] These efforts will help air quality resource managers make informed decisions about how to respond to the effects of global change on air quality. They are also a critical component of the Assessment of the Implications of Global Change for Air Quality in the U.S, planned for release in 2012.

In FY 2009, the program began to shift its environmental and health effects research emphasis to support a comprehensive assessment of the effects of climate change on water quality, including aquatic ecosystems. In FY 2010, EPA will begin research on the effects of land use practices and climate change on water systems. This information will assist in determining climate change impacts on water resources in different regions and in the development of decision support tools needed to protect water quality and aquatic ecosystems.

In FY 2010, the program will also perform research, in collaboration with other programs, to provide information that will inform efforts to mitigate greenhouse gases and other radiative forcing compounds. The research will address environmental implications of mitigation technologies, support EPA Air and Water programs rulemaking activities, and identify potential mitigation options that could reduce both traditional air pollutants (e.g., Ozone and PM) and green house gases. Research on geologic sequestration of carbon dioxide, in partnership with EPA's Drinking Water research program and the Department of Energy, will support the Office of Water's carbon sequestration rulemaking.

The U.S. Global Change Research Act of 1990 mandates periodic scientific assessments of the effects of global change.[32] 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. EPA, beginning in FY 2006, has participated in the development of CCSP's Synthesis and Assessments Products (SAPs), serving as lead-Agency for three of the 21 assessments.[33] Two EPA SAPs, Adaptation Options for Climate-Sensitive Ecosystems and Resources (SAP 4.4) and Analyses of the Effects of Global Change on Human Health and Welfare and Human Systems (SAP 4.6), were released in calendar year 2008. EPA will continue to participate in CCSP's programmatic, assessment, and planning activities.

The global change research program makes extensive use of the Science to Achieve Results (STAR) program's competitive, peer-reviewed grants. In FY 2010, STAR's global change component will focus on two research areas. First, new grants will be funded to develop effective strategies to both mitigate climate change and reduce air pollution while accounting for future

30 For more information, see http://www.epa.gov/nerl/goals/global/.

31 For more information, see http://www.epa.gov/appcdwww/apb/greengas.htm.

32 See 15 USC §2936.

33 For more information, see http://www.climatescience.gov/Library/sap/sap-summary.php .

changes in climate, land use, and technology. Second, STAR funding will enable investigation of the sensitivity of U.S. water systems to global change by developing models to quantitatively assess the impacts of global change on water systems.

To improve the Research: Global Change program EPA has taken steps to (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. The program is finalizing long-term performance targets and will collect formal long-term measurement data during its comprehensive BOSC review scheduled for late 2009. Additionally, the program is revising its multi-year plan around a clearer framework, and has developed an approach for improving program efficiency.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered.	100%	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of Global publications rated as highly cited publications	Available 2010	No Target Provided (biennial)	23	No Target Provided (biennial)	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of Global publications in high-impact jopurnals	Available 2010	No Target Provided (biennial)	24.6	No Target Provided (biennial)	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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,156.0) This increase supports global change research and will allow the program to expand its projections on the effects of climate change on air and water quality in the United States. The results will be used by air and water quality managers to evaluate how climate change influence will affect attainment of air and water quality standards. The increase also will be used to evaluate alternative strategies for reducing greenhouse gas emissions and the environmental implications of those strategies.

- (+$368.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$253.0) This represents a realignment of funds associated with equipment purchases and repairs across the Agency's research programs.

- (+$246.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

Statutory Authority:

USGCRA; NCPA; ERDDA.

Program Area: Research: Clean Water

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

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$48,228.2***	***$46,873.0***	***$47,909.0***	***$1,036.0***
Total Budget Authority / Obligations	$48,228.2	$46,873.0	$47,909.0	$1,036.0
Total Workyears	200.9	190.2	190.2	0.0

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, and the reliable delivery of safe drinking water, as well as 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, exposure/health effects, source water protection, treatment strategies, and distribution/storage/infrastructure). This structure provides opportunities for integrating method development with health effects research and applications in treatment technologies and water distribution systems. In addition, this structure provides an opportunity to integrate water availability, water efficiency and energy considerations into the risk characterization-risk management paradigm.

Research in the Drinking Water Research Program is coordinated with the Agency's regulatory activities and timelines and is responsive to EPA's water program and Regional offices. Current research topics include: the Revised Total Coliform Rule (R-TCR) and related research on distribution systems; 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 (LT2ESWTR); and research support for simultaneous compliance challenges, particularly co-compliance with the Lead and Copper Rule (LCR), Microbial and Disinfectant Byproduct (M/DBP) rules, and National Primary Drinking Water Regulations (NPDWR). Research also is targeted at supporting the proposed revisions to 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 soon-to-be-released third Contaminant Candidate List (CCL3) and supporting the unregulated contaminant monitoring rule (UCMR).

Several peer-reviewed research strategies[34,35] and guidance from external experts[36,37,38,39] have provided input and guidance for charting the research directions. The Agency also maintains a Drinking Water Research Program (DWRP) Multi-Year Plan[40] (MYP) that outlines steps for meeting these needs and annual performance goals and measures for evaluating progress. The drinking water MYP has been revised to reflect anticipated science and regulatory needs in FY 2010 and beyond. These plans are subjected to rigorous peer review[41] 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.[42] The BOSC was "favorably impressed" with the program's revised structure and concluded that the formation of five thematic areas (i.e. Assessment tools, Exposure/Health Effects, Source water/Water resources, Treatment/Residuals, and Distribution/Storage/Infrastructure) "allows focus on statutory requirements such as the 6-year review or the Contaminant Candidate List (CCL) 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. A complete BOSC review is scheduled for FY 2010.

FY 2010 Activities and Performance Plan:

In FY 2010, 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. Efforts also are being directed at integrating concepts of water availability, energy-water interdependencies, and the sustainability of water systems in the context of the program's long-term goals. The thematic areas of the program are: assessment tools, exposure/health effects, source water protection, treatment strategies, and water distribution/storage/infrastructure systems.

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

34 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).

35 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).

36 National Research Council. *Classifying Drinking Water Contaminants for Regulatory Consideration.* Washington, D.C.: The National Academies Press (2001).

37 National Academies of Science. *From Source Water to Drinking Water: Workshop Summary.* Washington, D.C.: The National Academies Press (2004).

38 National Research Council. *Indicators for Waterborne Pathogens.* Washington, D.C.: The National Academies Press (2004).

39 National Research Council. *Public Water Supply Distribution Systems: Assessing and Reducing Risks--First Report.* Washington, D.C.: The National Academies Press (2005).

40 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.

41 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.

42 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

Unregulated Contaminant Monitoring Rules and for evaluating the effectiveness of treatment techniques. Exposure biomarkers for use in exposure and epidemiology studies, as well as measurement methods (recovery, viability, speciation) will be improved for compliance monitoring and Contaminant Candidate List (CCL) classification and prioritization. FY 2010 efforts will:

- Integrate sample collection, concentration, purification and detection for real-time quantitative detection methods for CCL related organisms.
- Characterize virulence and/or infectivity of potential CCL pathogens.
- Develop microarray methods to detect cyanobacteria and cyanotoxin genes in drinking water reservoirs.
- Develop and validate a virulence-factor Biochip for screening and identification of select CCL pathogens (E. Coli, Cryptosporidum, and Norovirus) and other waterborne microorganisms.
- Evaluate virulence factor activity relationships (VFARs) in characterizing CCL pathogens.

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. Work in FY 2010 will focus on:

- Factors that influence the toxicity of Disinfection By-Product Mixtures.
- Health effects of select cyanobacterial toxins, nanoparticles.
- Results from a population-level study to assess the relationship between measured and modeled parameters of a metropolitan water distribution system and the incidence of gastrointestinal disease.
- Completing research on arsenic exposure and health effects; bioavailability of arsenicals associated with target foods biotransformation pathways due to gastrointestinal microflora.
- Characterizing biomarkers of virus exposure through drinking water consumption.

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 2010 with increasing emphasis on underground injection control (UIC), aquifer storage and recovery (ASR), and ground water recharge. Research will continue toward answering key questions associated with minimizing risks of geologic sequestration of carbon on underground sources of drinking water (USDW). Studies are underway to develop models to assess risk associated with underground injection of carbon dioxide, field monitoring techniques to assess leakage of injected carbon dioxide into sources of drinking water, and tools to support implementation aspects of the proposed UIC rule on geological sequestration.

Treatment Strategies: The emphasis of the research will be on evaluating existing treatment strategies for control of CCL and other emerging contaminants, development of point-of-

use/point-of-entry systems for small systems, implementation issues for regulated contaminants, and preventing simultaneous compliance issues. Major focus areas include disinfection efficacy, control of emerging contaminants, corrosion control, and optimizing energy and water efficiency in producing and delivering potable water.

Distribution/Storage/Infrastructure: Research efforts will be directed at integrated research on water supply distribution systems and infrastructure. The Agency is participating in a "Distribution System Research and Information Collection Partnership" to develop a prioritized research agenda focused on decision relevant issues related to cross connections, back-flow, intrusion, main breaks and repairs, biofilms, nitrification, and solids accumulation. This work is in support of the revisions to the Total Coliform Rule (TCR) and the next round of 6-year review. Studies will be conducted to better understand the growth and colonization of viral, bacterial and protozoan pathogen in distribution systems including the role of free-living amoebae in fate, transport and infectivity; nitrification reactions that occur in distribution systems, accumulation and mobilization of contaminants from distribution systems including lead, arsenic, and vanadium, and disinfection. Research started in FY 2007 under the "Water Infrastructure for the 21st Century" Initiative, will continue in FY 2010 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. Anticipated research products include:

- Advanced condition assessment for drinking water mains
- Microbial characterization of distribution systems
- Nitrification reactions in drinking water distribution systems.
- Evaluation of childhood febrile and gastrointestinal health effects associated with contaminated ground water and distribution system vulnerabilities

Within the five 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, potential revisions to the Lead and Copper rule, etc). 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 continue 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.

To improve program management efforts, 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. The program collected initial long-term measurement data during its mid-cycle BOSC review in

May 2007, and will collect formal long-term measurement data during its comprehensive BOSC review scheduled for FY 2010.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned methodologies, data, and tools delivered in support of EPA's Office of Water and other key stakeholders needs for developing health risk assessments, producing regulatory decisions, implementing new and revised rules, and achieving simultaneous compliance under the Safe Drinking Water Act.	100	100	100	100	%

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned risk management research products delivered to support EPA's Office of Water, Regions, water utilities, and other key stakeholders to manage public health risks associated with exposure to drinking water, implement effective safeguards on the quality and availability of surface and underground sources	100	100	100	100	%

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	of drinking water, improve the water infrastructure, and establish health-based measures of program effectiveness.					

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 2010, the program will strive to complete 100 percent 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$412.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$173.0) These resources will fund research to characterize and manage health risks associated with the sources, production and distribution of drinking water for public water supplies.
- (+$246.0) This represents a realignment of funds associated with equipment purchases and repairs across Agency research programs.
- (+$205.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$53,343.0***	***$59,291.0***	***$62,454.0***	***$3,163.0***
Total Budget Authority / Obligations	$53,343.0	$59,291.0	$62,454.0	$3,163.0
Total Workyears	237.7	236.8	236.8	0.0

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[43] (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 independent expert scientists and engineers, evaluated 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 Water program 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 Water program, the program's primary client, in developing their research priorities."[44]

FY 2010 Activities and Performance Plan:

Research efforts within the water quality research program are aligned with the Agency's strategic objectives44 under the CWA to:

- promulgate protective standards,
- identify contaminant contributions to impaired waters,

43 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

44 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

- use tools to restore and protect the nation's waters with due consideration to minimizing impacts from point and non-point sources of contamination, and
- maintain and improve the nation's aging infrastructure.

In FY 2010 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 [e.g., pharmaceuticals and personal care products (PPCPs) and 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. In FY 2010, research will continue to help provide the data and analysis to support revisions to recreational water 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 the TMDL allocation processes with the development of information and integrated water quality and quantity modeling and monitoring tools, including tools for targeting and prioritizing monitoring and restoration. This research supports assessing condition, diagnosis of impairment, mitigation, and achieving success, including support for CWA Section 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 (complementary 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 Agency's Ecological Research program to enhance our understanding of the benefits and value of ecological services); and technical assistance for watershed modeling, decision support tools, and monitoring the biological condition of the nation's aquatic resources. Key users of these products will be at the regional, state, and local level.

Research will continue on the development of microbial source tracking (MST) indicators that can be used to distinguish human from non-human pathogens and amongst different sources of non-human pathogens (e.g., cows versus geese). Such work is generally important to supporting improved TMDLs that will more accurately identify the sources of pathogens that must be managed to meet water quality standards. In particular, the results of this research support the development of revisions to the ambient water criteria for recreational settings.

In addition, existing models of pollutant transport and fate will be expanded to allow the evaluation of alternative strategies for restoring and 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 ecosystems and for demonstrating the effectiveness of protecting designated uses from future development or other impacts.

In FY 2010, EPA's research and development program will put increased focus on wet weather flow problems in urban areas, looking particularly at how green infrastructure options could improve efficiency. Many municipalities are faced with multi-million dollar costs associated with controlling wet weather flow and particularly combined sewer overflows (CSOs). Green infrastructure options have the potential to reduce costs of control compared to traditional "grey" infrastructure, but are less proven.

Green infrastructure has the potential to provide a number of other environmental and economic benefits in addition to improving the water quality outcomes. They include the recharge of ground water and surface water supplies; cleaner air; reduced urban temperatures; reduced energy demand; carbon sequestration; reduced flooding; community benefits such as improved aesthetics, improved human health, recreational and wildlife areas; new jobs creation; and potential cost savings associated with lower capital costs for paving, curb and gutter, and building large stormwater collection and conveyance systems. [45] However, design criteria and guidance information is lacking for the placement installation, operation and maintenance for many of the green infrastructure alternatives. Additional research is also needed to collect information on measuring the environmental and economic improvements so that technical information can be provided to communities nationwide.

45 Testimony of Michael Shapiro, Acting Assistant Administrator for Water, U.S. Environmental Protection Agency; before the Subcommittee on Water Resources and the Environment Committee on Transportation and Infrastructure; United States House of Representatives; March 19, 2009.

Research will be conducted on application of green BMPs in different urban settings, on incentives for private land owners to put such units on their sites, and on effective monitoring of the water quality improvements that result.

The preservation and restoration of 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 release of pathogens and pathogen indicator organisms from manure-treated farmlands is needed to ensure that environmentally responsible practices are available to the agricultural community, and will continue. Field studies at concentrated animal feed operations (CAFOs) will determine the magnitude of releases to ground waters and surface waters and evaluate control options with emphasis on pathogen and nutrient contaminants. This work will support the development of effective TMDLs and National Pollutant Discharge Elimination System (NPDES) permits.

Source Control and Management (SCM) 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.

In FY 2010, research will continue on 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.

Research will continue on the public health and environmental risk posed by of microbial releases from publically owned treatment works (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.

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 (a subcomponent of aging water infrastructure research; below) and on the variation of BMP cost and performance with geographical and other major influencing variables. EPA will continue to support the Pathogens Equivalency Committee (PEC) which evaluates innovative approaches to sewage sludge treatment for the purposes of determining whether they meet requirement of Part 503 (biosolids) regulations.

The "Water Quality Research." program has implemented several actions to improve management and performance. 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of WQRP publications rated as highly cited publications.	15.2	15.7	No Target Provided (biennial)	16.7	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of WQRP publications in high impact journals.	13.8	14.7	No Target Provided (biennial)	15.7	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs (in support of	100	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	WQRP long-term goal #3) delivered					

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 FY 2010, the program plans to accomplish its goals of completing and delivering 100 percent 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 percent. In achieving these targets, the program will better enable EPA to meet its goals.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$3,000.0) This increase will fund the expansion of green infrastructure research to assess, develop and compile scientifically rigorous tools and/or models that will be used by EPA's Water program, States, and municipalities. This research will address region and climate-specific concerns and provide technical information that can be used to help quantitatively determine the benefits of green infrastructure and reduce the uncertainty involved in using it for compliance purposes. Research will also be conducted to advance the use of gray water, particularly in areas facing water shortages, to help reduce the burden on water supplies and infrastructure.

- (+$328.0) This provides resources in the area of Criteria Development and Watershed Management and Source Control.

- (+$152.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

- (+$98.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$415.0) This represents a realignment of funds associated with critical equipment purchases and repairs across Agency research programs.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$34,569.9***	***$39,350.0***	***$45,133.0***	***$5,783.0***
Hazardous Substance Superfund	$6,799.6	$3,377.0	$3,395.0	$18.0
Total Budget Authority / Obligations	$41,369.5	$42,727.0	$48,528.0	$5,801.0
Total Workyears	187.9	178.6	188.6	10.0

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). EPA's Human Health Risk Assessment (HHRA) program generates health assessments that 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. EPA's human health risk assessment program provides the scientific foundation for the Agency's actions to protect Americans' public health and the environment.

Three complementary areas comprise the Human Health Risk Assessment program:

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

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 are also disseminated to the public on the IRIS internet database.[46] 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 2008, 548 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 externally peer reviewed and disseminated through the published literature as well as EPA web sites, and are used in the development of IRIS assessments.

46 Available at: http://www.epa.gov/iris.

Integrated Science Assessments: Congress requires that EPA regularly summarize the state-of-the-science for criteria air pollutants – ozone, particulate matter, sulfur and nitrous oxides, carbon monoxide, and lead – to assist EPA's Air and Radiation program 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[47] (MYP), which details the 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 and are linked to the program's annual and long-term performance measures. The MYP also outlines coordination efforts with a number of EPA research strategies and plans[48] (*e.g.,* Human Health Research Strategy, Drinking Water MYP, Clean Air MYP) to obtain the information necessary to inform risk assessment outputs and programmatic decisions.

In FY 2008, an evaluation by EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of independent expert scientists and engineers—concluded that the Human Health Risk Assessment program "has been highly responsive to the needs of the program offices and regions," producing products that are critical to EPA's regulatory mission and form the foundation for regulatory decisions and policies. This prospective and retrospective review evaluated the program's relevance, quality, performance, and scientific leadership. The evaluation found that the program is making substantial and satisfactory progress in each of the above areas based both on clearly defined milestones and by providing the additional support requested by EPA programs to respond to unscheduled emergency needs. The BOSC's evaluation and recommendations are being used to help plan, implement, and strengthen the program over the next five years.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA requests $28.7 million for IRIS and other health hazard assessments, which includes an increase of $5.0 million and ten work years to allow the IRIS program to increase the annual output of new IRIS assessments and updates of existing IRIS assessments. These additional resources are necessary to increase the number of completed critical risk assessments, in addition to decreasing the backlog of draft assessments and better meet the priority assessment needs of the Agency. EPA will continue to evaluate the process over time in response to the Government Accountability Office's (GAO) High Risk Series report identifying weaknesses in the IRIS process to ensure that the program effectively meets the needs of EPA, the Federal government, and the American public.

In the area of risk assessment guidance, methods and models, the Agency requests $9.4 million in FY 2010. This continued investment will make improvements in the following areas:

- Approaches for applying mode of action information in risk assessments;

47 Available at: http://www.epa.gov/ord/htm/multi-yearplans.htm

48 Available at: http://www.epa.gov/ord/htm/researchstrategies.htm and http://www.epa.gov/ord/htm/multi-yearplans.htm.

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

In addition, EPA requests $7.1 million in FY 2010 for the Human Health Risk Assessment program to conduct Integrated Science Assessments (ISA). These funds will support work on the following key assessments:

- Continuing to improve and implement a process to identify, compile, characterize, and prioritize new scientific studies for ISAs of criteria air pollutants, as a mandated prerequisite to EPA's review of the NAAQS and effectively meet court ordered deadlines to provide these assessments; and
- Delivering final ISAs for Particulate Matter and Carbon Monoxide
- Delivering final ISAs for Particulate Matter and Carbon Monoxide and release *external review draft* ISAs for Ozone and Lead program to contribute to EPA's Office of Air and Radiation'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 program to make significant progress toward its long-term goals of providing state-of-the-science health hazard assessment information. The ISAs provide important scientific analytics in support of many of EPA's important rulemakings.

The Human Health Risk Assessment program is taking a number of steps to further improve itself. The program is currently 1) revising its management controls to better incorporate both programmatic priorities and the level of effort required to increase the number of IRIS assessments completed; 2) revising its efficiency measure and using it to improve performance management; and 3) investigating alternative approaches for measuring progress related to providing timely, high quality scientific assessments. The program has taken action on each of these recommendations. For example, the program is examining how best to expand its efficiency measure to ensure consistency with other approaches being developed across EPA's Research and Development program.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Average cost to produce Air Quality Criteria/Science Assessment documents.	Available FY 2010	3,796K	4,253K	4,003K	Average Cost

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of HHRA Technical Support Documents.	89	90	90	90	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 and communities.

The program gauges its annual and long-term success in meeting this objective by assessing its progress on several key measures. The program continues to track the percent completion of key milestones. In response to GAO recommendations to streamline the current IRIS process, the program's newest measures, which are reported in EPA's quarterly EPA*stat* report, will be revised and the targets for outputs increased appropriately.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$5,000.0 / +10.0 FTE) This reflects an increase to support the Integrated Risk Information System (IRIS), including 10 FTE and associated payroll of $1,390.0. The increment would allow the IRIS Program to better meet the priority assessment needs of the Agency by increasing the annual output of new IRIS assessments and updates of existing IRIS assessments. This would enable the IRIS program to focus on its large backlog of assessments for chemicals previously identified by EPA programs as priority needs. A further benefit would be the development and application of new approaches to human health risk assessment in collaboration with EPA's Prevention, Pesticides, and Toxic Substances program and the Agency's Computational Toxicology program.

- (+$408.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$190.0) This reflects resources to fund research in the area of risk assessment guidance, methods and model development.

- (+$185.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$13,987.1***	***$15,156.0***	***$19,602.0***	***$4,446.0***
Total Budget Authority / Obligations	$13,987.1	$15,156.0	$19,602.0	$4,446.0
Total Workyears	37.8	32.7	32.7	0.0

Program Project Description:

Computational Toxicology is the application of mathematical and computer models to help assess the risk chemicals pose to human health and the environment. Supported by advances in informatics, high-throughput screening, and genomics, computational toxicology offers scientists the ability to develop a more detailed understanding of the risks posed by large numbers of chemicals, while at the same time reducing the use of animals for toxicological testing.

Established in 2003, EPA's Computational Toxicology Research Program (CTRP) has the long-term goal of improving understanding about the relationship of source to outcomes (e.g. chemical to health effect) by providing tools for screening and prioritizing chemicals, and for improving the pace and quality of risk assessments. The National Center for Computational Toxicology (NCCT)[49] was established in FY 2005 to play a critical coordination and implementation role in these activities across the Agency. The strategic directions of the CTRP are highly consistent with the National Research Council report "Toxicity Testing in the Twenty-first Century: A Vision and a Strategy"[50], and includes several substantial and innovative projects in chemical screening and prioritization, informatics, and systems biology[51] .

The CTRP also includes three EPA-funded Science to Achieve Results (STAR) centers in bioinformatics and computational toxicology. In addition, the STAR Program has issued a solicitation to fund one additional center in FY 2009 that will integrate *in vitro* biochemical and cellular response data with computational models of core processes that drive embyronic development, including patterning, morphogenesis, selective growth and cell differentiation. This research will lead to a more detailed understanding of biological pathways that are critical to understanding environmental risk to human development.

All of these CTRP efforts are being coordinated with other Federal partners through the Tox21 initiative, in order to hasten this transformation in environmental health protection[52]. The CTRP efforts are at the core of *The U.S. Environmental Protection Agency's Strategic Plan for*

49National Center for Computational Toxicology http://www.epa.gov/ncct/

50Toxicity Testing in the Twenty-first Century: A Vision and a Strategy http://dels.nas.edu/dels/rpt_briefs/Toxicity_Testing_final.pdf

51 http://www.epa.gov/ncct/pdf/ORD_NCCT_Imp_Plan.pdf

52 Collins et al., 2008, *Science;* http://www.sciencemag.org/cgi/reprint/319/5865/906.pdf

Evaluating the Toxicity of Chemicals[53]. The *Strategic Plan* and the pending CTRP Implementation Plan for FY2009-2012 highlight the unique capabilities of EPA to provide the necessary science to transform how chemical and other risk assessments are performed, and thus support improved management of environmental contaminants and chemical risk.

Scientific review of the CTRP is conducted by EPA's Board of Scientific Counselors (BOSC), a Federal advisory committee comprised of independent expert scientists and engineers. The third review of the CTIRP by the BOSC subcommittee occurred in December 2007. This review focused specifically on the topics of information management, high-throughput screening, and systems biology. In its report [54] the BOSC expressed strong support for the ToxCast, ExpoCast, ACToR, and the Virtual Liver and Virtual Embryo research projects. These projects are discussed further in the following section. Together, these efforts are providing the foundation to advance high-throughput toxicology and risk assessment that will close the critical data gaps present for many chemicals of concern to the EPA.

FY 2010 Activities and Performance Plan:

Consistent with the *U.S. Environmental Protection Agency's Strategic Plan for Evaluating the Toxicity of Chemicals,* these funds will support the next CTRP Implementation Plan for FY 2009-2012, which will focus on three key areas in FY 2010: 1) chemical prioritization and categorization tools; 2) information technology; and 3) systems biology models. In addition, emphasis will be placed on transitioning these computational tools for use by EPA's regulatory program offices.

Chemical Prioritization and Categorization Tools

A key programmatic need for EPA is improving its capability to predict which chemicals are in greatest need of toxicology testing, and which endpoints would be the most important to examine. To address this need, in FY 2007, EPA launched its ToxCast research program, which employs new automated laboratory methods, developed by the pharmaceutical industry, to test chemicals for their impacts on cell function in less time and for less cost than animal studies. This "high-throughput screening" (HTS) will enable testing of a backlog of chemicals that have not previously been tested, or have not been thoroughly tested, to determine if they are toxic to humans or the environment.

In Phase I of ToxCast, the Agency obtained high-throughput screening data on 320 chemicals with known toxicological profiles. HTS techniques rapidly and efficiently test large batches of chemicals for bioactivity utilizing robotics and automation applied to both molecular biology and assay methods. To date, ToxCast has generated more than 600 endpoints on each chemical. ToxCast efforts have been expanded by EPA partnerships with NIH via the Tox21 collaboration. The Tox21 partnership brings together the hundreds of ToxCast assays, with the thousands of chemicals being tested at the NIH Chemical Genomics Center[55].

53 National Service Center for Environmental Publications P.O. Box 42419 Cincinnati ,OH 45242 # 100K09001

54 http://www.epa.gov/osp/bosc/pdf/ctox0809rpt.pdf

55 Collins et al., 2008, *Science;* http://www.sciencemag.org/cgi/reprint/319/5865/906.pdf

With the increase in the FY 2010 President's request, efforts will support Phase II of ToxCast to profile the activities of up to 500 additional compounds in order to broaden chemical diversity and evaluate the predictive nature of bioactivity signatures. With successful completion of Phase II (scheduled for FY 2012), ToxCast technologies can be applied to chemicals and other materials of concern to EPA program offices (e.g. nanomaterials and pharmaceuticals).

In FY 2010, a new effort, ExpoCast, will be launched. Whereas ToxCast provides information on the biological activity of various chemicals, ExpoCast will employ models that use data from ToxCast and other sources to predict the impacts of chemical exposure on the human body. ExpoCast will also be a high-throughput system capable of generating a great deal of information in a short period of time.

Information Technology

Advanced information management systems are needed to mine existing data for patterns, and to appropriately place new chemicals of unknown hazard within the context of data on existing chemicals. These advanced systems allow the integration of data from many different domains of toxicology, and allow for efficient expansion with information on new chemicals and other materials.

EPA has developed several advanced data management applications. The Aggregated Computational Toxicology Resource project (ACToR)[56], is a public, web-based resource that currently has information from over 200 sources on over 500,000 chemicals and other substances. ACToR organizes information from various data generation efforts including 1) NCCT's ToxCast and ExpoCast programs; 2) EPA's Toxicology Reference Database (ToxRefDB)[57] and 3) the Tox21 high-throughput screening collaboration of EPA and NIH. These data generation and management systems will be expanded throughout FY 2010.

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 2010, this research will continue to: (1) provide standards for developing, documenting, archiving, and accessing quantitative mathematical models; (2) utilize systems-modeling approaches for the latest biological, chemical, and exposure data for quantitative risk assessment; (3) 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 (4) implement the Virtual Liver and Virtual Embryo Projects. Collectively, these elements will provide a framework that integrates mechanistic information and data for predicting the risk of adverse outcomes in humans through dynamic simulation.

56 http://actor.epa.gov/actor/faces/ACToRHome.jsp

57 http://www.epa.gov/ncct/toxrefdb/

Performance Targets:

Work 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. Currently, there are no formal performance measures for this specific Program. However, the NCCT develops annual research milestones as part of it's multi-year implementation plans, and tracks and manages performance though the timely completion of those milestones.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$5,000.0) This increase would enhance modeling efforts to provide regulatory offices with detailed hazard assessment profiles on thousands of chemicals of concern, as well as information on human exposure potential, including chemical screening and prioritization, and toxicity pathway-based risk assessment (i.e., accelerate efforts to develop the virtual liver and the virtual embryo, and initiate planning for the virtual cardiopulmonary system). Specifically, this higher level of funding will provide for the high-throughput screening of up to 200 additional chemicals (i.e., a total of 500 instead of 300 chemicals in Phase II) in the ToxCast program, with complementary exposure predictions from ExpoCast for some of these chemicals, and the deployment of this information in databases with supporting analysis tools, via computer programs and Agency websites.

- (+$133.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

- (+$121.0) These resources would fund research to provide predictive tools for risk assessment.

- (-$59.0) This represents a realignment of funds associated with equipment purchases and repairs across the Agency's research programs.

- (-$749.0) 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:

TSCA; FIFRA; FQPA; SDWA; ERDA.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$11,158.9***	***$11,486.0***	***$11,442.0***	***($44.0)***
Total Budget Authority / Obligations	$11,158.9	$11,486.0	$11,442.0	($44.0)
Total Workyears	53.3	50.1	50.1	0.0

Program Project Description:

The Endocrine Disruptors Research program provides direct support to EPA's endocrine screening and testing programs (mandated under the Food Quality Protection Act of 1996 and the Safe Drinking Water Act Amendments[58] of 1996) by evaluating current testing protocols and developing new protocols to evaluate potential endocrine effects of environmental agents. The research program also 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. In addition, the program develops risk management tools to prevent or mitigate exposures to endocrine disrupting chemicals (EDCs). Research assists decision-makers in reducing and preventing exposure of humans and ecosystems to endocrine disruptors. EPA's Endocrine Disruptors Research program provides the scientific foundation for the Agency's actions to protect Americans against unreasonable risk from exposure to toxics.

Research is guided by the Endocrine Disruptors Research Plan, which was developed with participation from major research clients and outlines research needs and priorities.[59] The Agency also maintains a multi-year plan (MYP)[60] for Endocrine Disruptors research that outlines steps for meeting these needs, as well as annual performance goals and key research outputs for evaluating progress.

Scientific review of the Endocrine Disruptors Research Program (EDRP) is conducted by EPA's Board of Scientific Counselors (BOSC), a Federal advisory committee comprised of independent expert scientists and engineers. A BOSC subcommittee conducted an evaluation of the EDRP from September to November 2007 and commended the progress and direction of the research.[61] The subcommittee rated the overall progress of the EDRP program as "*exceeds expectations.*"

58 SDWA Section 1457.

59 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.

60 U.S. EPA, Office of Research and Development, *Multi-Year Plan for Endocrine Disruptors (draft)*. Washington, D.C.: EPA (2007). Available at: http://www.epa.gov/ord/npd/pdfs/Draft-EDCs-MYP-091407.pdf.

61 U.S. EPA. Office of Research and Development. EDC Research Program Review. Washington, D.C. (2008)
Available at: http://www.epa.gov/osp/bosc/pdf/edcmc0804rpt.pdf.

The subcommittee noted that "this program has established itself as a leader in several areas of EDCs research. It has leveraged expertise across the Agency and with other federal and academic scientists; it has been quick to respond and adapt its focus and research questions to the rapidly changing research landscape of EDCs; and it has developed an excellent new MYP. The EDRP has accomplished a remarkable amount in the face of diminishing financial resources." In reviewing EPA's response to the recommendations[62] from the previous BOSC review, the subcommittee acknowledged that the research program "partnered extensively with other agencies with interests in EDCs." The subcommittee remarked that "EPA has been a leader in the development of genomics, proteomics, metabolomics, computational modeling, and whole animal endpoints to identify biomarkers of exposure to EDCs."

FY 2010 Activities and Performance Plan:

In FY 2010, resources will continue to be used to develop, evaluate, and apply innovative DNA microarray and other state-of-the-art analytical methods for endocrine disrupting chemicals. 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 for use in the Endocrine Disruptors Screening Program. Using genomics and related approaches to continue developing improved molecular and computational tools can help prioritize chemicals for screening and testing that will lead to a reduction of animal testing. This work has been highlighted as a priority for cross government investment. It is also consistent with the National Research Council's 2007 report on "Toxicity Testing in the Twenty-first Century: A Vision and a Strategy," which recommends that the Agency move toward using new technologies to prioritize and screen for chemicals.[63]

Other important areas of research to be continued in FY 2010 include:

- Developing and improving the final two Tier 2 screening assays, the fish life-cycle and the amphibian growth and reproduction assays – a high priority for the Agency in implementing the Endocrine Disruptor Screening Program (EDSP);
- Developing the next generation of EDSP assays by applying newer computational and molecular approaches to develop models that predict a chemical's ability to cause endocrine disruption;
- Determining classes and potencies of chemicals that act as endocrine disruptors, characterizing modes of action and the shape of the dose-response curve, developing approaches for assessing cumulative risk, and developing methods for 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

62 U.S. EPA, Office of Research and Development, EDC Research Program Review. Washington, D.C. (2005).
Available at: http://www.epa.gov/osp/bosc/pdf/edc0504rpt.pdf.

63 National Academies Press (2007). Available at: http://www.nap.edu/catalog.php?record_id=11970#toc.

- 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 has worked to articulate its research and development priorities to ensure compelling, merit-based justifications for funding allocations in response to assessments of its purpose, performance planning and management.

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, community, and ecosystems, with a focus on endocrine-active pesticides and toxic chemicals.

The program's long-term performance measures are: (1) to provide OPPTS with improved screening and testing protocols for use in implementing the Agency's Endocrine Disruptors Screening Program; (2) 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 (3) to reduce the uncertainty regarding the effects, exposure, 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 EPA's Office of Prevention, Pesticides and Toxic Substances (OPPTS) will validate for use in evaluating the potential for chemicals to cause endocrine-mediated effects.

In 2008, the National Academy of Sciences (NAS) completed a study commissioned by EPA's Research and Development program to address OMB's recommendation to establish outcome-oriented efficiency measures.[64] According to the NAS study, "efficiency" in federal R&D programs is best assessed by using an external expert-review panel to evaluate the relevance, quality, and performance of the research. Considering these findings, the Office of Research and Development (ORD) is engaging its BOSC to evaluate if ORD's research programs are "doing the right research and doing it well."

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$71.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

64 National Academies Press. (2008) Evaluating Research Efficiency at the U.S. Environmental Protection Agency. Available at: http://www.nap.edu/catalog.php?record_id=12150.

- (+$53.0) This provides resources to research in the area of providing a better understanding of science underlying the effects, exposure, assessment, and management of endocrine disruptors.

- (+$29.0) This represents a realignment of funds associated with equipment purchases and repairs across the Agency's research programs.

- (-$197.0) 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; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$9,721.8***	***$9,651.0***	***$10,894.0***	***$1,243.0***
Total Budget Authority / Obligations	$9,721.8	$9,651.0	$10,894.0	$1,243.0
Total Workyears	5.6	2.6	2.6	0.0

Program Project Description:

EPA places a high priority on ensuring that our nation has a large and well-trained scientific and engineering workforce that can address complex environmental issues. To help achieve excellence in science and technology education, EPA offers five programs that encourage promising students to obtain advanced degrees and pursue careers in environmentally related fields. According to a July 2004 publication by the National Science and Technology Council titled *Science for the 21st Century*, beginning in 1998, the U.S. experienced a significant decline in science and engineering doctorates. EPA's fellowships programs help address this decline by educating new academic researchers, government scientists, science teachers, and environmental engineers. They also play a key role in developing a talent pool from which EPA can recruit and hire scientists. EPA fellowships programs are:

Science to Achieve Results (STAR) Fellowship Program:[65] EPA's STAR Fellowship program supports master's and doctoral candidates in environmental studies. Students in the U.S. compete for STAR fellowships through a rigorous review process. The review process is merit based and takes into consideration whether the proposed area of the applicant's research and study will:

- Strengthen the scientific basis for environmental management decisions and practices;
- Produce data, methods, or practices to help the scientific or regulated community to better understand and/or manage complex environmental problems; or
- Provide a focus for future research and technology development in science, engineering, or modeling approaches for assessing and managing environmental risks.

On average, approximately 10 percent of STAR program applicants receive a fellowship. Students can pursue degrees in traditionally recognized environmental disciplines, as well as other fields such as social anthropology, urban and regional planning, and decision sciences. To support these advanced degree-seeking students, EPA provides assistance for up to three years in the form of a stipend ($20,000/year), a research budget ($5,000/year) and tuition assistance (up to $12,000/year). The program has provided new environmental research in physical, biological,

65 For more information, see http://es.epa.gov/ncer/fellow.

health and social sciences, and engineering. At least one student from each of the fifty states, the District of Columbia, and Puerto Rico has received an EPA STAR Fellowship.

Greater Research Opportunities (GRO) Fellowship Program:1 EPA's GRO Fellowship program helps build capacity in universities that receive limited funding for research and development by awarding fellowships to undergraduate students in environmental fields. These institutions receive less than $35 million annually in Federal science and engineering funds. Eligible students receive support for their junior and senior years of undergraduate study and complete an internship at an EPA facility during the summer between their junior and senior years. EPA provides up to $19,250 a year for academic support and $8,000 of support for the three-month summer internship with EPA. In addition to conducting quality environmental research, fellows agree to maintain contact with EPA for at least five years after graduation. EPA uses the information gathered from its fellows to track their success in pursuing advanced degrees in environmental studies and finding a career in science and engineering. Of the fellows who received fellowships between FY 2003 and FY 2006 and reported information to EPA, 78 percent reported that they were working or studying in an environmentally-related field.

Environmental Science and Technology Policy Fellowship Program:[66] In conjunction with the American Association for the Advancement of Science, EPA places qualified technical professionals with a Ph.D. degree or equivalent in EPA headquarters for up to two years to design and work on projects at the interface of science and policy. In this way, fellows develop a better understanding of the needs of policy-makers and how to make their research more meaningful to those who depend on it. EPA's interests are wide ranging, and fellows can work on any environmentally relevant issue within EPA's jurisdiction. Fellows are awarded annual stipends ranging between $70,000 and $95,000. Since the program began in 2005, EPA has hosted 263 fellows, and these fellows have been placed in every program office within EPA. Currently, EPA hosts roughly a dozen fellows each year.

Environmental Public Health Fellowship Program:[67] To enhance the training of highly qualified and motivated public health professionals, EPA, in conjunction with the Association of Schools of Public Health, offers professional development opportunities to graduates of accredited U.S. schools of public health who have received at least a Master of Public Health or equivalent degree within the last five years. The goal of the program is to provide real-world experience in environmental public health issues to complement participants' academic training. These fellows are placed in EPA laboratory, regional, program or research management offices across the country. Fellows are awarded annual stipends of up to $50,000 and funding to defray health insurance costs and a travel and professional development budget. EPA's goal is to place 32 fellows in EPA headquarters, regional offices, and laboratories each year.

EPA Marshall Scholarship Program:[68] In FY 2005, EPA began a partnership with the government of the United Kingdom under the auspices of the highly regarded Marshall Scholarship program. Since 1953, the Marshall Scholarship program has provided opportunities for highly motivated students to receive support for two years of graduate study in Great Britain,

66 For more information, see http://fellowships.aaas.org/01_About/01_Partners.shtml#EPA.

67 For more information, see http://www.asph.org/document.cfm?page=751&JobProg_ID=1.

68 For more information, see http://www.marshallscholarship.org/applications/epa.

culminating in a Master's Degree. The EPA Marshall Scholarship program extends that opportunity for students who are interested in environmental careers, particularly those fields that address environmental problems of a global nature or benefit multi-lateral efforts. Under this program, eligible students who successfully complete the first two years as a Marshall Scholar may receive up to three more years of support towards the award of a doctoral degree in an environmentally related technical discipline. Marshall Scholars receive approximately $40,000 a year to cover university tuition and fees, a stipend, program-related expenses, and travel to and from the United States.

These five fellowship programs represent a long-term investment aimed at:

- enhancing environmental research and development,
- improving the nation's promotion of green principles, and
- increasing the nation's environmental workforce, post secondary environmentally-related educational opportunities, and environmental literacy.

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."[69]

FY 2010 Activities and Performance Plan:

The Agency proposes $10.9 million for the Fellowships program in FY 2010 which will allow EPA to award approximately 131 new fellowships. It also will provide support for approximately 48 current 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.

EPA has incorporated "Broader Impact Criteria" into its GRO Undergraduate Fellowship program. Broader Impact Criteria also will be incorporated into the next solicitation under the STAR Fellowship program. Broader Impact Criteria require the applicant to address issues other than the intellectual merit of their research proposal. These criteria require an applicant to address, among other things, what broader impacts the applicant may have as a fellow, such as furthering environmental awareness, stewardship, equity, and broadening participation of underrepresented groups in science, technology, engineering, and mathematics (STEM). Incorporating Broader Impact Criteria into EPA's fellowship programs not only strives to enhance the diversity found in the country's scientific community, but also supports EPA's immediate human capital goal to attract and retain a diverse and talented workforce by nurturing the "pipeline" of diverse persons going into environmentally-related fields.

69 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.

Performance Targets:

Work under this program supports EPA's Objective 5.4: Enhance Science and Research. Currently, there are no OMB assessment performance measures for this specific program project, as the program has not been subject to OMB assessment review. However, EPA's Research and Development program will begin an external evaluation of the Fellowships program in FY 2009.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,114.0) This reflects an increase to the STAR Fellowships and other research fellowships. The increase will enable EPA to award approximately 20 additional STAR fellowships to students performing environmental research in physical, biological, health and social sciences, and engineering, which will serve to increase the nation's environmental work force and environmental literacy.

- (+$7.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$122.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

Statutory Authority:

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

Research: Human Health and Ecosystems

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

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$146,871.2***	***$153,760.0***	***$158,310.0***	***$4,550.0***
Total Budget Authority / Obligations	$146,871.2	$153,760.0	$158,310.0	$4,550.0
Total Workyears	500.8	484.9	484.9	0.0

Program Project Description:

EPA's health and ecological research programs provide the scientific foundation for the Agency's actions to protect Americans' public health and environment. The Agency conducts human health and ecosystems research to: 1) identify and characterize environment-related human health problems, determine exposures to and sources of agents responsible for these health concerns, and use public health indicators to evaluate the effectiveness of risk management decisions, and 2) quantify the impacts of human activities on the benefits and services provided by ecosystems, 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 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 Research program and Ecosystem Services Research Program (ESRP) are continually evolving. The Human Health Research program is working to continue its success in "characterizing and reducing uncertainties in risk assessment" while orienting the program toward "developing and linking indicators of risk" along the source-exposure-effects-disease continuum. This information, in turn, is used to demonstrate and measure reductions in human, environmental-related disease incidence or severity resulting from risk management decisions. The program is designed to include research that addresses limitations, gaps, and challenges articulated in EPA's Report on the Environment (2008) and the National Research Council's 2007 report "Toxicity Testing in the 21st Century: A Vision and a Strategy" and 2008 report "Science and Decisions: Advancing Risk Assessment."

In FY 2009, the Ecosystem Services Research Program fully transitioned to its new focus on conserving and protecting ecosystem services through proactive decision-making. This focus synthesizes and builds upon the program's previous accomplishments in quantifying the ecological condition of the nation's aquatic resources, as well as in developing ecological stressor-response models, methods to forecast alternative future scenarios, and methods to restore ecological functions and ecosystem services within degraded systems. By integrating these tools within a common framework to assess ecosystem services, the program can better

investigate and advance opportunities for more quickly achieving desired environmental outcomes at lower cost and with fewer unintended consequences.

Research is guided by the "Human Health Research Strategy"[70] and the "Ecological Research Strategy,"[71] which were developed in collaboration with major clients (*e.g.*, EPA's program and Regional offices). These strategies outline research needs and priorities. In addition, several multi-year plans (MYPs)[72] (*e.g.*, human health, ecological research, and mercury) convey research priorities and approaches for achieving the goals and objectives of protecting communities. MYPs 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 ESRP have both received successful evaluations from EPA's research advisory committee, the Board of Scientific Counselors (BOSC). In March 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."[73] The BOSC also commented that 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.[74] The Human Health Research program was reviewed again in January 2009 and received a preliminary rating of "Meets Expectations" (report expected June 2009).

During its BOSC reviews, the ESRP was recognized as holding a unique position within the federal government for its research to establish and communicate a greater understanding of the value of ecosystem services and their interdependent relationship to human activities and well being (BOSC 2005, 2007)[75]. In 2007, the mid-cycle BOSC review of the ESRP resulted in a rating of "Meets Expectations" for work completed to date.[76] The ESRP name came from a recommendation by the SAB EPEC to adopt a name that better reflects the program's role as the Agency's first integrated research program to address the difficult topic of maintaining, enhancing, and restoring the services provided by the natural environment.

In 2008, EPA's Science Advisory Board's (SAB) Ecological Processes and Effects Committee (EPEC) stated in its review of the Program that the "draft Plan articulates a new strategic direction that focuses on quantifying ecosystem services and their contribution to human health and well-being. The SAB strongly supports this strategic direction and commends the Agency for developing a research program that, if properly funded and executed, has the potential to be transformative for environmental decision making as well as for ecological science. The SAB finds that the research focus on ecosystem services represents a suitable approach to integrate ecological processes and human welfare. The ESRP's focus on ecosystem services can provide a

70 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

71 For more information, see http://www.epa.gov/ord/htm/documents/eco.pdf.

72 For more information, see http://www.epa.gov/ord/htm/multi-yearplans.htm.

73 *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.

74 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://www.epa.gov/osp/bosc/pdf/hhmc0707rpt.pdf .

75 BOSC 2007 http://www.epa.gov/osp/bosc/pdf/ecomc082307.rpt.pdf

76 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

sound foundation for environmental decisions and regulation based on the dependence of humans on ecological conditions and processes."[77]

FY 2010 Activities and Performance Plan:

Human Health Research

In FY 2010, EPA's research under this program is 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 $82 million requested in FY 2010 for Human Health research, $63 million is requested for research in this area. This research will focus on the development of sensitive and predictive methods and models to identify reliable 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 models to predict biological effects based on internal dose methodologies.

EPA will continue to support research on mode of action information that can be used to reduce reliance on default assumptions in risk assessments for individual and related families of chemicals, particularly as related to selection of appropriate dose-response and cumulative risk models and to protection of vulnerable and susceptible populations. Such research will inform the re-evaluation of acceptable levels of arsenic and its metabolites in drinking water, the risk assessments of cancer and non-cancer effects of conazoles and structurally related fungicides, and risks of cumulative exposures to classes of pesticides and to multiple species of water disinfection byproducts. Additional research efforts guided by the National Research Council's report, "Toxicity Testing in the 21st Century: A Vision and a Strategy (2007)[78], will develop emerging molecular and genomic methods, and use "systems biology" approaches to identify critical toxicity pathways, *e.g.*, oxidative stress pathways and receptor-based and signaling pathways (such as those involved in endocrine and neuroendocrine signaling) for characterizing the potential health effects of chemicals (such as particulate matter, metals, pesticides, and chemical contaminants in drinking water).

In addition, FY 2010 research will focus on developing tools for identifying communities (*e.g.*, localities, populations, groups) at greatest risk from exposure to multiple chemicals, identifying and quantifying the factors influencing these exposures, and developing and implementing appropriate risk reduction strategies. Research on intervention and prevention strategies will ultimately be used make decisions which would reduce human risk associated with exposures to single and multiple environmental stressors. Cumulative risk research will develop models and approaches for reconstructing exposures based upon 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 persons, resulting in new protocols

77 EPA-SAB-08-011

78 National Academies Press (2007). Available at: http://www.nap.edu/catalog.php?record_id=11970#toc.

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, including non-chemical stressors, in the exacerbation or pathogenesis of diseases such as asthma that disproportionately impact children and the aging. Emerging risks of long term health effects resulting from early life exposures (e.g., during pregnancy and early childhood) will be examined in laboratory animal models and children's cohort studies.

To this end, EPA will continue to support and collaborate with the EPA/National Institute of Environmental Health Sciences (NIEHS)-sponsored Centers for Children's Environmental Health and Disease Prevention Research. This FY 2010 request includes $6 million for EPA to support advanced epidemiological research on the impact of environmental factors on children's health. Beginning in FY 2010, the Science to Achieve Results (STAR) grants program will fund both traditional and formative centers.[79] These centers were highlighted in the 2009 BOSC subcommittee review, which judged EPA's children's health program to "Exceed Expectations."

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, as summarized recently in the EPA report "A Decade of Children's Environmental Health" (2007). 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. Additional and related research supported by STAR grants and within EPA's in-house research program is developing methods and models for community based risk assessment, including the impacts of non-chemical stressors.

Finally, in FY 2010, 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, especially those relevant to children and older populations. Research on new tools to measure the effectiveness of regulatory decisions, such as upgrades to water treatment facilities based on the incidence of infectious disease from waterborne pathogens, will continue. In response to gaps identified in EPA's Report on the Environment (2008), EPA will move toward integrating a range of valid and predictive bioindicators of exposure, susceptibility and effects to develop approaches to assess public health impacts of regulatory decisions. These efforts include developing and validating novel environmental health outcome indicators in community settings through the STAR grant program. This aspect of the Human Health Research program received

79 For more information, see http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-08-002.html.

a preliminary rating of "Exceeds Expectations" from the 2009 Human Health BOSC subcommittee review.

EPA's Human Health Research program is greatly enhanced by the STAR program's competitive, peer-reviewed grants program. The STAR program has funded and will continue to fund an array of outstanding grantees that fill unique needs for exposures science, epidemiologic, and community-based participatory research on environmental public health outcomes of great concern, especially for vulnerable lifestages and populations like children and Tribal communities. For example, the program will continue to fund research to develop and validate predictive bioindicators of exposure, susceptibility, and effects that are needed to develop approaches to assess public health impacts of regulatory decisions, including developing environmental health outcome indicators. In addition, given the heightened interest in documenting the benefits of green building practices, the program will create opportunities to examine the impact of green schools on the health and performance of students and teachers.

A 2005 performance review of the "Human Health Research" program found that it had a focused design, meaningful performance measures, and that the program's research results were being used to reduce uncertainty in risk assessment. Since then, and in response to key recommendations, 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.

Ecosystem Services Research

In FY 2010, the total level of funding requested for Ecosystems research is $76 million. Within this is the ESRP multi-media program (FY 2010 Request, $71 million). The ESRP responds directly to numerous scientific and policy reports over the last decade that document the need to conserve irreplaceable services provided by ecosystems (e.g., NAS, 1997[80]; MA, 2005[81]; BOSC, 2005[82]; EPA Stewardship Initiative, 2006[83]; EBASP, 2006[84]; SAB C-VPESS 2007[85]; Restoring Nature's Capital, 2007[86]). The Millennium Assessment (MA) is one of the most comprehensive reports to date, and documented declines in 15 of 24 ecosystem services worldwide.[87]

In FY 2010, the ESRP will provide research critical to improving the policy and management decisions that affect the type, amount, and quality of benefits and services provided by ecosystem functions- including services derived from wetlands and coral reefs, two important ecosystems in which the Agency has regulatory responsibilities or other ongoing activities. The program will initially focus on methods development for a suite of ten ecosystem services. This

80 "NAS 1997" = Building a Foundation for Sound Environmental Decisions, Chapter 4: EPA's Position in the Broader Research Enterprise, National Academy of Sciences, 1997. available at http://www.nap.edu/openbook/0309057957/html/49.html

81 http://www.millenniumassessment.org

82 BOSC 2005 http://www.epa.gov/osp/bosc/pdf/eco0508rpt.pdf

83 www.epa.gov/epainnov/pdf/rpt2admin.pdf

84 US EPA. 2006. Ecological Benefits Assessment Strategic Plan. EPA-240-R-06-001. U.S. Environmental Protection Agency, Office of the Administrator, Washington, DC.

85 http://www.epa.gov/sab/07minutes/c-vpess_06-12-07_minutes.pdf

86 Restoring Nature's Capital: An Action Agenda to Sustain Ecosystem Services, 2007" available at http://pdf.wri.org/restoring_natures_capital.pdf.

87 We define ecosystem services as the products of ecological functions or processes that directly or indirectly contribute to human well-being, or have the potential to do so in the future. This definition provides a broad interpretation of ecosystem services to characterize services that may or may not be quantifiable.

systems-based approach will create ways to examine how a suite of ecosystem services responds to multiple stressors, using both prospective scenario analyses as well as monitoring frameworks to empirically assess changes in ecosystem services over time.

The ultimate goal for the ESRP is that decision-makers routinely use information and methods developed by this program to make proactive policy and management decisions that protect the environment and human well-being by conserving and enhancing ecosystem services at local, regional, and national scales. To accomplish this, the ESRP will conduct research using several complementary research themes:

1. defining ecosystem services and their implications for human well-being and economic 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 a decision support framework that enables decision-makers to integrate, visualize, and maximize diverse data, models and tools so they can anticipate and understand the likely consequences of management decisions on the sustainability of ecosystem services, their economic and non-monetary value, and their role in maintaining human well-being.

In addition, in FY 2010 the ESRP will examine ecosystem services from three distinct perspectives:

(a) *Pollutant based:* examining the effects of pollutants on ecosystem services; in this case, reactive nitrogen, which has implications for several nationally important issues, including upcoming rules for air emissions of NOx/Sox, and NAAQS; hypoxia in the Gulf of Mexico; contribution to greenhouse gases; and management of non-point pollution sources from agricultural and other lands.
(b) *Ecosystem based:* examining how stressors affect the suite of ecosystem services derived from wetlands and coral reefs, two important ecosystems for which the Agency has regulatory responsibilities.
(c) *Place-based* assessments at five locations: the Willamette River Basin, OR; Tampa Bay, FL; the Coastal Carolinas; the upper Midwest U.S., and an arid-land Southwest U.S. study. These place-based studies are done in collaboration with stakeholders and illustrate how local, state, and Regional decision-makers can use alternative future scenarios to proactively conserve and enhance ecosystem services. These study locations represent a spectrum of physiographic and socioeconomic characteristics with a variety of drivers of ecosystem change operating at local, regional, and national scales, as well as different types and magnitudes of potential impacts resulting from resource management decisions.

There will be greatly expanded opportunities in FY 2010 to collaborate with non-traditional partners within and outside of EPA because the ESRP incorporates both natural and social sciences. The ESRP has already spurred significant advances in creating a unique, cross-disciplinary, broadly applicable research program. In collaboration with Agency partners, the ESRP has identified five 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);
- Create credible scientific foundations for market incentives (e.g., for ecosystem services trading or for investments in conservation); and
- Identify the "art of the possible;" that is, to explore how policy makers and managers can use this information to simultaneously address multiple environmental issues, indentify trade-offs, and reduce conflict in strategies to achieve desired environmental outcomes.

The ESRP research also supports the *EPA Ecological Benefits Assessment Strategic Plan* and Executive Order 12866 which require assessing the costs and benefits of alternative strategies for environmental protection. As a result, the program will improve the scientific basis for performing more comprehensive valuations of ecosystem services than is currently possible by clarifying the economic, social and ecological ramifications of various management options.

Exploratory Grants and Nanotechnology Research

EPA's Nanomaterials Research Program (FY 2010 Request, $17.8 million, including $3.4 million in the Land research program; $13.9 million within the Human Health and Ecosystem research program; and $0.2 million in both the Air and Sustainability research programs) generates information to ensure the safe development, use, recycling and disposal of products that contain nano-scale materials ("nanomaterials"). This research is necessary to support and inform future health and environmental safety decisions. The EPA research program currently focuses on five nanomaterials: carbon tubes and fullerenes, cerium oxide, iron, silver, and titanium dioxide. These nanomaterials, based on analyses by the Organization for Economic Cooperation and Development (OECD) and EPA, are most likely to be found in products and, therefore, potentially be present in the environment. EPA research will determine whether these materials present a potential hazard or exposure over their life cycles, and how these materials, when used in products, may be modified or managed to avoid or mitigate potential human health or cological impacts. The research program is coordinated through the National Nanotechnology Initiative[88] and the OECD's Working Party on Manufactured Nanomaterials.

In FY 2010, guided by EPA's Nanomaterial Research Strategy[89], funds will support research on all five materials that characterizes source-to-dose, including releases and emissions; fate, transport, and transformation; and exposure. This research will identify material types that are found in biological systems at concentrations of potential concern. Targeted effects research will be prioritized based on greatest probability of exposure. Targeted human health and ecological effects research will identify the properties of these materials that are associated with adverse effects. Decision analysis research will be used to evaluate the application of traditional and new

88 For more information, see http://www.nano.gov/.

89 For more information, see http://es.epa.gov/ncer/nano/publications/nano_strategy_012408.pdf

risk assessment methods to nanomaterials, as well as develop approaches for making near- to medium-term decisions on nanomaterial safety in the absence of adequate information for formal risk assessment methodologies.

Green nanotechnology research will link exposure to associated adverse effects and develop prevention and mitigation methods using green chemistry and life-cycle analysis. This research will identify nanomaterial properties that may be modified or develop exposure controls to minimize potential risk from products containing nanomaterials, minimize inputs, and decrease energy usage during production. Also, the Agency's Science to Achieve Results (STAR) exploratory extramural grants program will provide continued support for the joint National Science Foundation-EPA funded Centers for the Environmental Implications of Nanotechnology.[90] In collaboration with other Federal agencies,[91] STAR grants will be solicited for research on the Agency's five priority material types.

Report on the Environment

EPA's Report on the Environment (ROE) plays a critical role in the Agency's strategic planning activities as the Agency develops and implements more transparent and outcome-oriented measures and indicators. This program is based on strong intragency and interagency partnerships with active participation from headquarters and regional offices to ensure that the ROE provides credible and defensible indicators that can best inform planning and decision-making at the Agency. The ROE has a steering committee comprised of Agency Senior managers and representatives from other agencies (USDA, CDC, DoI) who aid in research, preparation and review of indicators. More than 50 percent of the ROE indicators are from other Federal agencies. *EPA's 2008 Report on the Environment* was released in May 2008 as a science-based document that presents trends in the nation's environment and human health. To provide greater transparency on how EPA can improve its ability to assess the nation's environmental quality and human health, and how we use that knowledge to better manage measureable environmental results, EPA released an interactive public website (the "eROE") that is updated quarterly with the most recent environmental indicator data and enhancements (www.epa.gov/roe). The next complete revision and hard copy release of the ROE is planned for FY 2012.

Advanced Monitoring Initiative

In FY 2010 the Advanced Monitoring Initiative (AMI) will work with EPA programs, offices, and regions to bring the best monitoring data and modeling results to improve decisions made by EPA and its partners. It will benefit fully from the interagency U.S. Group on Earth Observations (USGEO) Initiative and with the international community through the "Global Earth Observing System of Systems (GEOSS)," primarily as a user of data and information, through partnerships with Federal agencies. The GEOSS architecture integrates environmental observation, monitoring, and measurements with modeling that directly support health, climate change, air quality, and other social benefit areas. AMI will augment ongoing efforts on data

90 For more information, see http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503124&org=BIO&from=home.

91 For more information, see http://es.epa.gov/ncer/nano/.

collection and management with an Agency-wide effort to provide a "knowledge base," and the tools to access and utilize it effectively.

In FY 2010, AMI will support EPA's three-to-five year cross-agency science priorities, particularly in the areas of climate and energy, environmental contaminants, and modernization of infrastructure. For each priority the AMI initiative will focus primarily on the development of decision support tools needed for implementation.

In addition, to respond to U.S. environmental technology needs, EPA USGEO's approach is to leverage environmental observation, monitoring, measurements, modeling, green technology development, commercialization and verification of development, technology transfer and applications of data, and information collected for decision making and tools. The GEOSS AMI will support environmental technology activities and integrated multi disciplinary research that aligns with the Agency's science priorities.

Mercury Research

EPA has developed a multi-year plan for studying mercury (FY 2010 Request, $4.6 million), including its sources, control and treatment, environmental fate and behavior, impacts on ecological resources, and potential effects on human health.[92] In FY 2010, the program will continue research to evaluate the transport of mercury from power plant stacks, including plume transport and ultimate deposition (e.g. mercury "hot spots") analyses. Although this research began to support the Agency's recently vacated Clean Air Mercury Rule (CAMR),[93] the research will still be needed to inform future mercury regulations. 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of the public health outcomes long term goal	100	100	100	100	Percentage

92 EPA, Office of Research and Development, *Mercury Research Multi-Year Plan* (Washington: EPA, 2003). See http://www.epa.gov/osp/myp/mercury.pdf.

93 For more information, see http://www.epa.gov/air/mercuryrule/.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of the aggregate and cumulative risk long term goal	100	100	100	100	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of mechanistic data long term goal	100	100	100	100	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of the susceptible subpopulations long term goal	100	100	100	100	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percentage of Human Health program publications rated as highly cited papers (top 10% in field) in research journals	25.6%	25.5%	No Target Established (Biennial)	26.5%	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Average time (in days) to process research grant proposals from RFA closure to submittal to EPA's Grants Administration Division, while	250	292	277	250	Days

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	maintaining a credible and efficient competitive merit review system (as evaluated by external expert review)					

The research conducted under these programs supports EPA Strategic Objective 4.4. Specifically, these programs identify and synthesize 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 FY 2010, 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 which are cited as supporting a decision to move away from or to apply default risk assessment assumptions, as was encouraged in the 2005 BOSC review, and in determining the extent to which key research products are cited in EPA decision documents.

In preparation for the FY 2007 mid-cycle and FY 2009 full BOSC reviews of the Human Health program, advanced computer programs were used to search EPA dockets and determine the extent to which scientific publications from this program were used in risk assessments, decision and policy documents, and guidance reports by EPA and other government regulators. Bibliometric analyses also were applied to measure the quality and stature of the journals in which Human Health papers were published and the extent to which these papers were cited in other scientific journals. Thus quantitative measures of both scientific quality and program relevance were incorporated into the BOSC review process.

In FY 2010, the ESRP intends to meet 100% of its planned outputs in support of each long-term goal while increasing program efficiency. As evidence of the utility of its research, the ESRP strives for continued improvements in its bibliometric measures for "highly cited" and "high impact" publications. In addition, based on research previously completed under this program, EPA plans to have forty-five 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. In its ongoing efforts to improve the ecosystem research program, ORD is engaging its BOSC to evaluate if the Agency's research and development programs are "doing the right research and doing it well."

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,188.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$1,257.0) These resources will provide research to inform policy and regulatory decisions for managing chemical risks to human health, including protecting children and other vulnerable groups and achieving environmental justice in American communities, and that affect the type, amount, and quality of benefits and services provided by ecosystem functions which will create ways to examine how a suite of ecosystem services responds to multiple stressors.

- (+$867.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program/Project to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

- (+$639.0) This represents a realignment of funds associated with equipment purchases and repairs across Agency research programs.

- (+$319.0) This is an increase in laboratory fixed costs, including maintenance, operations, utilities, and security costs.

- (-$720.0) This reflects a reassignment of resources to the Office of Air and Radiation (OAR) to continue funding of Temporally Integrated Monitoring of Ecosystems/Long Term Monitoring (TIME/LTM) Programs. The focus of the research in the TIME/LTM programs was on the design of the monitoring program, development of indicators to measure changes, and reporting on those changes as a means of verifying the intended results. The defined goal for both of these research programs has been completed. In FY 2010, the resources are being transferred to the Clean Air Allowance Trading Program within the Air and Radiation program to assume monitoring responsibility for the programs.

Statutory Authority:

CAA; SDWA; ERDDA; CWA; FIFRA; FFDCA; RCRA; FQPA; TSCA; USGCRA.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$11,212.5***	***$13,586.0***	***$13,782.0***	***$196.0***
Leaking Underground Storage Tanks	$567.7	$475.0	$484.0	$9.0
Oil Spill Response	$794.6	$720.0	$737.0	$17.0
Hazardous Substance Superfund	$19,392.9	$20,905.0	$21,401.0	$496.0
Total Budget Authority / Obligations	$31,967.7	$35,686.0	$36,404.0	$718.0
Total Workyears	132.9	154.7	154.7	0.0

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 topics. EPA's Land Research Program provides the scientific foundation for the Agency's actions to protect America's land. Research under this program has been evolving from waste treatment to beneficial re-use, avoidance of more toxic materials, and operation of waste management facilities to conserve capacity and produce energy. To address emerging material management issues, the program made a strategic shift 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),[94] 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. To enhance communication with customers, EPA has developed a Land Research Program web site.[95] The site includes a description of the program; fact sheets (science issues, research activities, and research impacts); research publications and accomplishments; and links to tools and models. 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 underwent an external process evaluation by a subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of independent, expert scientists and engineers—and the BOSC delivered their report to EPA in FY 2009 (December 2008). The BOSC found that, building on the full evaluation in FY 2006, the Land program has an MYP that articulates research goals for meeting

94 EPA, Office of Research and Development, *Land Research Program MYP*. Washington, D.C.: EPA. For more information, see http://www.epa.gov/ord/htm/multi-yearplans.htm#land.

95 For more information, see www.epa.gov/ord/landscience.

the critical needs of the program. The BOSC also indicated that the Land Research program is responsive to recommendations for the implementation of research activities, and as a result of the review, the program received a rating of "exceeds expectations."[96]

FY 2010 Activities and Performance Plan:

In FY 2010, resources will continue to support research to address material management, land reuse and revitalization issues, and emerging research topics. Under land reuse, the program works with states to optimize operations and monitor several landfill bioreactors to determine their potential to provide alternative energy in the form of landfill gas while increasing the nation's landfill capacity. This research directly contributes to Land Restoration long-term goals and will aid states and facility owners in pursuing permits for research and development of alternative options for disposal. 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.

Continuing support of Brownfields and land revitalization issues will include technology transfer of the decision support tool (SMARTe) to interested communities and countries. SMARTe is a joint effort of the U.S.-German Bilateral Working Group, the EPA, and the Interstate Technology Regulatory Council (ITRC) Brownfields Team for use by Brownfield project stake-holders for assessing both market and non-market costs and benefits of redevelopment options, clarifying both private and public financing options, evaluating and communicating environmental risks, and easing access to pertinent state-specific information related to specific projects. The Land research program also plans to initiate methamphetamine lab clean-up studies in response to the Methamphetamine Remediation Research Act,[97] which requires EPA to evaluate clean-up techniques and exposure risks.

Material management research areas in FY 2010 include coal combustion residue (CCR) disposal and reuse. Planned research products will address CCR leaching potential to support risk assessments, including the development of a decision support tool to evaluate options for coal ash disposal or beneficial reuse. The bioavailability of metals is an important issue in material reuse and research products will provide critical information to support risk assessments.

Under EPA's nanomaterial research program (FY 2010 Request, $17.7 million, including $3.4 million in the Land research program, $13.9 million in the Human Health and Ecosystem research program, and $0.2 million in both the Air and Sustainability research programs), described in more detail in Research: Human Health and Ecosystems, the Land Research program addresses the fate and transport research theme, with a goal to lead the Federal government in addressing key science questions on the persistence and movement of nanomaterials in the environment. In FY 2010, continuing into FY 2011, the program will:

- Develop a state of the art simulation model for nanoparticle transport in groundwater.
- Publish a report on relation of surface chemistry factors to transport and fate of nanomaterials in soils and sediments.

96 BOSC Land Restoration and Preservation Research Mid-Cycle Subcommittee Report. For more information, see http://www.epa.gov/osp/bosc/pdf/landmc0901rpt.pdf.

97 For more information, see http://thomas.loc.gov/cgi-bin/query/D?c110:5:./temp/~c110O7oMUL::

- Publish a report on the state-of-the-science for sampling and measurement of nanomaterials in environmental media.
- Publish studies on the fate and transformation of fullerenes in environmental systems.
- Assess ecological exposure to nanomaterials in support of risk characterization.
- Model nanomaterial chemical fate & transport in the air medium.

To improve performance management, the program established a process by which the BOSC rates each program long-term performance as part of its reviews. In addition, the National Academy of Sciences (NAS) completed a study commissioned by EPA's Research and Development program to address OMB's recommendation to establish outcome-oriented efficiency measures. According to the NAS study, efficiency in federal research and development programs is best assessed by using an external expert-review panel to evaluate the relevance, quality, and performance of the research. Considering these findings, the program is engaging the BOSC to better evaluate investment efficiency and the extent to which the program is "doing the right research and doing it well." The program is also exploring a measure that tracks the percentage of its budget allocated to direct science activities.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	Available 2010	29.0	28	27	Days

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of the manage material streams, conserve resources and appropriately manage waste long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of	100	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	contaminated sites long-term goal.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of Land publications in high impact journals.	26.2	25.7	No Target Established (Biennial)	26.7	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of Land publications rated as highly cited publications.	18.0	26.8	No Target Established (biennial)	27.8	Percent

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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$146.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$66.0) These resources will fund research in the area of materials management.
- (+$56.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.
- (-$72.0) This represents a realignment of funds associated with equipment purchases and repairs across the Agency's research programs.

Statutory Authority:

SWDA; HSWA; ERDDA; SARA; CERCLA; RCRA; OPA; BRERA; MRRA.

Program Area: Research: Sustainability

Research: Sustainability

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

Goal: Compliance and Environmental Stewardship
Objective(s): Enhance Societies Capacity for Sustainability through Science and Research

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$22,346.0***	***$21,157.0***	***$24,107.0***	***$2,950.0***
Hazardous Substance Superfund	$99.7	$79.0	$0.0	($79.0)
Total Budget Authority / Obligations	$22,445.7	$21,236.0	$24,107.0	$2,871.0
Total Workyears	74.2	70.8	70.8	0.0

Program Project Description:

EPA's Science and Technology for Sustainability (STS) research program provides information and tools to Agency Program and Regional offices and external stakeholders to aid them in taking more sustainable and preventive approaches to health and environmental problems. EPA's focus on sustainability stems largely from the Pollution Prevention Act of 1990. EPA is committed to promoting sustainability—achieving economic prosperity while protecting natural systems and quality of life for the long-term. EPA's Science and Technology for Sustainability Research program provides the scientific foundation for the Agency's actions for the integrated management of air, water, and land resources, as well as changes in traditional methods of creating and distributing goods and services.

The STS program is designed to provide technologies, tool, and metrics to inform decision-makers. Adoption of sustainability concepts in environmental management requires a new way of thinking and depends heavily on scientific advances that provide technologies and decision tools needed to inform future risk management decisions. As decision-makers adopt these new sustainable approaches, they will need metrics to assist them in measuring the impacts of actions in the context of sustainability.

The Science Advisory Board's (SAB) Environmental Engineering Committee reviewed EPA's Sustainability Research Strategy[98] and the STS Multi-Year Plan in June 2006.[99] 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."[100] In addition, EPA's Board of Scientific Counselors (BOSC) completed a review of the STS research program in FY 2008.[101] In its report, the BOSC notes

98 For more information, see http://www.epa.gov/sustainability/pdfs/EPA-12057_SRS_R4-1.pdf.

99 For more information, see http://www.epa.gov/osp/bosc/subcomm-sust_mid-2009.htm.

100 For more information, see http://yosemite.epa.gov/sab%5Csabproduct.nsf/D24960CAEE6ECCAB852572FE00704EC0/$File/sab-07-007.pdf.

101 For more information see, http://www.epa.gov/osp/bosc/pdf/sust0803rpt.pdf.

that the STS program "meets or exceeds expectations" in achieving long-term goals for the adoption of technology and tools.

The STS research program is designed to position EPA's Research and Development program to provide scientific and technical support to regional and national sustainability policies and initiatives. To 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 provides the underlying science needed to develop, apply, and implement these metrics. Efforts are focused on developing scientifically-based sustainability metrics and indices that will support understanding of the implications of different technology and risk management pathways, evaluation of regional ecosystem sustainability over time, and assessment of how various management strategies move a region towards sustainability. A related area of focus is developing national sustainability metrics suitable for use in the Agency's Report on the Environment.

- *Decision Support Tools*:[102] This research creates tools and methods that provide information to decision-makers in the public and private sectors on ways to evaluate environmental management issues in a holistic manner in order to achieve sustainable outcomes. This effort is built on the foundation of Life Cycle Analysis (LCA) and supply chain analysis techniques. These techniques address the sustainability of alternative policy options, production pathways, and product usage by describing the full environmental impact and sustainability implications of each alternative. Such methods and techniques are applied to specific problems of interest including consumer products, municipal solid waste management, and chemical production.

- *Technologies:* This research emphasizes the role that technologies have in facilitating sustainable outcomes. Through programs such as the Small Business Innovation Research (SBIR) program and the People, Prosperity, and Planet (P3) student design competition, emphasis is placed on finding solutions to client-driven problems while promoting sustainable design and implementation practices generate research *outputs* in the form of innovative, inherently benign, integrated, and interdisciplinary designs that will advance the scientific, technical, and policy knowledge necessary to further the goals of sustainability.

Over the long term, the STS program promotes and supports national and regional sustainability policies and initiatives. The program ensures that decision-makers within the EPA and at the local, regional and national levels have a scientifically sound set of scientific principles and management tools that promote stewardship and sustainability outcomes.

102 For more information, see http://www.epa.gov/ord/NRMRL/std/sab.

FY 2010 Activities and Performance Plan:

In FY 2010, the Agency requests $24.1 million for the STS research program to continue its focus on sustainability metrics, decision support tools, and systems research. This includes a $5 million increase for a biofuels research initiative to help decision–makers better understand the risk tradeoffs associated with biofuels use and production and to help identify options to maximize climate benefits and minimize unintended impacts. The initiative will focus on the life cycle environmental impacts of biofuels and the environmental challenges that occur in each of the four major phases of the biofuel supply chain—feedstock production, biofuel production, biofuel distribution, and biofuel end use. The work will inform the biofuels life-cycle analysis (LCA) and mandatory reporting requirements contained in the Energy Independence and Security Act (EISA).

In FY 2010, the STS program will continue development of systems metrics, which represent the measurement of energetic resources, human health, ecological burden (i.e., water, biota, air), and overall system function and health on a broad regional scale. For example, the San Luis Valley Project will complete the development and application of a set of four sustainability metrics (ecological and economic) to be used by environmental managers in supporting sustainable outcomes in San Luis Valley, Colorado. This will be followed by the launch of a new research project to apply sustainability metrics to management of regional ecosystems in Puerto Rico. Additionally as discussed, new research has begun in the area of sustainable production, distribution, and use of biofuels. The increase to the STS program will enable EPA's Research and Development program to implement and track sustainability metrics across the biofuels system.

Funding also will enable research in the area of decision support tools, including efforts to further develop a streamlined in-house Life Cycle Assessment methodology and incorporate material flow concepts into existing tools. The program will complete an environmental impact assessment model for land use and continue work on a water use model. Work will continue on extending an auction-based management approach to wet weather flow management in urban watersheds using the Cincinnati and Cleveland metropolitan areas as case studies.

The EPA also will continue to fund the development of new innovative technologies through the People, Prosperity and Planet (P3) program. This program not only advances the development of national and international environmental technology testing protocols and a global environmental technology network, but also encourages innovation in environmental stewardship.

EPA has taken steps to improve this program's performance through the development of the Science and Technology for Sustainability Multi-Year Plan (MYP). In addition, the program developed and finalized several annual output and long-term outcome measures. As noted previously, EPA's Board of Scientific Counselors (BOSC) completed a review of the STS research program in FY 2008.[103] The review identified that the STS program "meets or exceeds expectations" in achieving long-term goals for the adoption of technology and tools. The STS research program will continue to implement recommendations of the BOSC.

103 For more information see, http://www.epa.gov/osp/bosc/pdf/sust0803rpt.pdf.

The program has also taken steps to measure efficiency. In 2008, the National Academy of Sciences (NAS) completed a study commissioned by EPA's Research and Development program to address OMB's recommendation to establish more outcome-oriented efficiency measures. According to the NAS study, efficiency in federal research and development programs is best assessed by using an external expert-review panel to evaluate the relevance, quality, and performance of the research. Considering these findings, EPA is engaging its Board of Scientific Counselors to evaluate whether the program is "doing the right research and doing it well." The program is also exploring a measure that tracks the percentage of its budget allocated to direct science activities.

Performance Targets:

Work under this program supports EPA's Strategic Plan Objective 5.4: Enhance Science and Research. The program manages performance through the timely completion of research milestones and the citation rates of research publications.

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 program's publications are "highly cited" 2.8 times more than other publications. At the close of FY 2009, the program aims to further increase its percentage of "highly cited" publications to 29.2 percent from 28.2 percent in FY 2007. Achieving these biennial bibliometric targets will ensure EPA continues to make significant progress toward providing the research needed to meet its long-term sustainability goals.

Additionally, in FY 2010 the STS program intends to deliver several tools, models, guidance, and reports to inform state and federal regulatory decision makers. In order to evaluate the sustainability of biofuels production, the STS program will expand the suite of environmental impact assessment models to include sustainable land use. The program also will provide decision makers at a local level with recommendations on the effectiveness of a small-parcel, best management practice approach to managing urban watersheds.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$5,000.0) This increase provides resources for a biofuels research initiative to aid decision-makers in better understanding the risk tradeoffs associated with biofuels use and production. The work will inform the life-cycle analysis and mandatory reporting requirements contained in the Energy Independence and Security Act (EISA). Additionally, the program will further develop and test the application of criteria and metrics to assess sustainable biofuel production.

- (+$907.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$75.0) These resources would fund research in the area of sustainable technologies.

- (-$297.0) This represents a realignment of funds associated with equipment purchases and repairs across the Agency's research programs.

- (-$2,735.0) This reflects an adjustment for Small Business Innovation Research (SBIR). Enacted funding levels for this program project include the amount EPA is required to set aside for contracts to small businesses to develop and commercialize new environmental technologies. This adjustment is necessary because the SBIR set aside, at this point in the budget cycle, is redistributed to other research programs in the President's Budget request. After the budget is enacted, when the exact amount of the mandated requirement is known, the funds will be transferred to the SBIR program in this program project.

Statutory Authority:

CAA; CWA; FIFRA; PPA; RCRA; SDWA; SBA; SARA; TSCA; ERDDA; EISA.

Program Area: Toxic Research and Prevention

Research: Pesticides and Toxics
Program Area: Toxic Research and Prevention
Goal: Healthy Communities and Ecosystems
Objective(s): Enhance Science and Research

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	***$24,616.7***	***$26,949.0***	***$27,839.0***	***$890.0***
Total Budget Authority / Obligations	$24,616.7	$26,949.0	$27,839.0	$890.0
Total Workyears	128.9	137.4	137.4	0.0

Program Project Description:

The Pesticides and Toxics Research program is a multidisciplinary program that conducts research and development related to risks resulting from exposure to pesticides and toxic chemicals. The research supports 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. Research to develop and validate methods and models and assessments for predicting risks from pesticides, toxic substances, and products of biotechnology to human health and ecosystems is conducted under the Pesticides and Toxics research program. EPA's Pesticides and Toxics Research program provides the scientific foundation for the Agency's actions to protect against unreasonable risk from exposure to toxics.

Research is guided by the Biotechnology Research Strategy[104] and the Wildlife Research Strategy,[105] both of which were developed with broad participation from major clients (*e.g.* EPA's Prevention, Pesticides and Toxic Substances program and Regional offices). The strategies outline the Agency's research needs and priorities. The Safe Pesticides/Safe Products (SP2) multi-year plan (MYP)[106] outlines specific steps for meeting these needs, as well as annual performance goals and measures for evaluating progress.

The program's focus is to develop methods, models, and data for use in decision making by EPA's Office of Prevention, Pesticides and Toxic Substances (OPPTS) 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;

104 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.

105 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.

106 U.S. EPA, Office of Research and Development, Safe Pesticides/Safe Products Multi-Year Plan. Washington, D.C.: EPA (2006). Available at: http://epa.gov/ord/npd/pdfs/SP2+MYP+120106final.pdf.

(2) to develop probabilistic risk assessment methods and models to better 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.[107] 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 2010 Activities and Performance Plan:

In FY 2010, the resources for Pesticides and Toxics research will continue to support the scientific foundation for addressing risks from human and wildlife exposure to pesticides and toxic chemicals. 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 continue to focus on:

- developing predictive biomarkers of neurotoxic effects for major classes of pesticides;
- developing alternative test methods for the hazard identification of developmental neurotoxicants;
- developing virtual chemical screening methods for risk-based prioritization and ranking needs for chronic non-cancer effects;
- developing quantitative structure activity relationships (QSARs) to relate various structural descriptions of molecules to toxicity endpoints;
- characterizing the toxicity and pharmacokinetics of certain perfluorinated chemicals (PFCs);
- evaluating the fate and transport of certain PFCs in soil; and
- evaluating the emissions of certain PFCs into the indoor environment from articles of commerce.

Research conducted in FY 2010 also 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;

107 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/sp2070723rpt.pdf.

- models for assessing the relative risk of chemical and non-chemical stressors; and
- models to define geographical regional/spatial scales for risk assessment.

The program will develop methods for characterizing population-level risks of toxic substances to aquatic life and wildlife. 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, FY 2010 resources will maintain a limited investment in biotechnology research to support decision-making related to products of biotechnology. Through its Science to Achieve Results (STAR) program, methods are being developed to assess the potential allergenicity of genetically engineered plants and to determine what factors influence allergenicity. As a result of a joint solicitation of proposals with the National Institute for Allergenicity and Infectious Diseases, EPA will continue to support grants that examine the genetic, developmental, or other determinants and mechanisms, and the influence of route, duration, and timing of dietary exposure that underlay the onset of food allergies. Together, the two Agencies are funding 16 grants.

The Pesticides and Toxics Research program continues to implement key improvement steps: it 1) developed a formal response to the BOSC report and is addressing action items and making progress toward long-term and annual targets; 2) is assessing the current efficiency measure to determine how best to capture the cost effectiveness of research activities, in light of the National Academy of Sciences' study (see below); and 3) is developing a process to better use performance information to improve program performance.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Percent variance from planned cost and schedule	Available 2010	-8	-6	-5	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of the SP2 program's long-term goal one.	100	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Ouput	Percentage of planned outputs delivered in support of the SP2	100	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	program's long-term goal three.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of planned outputs delivered in support of the SP2 program's long-term goal two.	100	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of SP2 publications rated in highly cited publications	Available 2010	23.2	No Target Established (biennial)	24.2	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of SP2 publications in high impact journals	Available 2010	36.2	No Target Established (biennial)	37.2	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. A key focus for FY 2010 will be to develop the scientific underpinning related to the effects, exposures, and risk management of specific individual or classes of pesticides and toxic substances that are of high priority to the Agency to inform Agency risk assessment/management decisions.

In 2008, the National Academy of Sciences (NAS) completed a study commissioned by EPA's Research and Development program to address OMB's recommendation to establish outcome-oriented efficiency measures.[6] According to the NAS study, "efficiency" in federal R&D programs is best assessed by using an external expert-review panel to evaluate the relevance, quality, and performance of the research. Considering these findings, ORD is engaging its BOSC to evaluate if ORD's research programs are "doing the right research and doing it well."

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$571.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$255.0) This represents a realignment of funds associated with equipment purchases and repairs across the Agency's research programs.

- (+$11.0) These resources would fund research in the area of prioritizing testing requirements, enhancing interpretation of data to improve human health and ecological risk assessments.

- (+$53.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program/Project to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$107,454.8	$98,779.0	$102,856.0	$4,077.0
Science & Technology	***$3,292.5***	***$3,555.0***	***$3,720.0***	***$165.0***
Total Budget Authority / Obligations	$110,747.3	$102,334.0	$106,576.0	$4,242.0
Total Workyears	561.7	583.4	589.4	6.0

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 2010 Activities and Performance Plan:

In FY 2010, 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 implementing the Unregulated Contaminant Monitoring Rule (UCMR); and responding to technical implementation questions regarding the entire range of NPDWRs.

- 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 2010. 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 FY 2010, EPA will have worked with 4 Regions and 22 states to facilitate the transfer of specific skills using the performance-based training approach targeted towards optimizing key groundwater system and distribution system integrity. 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.

- Continue to manage contaminant monitoring for the second round of the UCMR implementation. The monitoring period for UCMR2 is January 2008 to December 2010. Once public water system monitoring of the selected unregulated contaminants is completed first quarter FY 2010, analysis of the resulting data can begin. This data, used in concert with health effects, and other occurrence information, contributes significantly to the regulatory determination process. Data reporting by public water systems will continue through mid- FY 2011. Key activities for EPA include management of all aspects of small-system monitoring, oversight of approved laboratories, troubleshooting and technical assistance, 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	89.5	90	90	Percent Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of population served by community water systems that will receive drinking water that meets all	92	90	90	90	Percent Population

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	89.5	90	90	Percent Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of population served by community water systems that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.	92	90	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 OMB assessments for the following related programs: the Drinking Water State Revolving Fund, Public Water System Supervision Grant program and Underground Injection Control Grant program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$162.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+3.0) This reflects an increase to support evaluation for engineering and scientific data (including treatment technology information)

Statutory Authority:

SDWA.

ENVIRONMENTAL PROTECTION AGENCY
2010 Annual Performance Plan and Congressional Justification

Table of Contents - Environmental Programs and Management

Resource Summary Table **184**
Program Projects in EPM **184**
Program Area: Air Toxics And Quality **190**
- **Clean Air Allowance Trading Programs** 191
- **Federal Stationary Source Regulations** 194
- **Federal Support for Air Quality Management** 197
- **Federal Support for Air Toxics Program** 203
- **Radiation: Protection** 206
- **Radiation: Response Preparedness** 209
- **Stratospheric Ozone: Domestic Programs** 212
- **Stratospheric Ozone: Multilateral Fund** 215

Program Area: Brownfields **218**
- **Brownfields** 219

Program Area: Climate Protection Program **221**
- **Climate Protection Program** 222

Program Area: Compliance **228**
- **Compliance Assistance and Centers** 229

Program Project Description: **229**
- **Compliance Incentives** 235
- **Compliance Monitoring** 239

Program Area: Enforcement **244**
- **Civil Enforcement** 245
- **Criminal Enforcement** 250
- **Enforcement Training** 253
- **Environmental Justice** 255
- **NEPA Implementation** 259

Program Area: Geographic Programs **261**
- **Geographic Program: Chesapeake Bay** 262
- **Geographic Program: Great Lakes** 269
- **Geographic Program: Lake Champlain** 275
- **Geographic Program: Long Island Sound** 278
- **Geographic Program: Other** 283
- **Great Lakes Restoration** 292

Program Area: Homeland Security **302**
- **Homeland Security: Communication and Information** 303
- **Homeland Security: Critical Infrastructure Protection** 305
- **Homeland Security: Preparedness, Response, and Recovery** 308
- **Homeland Security: Protection of EPA Personnel and Infrastructure** 311

Program Area: Indoor Air **313**
- **Indoor Air: Radon Program** 314
- **Reduce Risks from Indoor Air** 316

Program Area: Information Exchange / Outreach **319**
Children and Other Sensitive Populations: Agency Coordination 320
Environmental Education 322
Congressional, Intergovernmental, External Relations 324
Exchange Network 327
Small Business Ombudsman 331
Small Minority Business Assistance 333
State and Local Prevention and Preparedness 335
TRI / Right to Know 338
Tribal - Capacity Building 341
Program Area: International Programs **344**
US Mexico Border 345
International Sources of Pollution 348
Trade and Governance 352
Program Area: IT / Data Management / Security **356**
Information Security 357
IT / Data Management 359
Program Area: Legal / Science / Regulatory / Economic Review **364**
Administrative Law 365
Alternative Dispute Resolution 367
Civil Rights / Title VI Compliance 368
Legal Advice: Environmental Program 371
Legal Advice: Support Program 373
Regional Science and Technology 375
Regulatory Innovation 378
Regulatory/Economic-Management and Analysis 384
Science Advisory Board 388
Program Area: Operations and Administration **390**
Facilities Infrastructure and Operations 391
Central Planning, Budgeting, and Finance 394
Acquisition Management 396
Financial Assistance Grants / IAG Management 398
Human Resources Management 400
Program Area: Pesticides Licensing **403**
Pesticides: Protect Human Health from Pesticide Risk 404
Pesticides: Protect the Environment from Pesticide Risk 408
Pesticides: Realize the Value of Pesticide Availability 413
Science Policy and Biotechnology 416
Program Area: Resource Conservation and Recovery Act (RCRA) **418**
RCRA: Waste Management 419
RCRA: Corrective Action 423
RCRA: Waste Minimization & Recycling 426
Program Area: Toxics Risk Review and Prevention **432**
Endocrine Disruptors 433
Toxic Substances: Chemical Risk Review and Reduction 435
Pollution Prevention Program 443

Toxic Substances: Chemical Risk Management 450
Toxic Substances: Lead Risk Reduction Program 454
Program Area: Underground Storage Tanks (LUST / UST) 458
LUST / UST 459
Program Area: Water: Ecosystems..... 463
Great Lakes Legacy Act 464
National Estuary Program / Coastal Waterways..... 466
Wetlands 470
Program Area: Water: Human Health Protection 473
Beach / Fish Programs..... 474
Drinking Water Programs 477
Program Area: Water Quality Protection..... 485
Marine Pollution 486
Surface Water Protection..... 490

APPROPRIATION: Environmental Program & Management
Resource Summary Table
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management				
Budget Authority	$2,362,491.2	$2,392,079.0	$2,940,564.0	$548,485.0
Total Workyears	10,605.2	10,786.2	10,892.6	106.4

Bill Language: Environmental Programs and Management

For environmental programs and management, including necessary expenses, not otherwise provided for, for personnel and related costs and travel expenses; hire of passenger motor vehicles; hire, maintenance, and operation of aircraft; purchase of reprints; library memberships in societies or associations which issue publications to members only or at a price to members lower than to subscribers who are not members; administrative costs of the brownfields program under the Small Business Liability Relief and Brownfields Revitalization Act of 2002; and not to exceed [$19,000] $9,000 for official reception and representation expenses, [$2,392,079,000] $2,940,564,000, to remain available until September 30, [2010: Provided, That of the funds included under this heading, not less than $95,846,000 shall be for the Geographic Programs specified in the explanatory statement described in section 4 (in the matter preceding division A of this consolidated Act)] 2011.

Program Projects in EPM
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Air Toxics and Quality				
Clean Air Allowance Trading Programs	$19,774.8	$19,993.0	$20,548.0	$555.0
Federal Stationary Source Regulations	$27,253.7	$26,488.0	$27,179.0	$691.0
Federal Support for Air Quality Management				
Clean Diesel Initiative	$349.5	$0.0	$0.0	$0.0
Federal Support for Air Quality Management (other activities)	$94,206.5	$96,480.0	$100,510.0	$4,030.0
Subtotal, Federal Support for Air Quality Management	$94,556.0	$96,480.0	$100,510.0	$4,030.0
Federal Support for Air Toxics Program	$25,208.5	$22,836.0	$24,960.0	$2,124.0
Radiation: Protection	$10,820.8	$10,957.0	$11,272.0	$315.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Radiation: Response Preparedness	$2,899.4	$2,997.0	$3,087.0	$90.0
Stratospheric Ozone: Domestic Programs	$4,939.0	$5,703.0	$5,844.0	$141.0
Stratospheric Ozone: Multilateral Fund	$9,683.0	$9,697.0	$9,865.0	$168.0
Subtotal, Air Toxics and Quality	$195,135.2	$195,151.0	$203,265.0	$8,114.0
Brownfields				
Brownfields	$25,200.3	$22,957.0	$25,254.0	$2,297.0
Climate Protection Program				
Climate Protection Program				
Energy STAR	$38,713.6	$49,735.0	$50,748.0	$1,013.0
Methane to markets	$6,348.1	$4,497.6	$4,582.0	$84.4
Asian Pacific Partnership	$1,567.0	$0.0	$0.0	$0.0
Greenhouse Gas Reporting Registry	$3,205.7	$6,388.0	$17,005.0	$10,617.0
Climate Protection Program (other activities)	$47,529.9	$33,650.4	$39,299.0	$5,648.6
Subtotal, Climate Protection Program	$97,364.3	$94,271.0	$111,634.0	$17,363.0
Subtotal, Climate Protection Program	$97,364.3	$94,271.0	$111,634.0	$17,363.0
Compliance				
Compliance Assistance and Centers	$28,063.5	$23,770.0	$26,070.0	$2,300.0
Compliance Incentives	$10,250.7	$8,992.0	$10,702.0	$1,710.0
Compliance Monitoring	$92,048.1	$96,064.0	$99,859.0	$3,795.0
Subtotal, Compliance	$130,362.3	$128,826.0	$136,631.0	$7,805.0
Enforcement				
Civil Enforcement	$131,986.8	$137,182.0	$145,949.0	$8,767.0
Criminal Enforcement	$40,128.8	$45,763.0	$49,399.0	$3,636.0
Enforcement Training	$2,924.9	$2,938.0	$3,097.0	$159.0
Environmental Justice	$4,332.1	$6,993.0	$7,203.0	$210.0
NEPA Implementation	$14,690.1	$16,281.0	$18,295.0	$2,014.0
Subtotal, Enforcement	$194,062.7	$209,157.0	$223,943.0	$14,786.0
Environmental Protection / Congressional Priorities				
Congressionally Mandated Projects	$12,403.5	$17,450.0	$0.0	($17,450.0)
Geographic Programs				
Geographic Program: Chesapeake Bay	$36,494.1	$31,001.0	$35,139.0	$4,138.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Geographic Program: Great Lakes	$22,968.4	$23,000.0	$0.0	($23,000.0)
Geographic Program: Long Island Sound	$4,827.0	$3,000.0	$3,000.0	$0.0
Geographic Program: Gulf of Mexico	$4,429.0	$4,578.0	$4,638.0	$60.0
Geographic Program: Lake Champlain	$2,919.9	$3,000.0	$1,434.0	($1,566.0)
Geographic Program: Other				
San Francisco Bay	$0.0	$5,000.0	$5,000.0	$0.0
Puget Sound	$8,696.1	$20,000.0	$20,000.0	$0.0
Lake Pontchartrain	$1,490.0	$978.0	$978.0	$0.0
Community Action for a Renewed Environment (CARE)	$3,360.1	$2,000.0	$2,448.0	$448.0
Geographic Program: Other (other activities)	$4,474.4	$3,402.0	$3,493.0	$91.0
Subtotal, Geographic Program: Other	$18,020.6	$31,380.0	$31,919.0	$539.0
Great Lakes Restoration	$0.0	$0.0	$475,000.0	$475,000.0
Regional Geographic Initiatives	$5,515.8	$0.0	$0.0	$0.0
Subtotal, Geographic Programs	$95,174.8	$95,959.0	$551,130.0	$455,171.0
Homeland Security				
Homeland Security: Communication and Information	$6,611.6	$6,899.0	$7,030.0	$131.0
Homeland Security: Critical Infrastructure Protection				
Decontamination	$124.7	$98.0	$99.0	$1.0
Homeland Security: Critical Infrastructure Protection (other activities)	$4,689.7	$6,739.0	$6,915.0	$176.0
Subtotal, Homeland Security: Critical Infrastructure Protection	$4,814.4	$6,837.0	$7,014.0	$177.0
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	$592.6	$3,378.0	$3,443.0	$65.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$3,512.7	$0.0	$0.0	$0.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$4,105.3	$3,378.0	$3,443.0	$65.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$5,462.5	$6,292.0	$6,414.0	$122.0
Subtotal, Homeland Security	$20,993.8	$23,406.0	$23,901.0	$495.0
Indoor Air				
Indoor Air: Radon Program	$5,269.5	$5,383.0	$5,576.0	$193.0
Reduce Risks from Indoor Air	$24,009.8	$20,512.0	$21,073.0	$561.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Subtotal, Indoor Air	$29,279.3	$25,895.0	$26,649.0	$754.0
Information Exchange / Outreach				
Children and Other Sensitive Populations: Agency Coordination	$7,226.7	$6,071.0	$6,515.0	$444.0
Environmental Education	$9,050.3	$8,979.0	$9,038.0	$59.0
Congressional, Intergovernmental, External Relations	$48,777.5	$48,456.0	$50,980.0	$2,524.0
Exchange Network	$14,133.2	$16,860.0	$18,213.0	$1,353.0
Small Business Ombudsman	$3,778.4	$2,981.0	$3,065.0	$84.0
Small Minority Business Assistance	$2,995.6	$2,296.0	$2,364.0	$68.0
State and Local Prevention and Preparedness	$12,518.5	$13,008.0	$13,555.0	$547.0
TRI / Right to Know	$15,213.2	$15,719.0	$15,656.0	($63.0)
Tribal - Capacity Building	$12,152.4	$11,973.0	$12,439.0	$466.0
Subtotal, Information Exchange / Outreach	$125,845.8	$126,343.0	$131,825.0	$5,482.0
International Programs				
US Mexico Border	$6,110.1	$5,561.0	$5,047.0	($514.0)
Commission for Environmental Cooperation	$4,289.2	$0.0	$0.0	$0.0
Environment and Trade	$1,903.7	$0.0	$0.0	$0.0
International Capacity Building	$5,107.0	$0.0	$0.0	$0.0
POPs Implementation	$1,811.9	$0.0	$0.0	$0.0
International Sources of Pollution	$0.0	$7,830.0	$8,851.0	$1,021.0
Trade and Governance	$0.0	$6,273.0	$6,451.0	$178.0
Subtotal, International Programs	$19,221.9	$19,664.0	$20,349.0	$685.0
IT / Data Management / Security				
Information Security	$6,157.6	$5,854.0	$6,015.0	$161.0
IT / Data Management	$91,928.2	$93,171.0	$103,305.0	$10,134.0
Subtotal, IT / Data Management / Security	$98,085.8	$99,025.0	$109,320.0	$10,295.0
Legal / Science / Regulatory / Economic Review				
Administrative Law	$5,657.9	$5,128.0	$5,352.0	$224.0
Alternative Dispute Resolution	$1,136.8	$1,374.0	$1,423.0	$49.0
Civil Rights / Title VI Compliance	$11,109.6	$11,488.0	$12,000.0	$512.0
Legal Advice: Environmental Program	$39,021.3	$40,247.0	$41,922.0	$1,675.0
Legal Advice: Support Program	$13,524.9	$14,676.0	$15,611.0	$935.0
Regional Science and Technology	$3,293.3	$3,219.0	$3,283.0	$64.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Regulatory Innovation	$23,392.1	$19,811.0	$20,606.0	$795.0
Regulatory/Economic-Management and Analysis	$17,379.6	$16,729.0	$22,403.0	$5,674.0
Science Advisory Board	$5,653.4	$5,451.0	$5,631.0	$180.0
Subtotal, Legal / Science / Regulatory / Economic Review	$120,168.9	$118,123.0	$128,231.0	$10,108.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$157,406.5	$160,366.0	$162,040.0	$1,674.0
Utilities	$7,019.4	$10,973.0	$13,514.0	$2,541.0
Security	$24,194.9	$25,676.0	$27,997.0	$2,321.0
Facilities Infrastructure and Operations (other activities)	$107,614.2	$106,869.0	$117,061.0	$10,192.0
Subtotal, Facilities Infrastructure and Operations	$296,235.0	$303,884.0	$320,612.0	$16,728.0
Central Planning, Budgeting, and Finance	$68,083.1	$73,432.0	$85,215.0	$11,783.0
Acquisition Management	$29,868.9	$31,872.0	$32,281.0	$409.0
Financial Assistance Grants / IAG Management	$24,174.4	$25,868.0	$26,681.0	$813.0
Human Resources Management	$40,886.6	$44,141.0	$47,106.0	$2,965.0
Subtotal, Operations and Administration	$459,248.0	$479,197.0	$511,895.0	$32,698.0
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide Risk	$59,536.1	$60,103.0	$61,747.0	$1,644.0
Pesticides: Protect the Environment from Pesticide Risk	$37,443.3	$41,236.0	$42,318.0	$1,082.0
Pesticides: Realize the Value of Pesticide Availability	$11,529.6	$12,984.0	$13,372.0	$388.0
Pesticides: Field Programs	$5,764.6	$0.0	$0.0	$0.0
Pesticides: Registration of New Pesticides	$1,417.6	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$3,918.4	$0.0	$0.0	$0.0
Science Policy and Biotechnology	$2,105.9	$1,738.0	$1,750.0	$12.0
Subtotal, Pesticides Licensing	$121,715.5	$116,061.0	$119,187.0	$3,126.0
Resource Conservation and Recovery Act (RCRA)				
RCRA: Waste Management	$66,432.8	$64,511.0	$67,550.0	$3,039.0
RCRA: Corrective Action	$39,960.6	$38,909.0	$40,459.0	$1,550.0
RCRA: Waste Minimization & Recycling	$14,731.9	$13,471.0	$14,122.0	$651.0
Subtotal, Resource Conservation and Recovery Act	$121,125.3	$116,891.0	$122,131.0	$5,240.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
(RCRA)				
Toxics Risk Review and Prevention				
Endocrine Disruptors	$7,102.4	$8,498.0	$8,659.0	$161.0
Toxic Substances: Chemical Risk Review and Reduction	$48,399.3	$47,078.0	$55,005.0	$7,927.0
Pollution Prevention Program	$15,538.0	$18,334.0	$18,874.0	$540.0
Toxic Substances: Chemical Risk Management	$6,518.9	$5,422.0	$5,923.0	$501.0
Toxic Substances: Lead Risk Reduction Program	$12,083.7	$13,927.0	$14,442.0	$515.0
Subtotal, Toxics Risk Review and Prevention	$89,642.3	$93,259.0	$102,903.0	$9,644.0
Underground Storage Tanks (LUST / UST)				
LUST / UST	$11,157.9	$11,946.0	$12,451.0	$505.0
Water: Ecosystems				
Great Lakes Legacy Act	$27,416.2	$37,000.0	$0.0	($37,000.0)
National Estuary Program / Coastal Waterways	$26,046.7	$26,557.0	$26,967.0	$410.0
Wetlands	$21,868.0	$22,539.0	$23,336.0	$797.0
Subtotal, Water: Ecosystems	$75,330.9	$86,096.0	$50,303.0	($35,793.0)
Water: Human Health Protection				
Beach / Fish Programs	$2,307.5	$2,806.0	$2,870.0	$64.0
Drinking Water Programs	$107,454.8	$98,779.0	$102,856.0	$4,077.0
Subtotal, Water: Human Health Protection	$109,762.3	$101,585.0	$105,726.0	$4,141.0
Water Quality Protection				
Marine Pollution	$13,430.4	$13,045.0	$13,399.0	$354.0
Surface Water Protection	$197,780.0	$197,772.0	$210,437.0	$12,665.0
Subtotal, Surface Water Protection	$197,780.0	$197,772.0	$210,437.0	$12,665.0
Subtotal, Water Quality Protection	$211,210.4	$210,817.0	$223,836.0	$13,019.0
TOTAL, EPA	$2,362,491.2	$2,392,079.0	$2,940,564.0	$548,485.0

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$19,774.8***	***$19,993.0***	***$20,548.0***	***$555.0***
Science & Technology	$9,253.9	$9,152.0	$9,979.0	$827.0
Total Budget Authority / Obligations	$29,028.7	$29,145.0	$30,527.0	$1,382.0
Total Workyears	88.9	88.6	88.6	0.0

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 power plants nationwide. It continues to be recognized as a model for flexible and effective air pollution regulation, both in the U.S. and abroad. The authorizing legislation specifies two phases and numerous deadlines for both the SO_2 and NO_x program components. The program also is responsible for implementing U.S. commitments under the US-Canada Air Quality Agreement of 1991 to reduce and maintain lower 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). For additional information on the Acid Rain program, please visit http://www.epa.gov/acidrain/.

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 Clean Air Interstate Rule (CAIR), promulgated in May 2005, must be revised, but may remain in operation in the interim, according to the U.S. Court of Appeals for the District of Columbia Circuit Court's December 2008 decision to "allow CAIR to remain in effect until it is replaced by a rule consistent with [the Court's July 11, 2008] opinion" so as to "at least temporarily preserve the environmental values covered by CAIR."[1] Using a market-based approach for controlling both SO_2 and NO_x, CAIR is projected to reduce Regional emissions from power plants in 28 eastern states and the District of Columbia (D.C.).

At the request of the states, EPA has administered the NO_x Budget Program (NBP), a Regional market-based cap-and-trade program for reducing NO_x emissions and transported ozone in the eastern U.S., for over a decade. The NBP was established initially in the late 1990s under a

[1] U.S. Court of Appeals for the D.C. Circuit, No. 05-1244, page 3 (decided December 23, 2008).

Memorandum of Understanding among nine states and D.C. in the Northeast Ozone Transport Region (OTR) and expanded under the NO_x State Implementation Plan (SIP) call to add 12 states from the Midwest and Southeast and double the number of affected sources. Affected sources include boilers, turbines, and combined cycle units from a diverse set of industries as well as electric utility units. For additional information on the NBP, please visit http://www.epa.gov/airmarkets/progsregs/nox/sip/.

FY 2010 Activities and Performance Plan:

In FY 2010, 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 direct measurement methods at over 4,600 electric generating units and 230 industrial units. In addition, the program will conduct audits and certify emissions monitors. Pursuant to title IV provisions, the program will continue to track and report annual carbon dioxide (CO_2) emissions and heat input for approximately 3,500 electric utility units in the Acid Rain Program. 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.

By the start of FY 2010, the NO_x Budget Program (NBP) will have become the CAIR seasonal NOx program, through implementation of existing rules, and will include six additional states and approximately 600 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.

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.

The program issues comprehensive annual reports on compliance and environmental results from implementation of the Acid Rain and NO_x Budget trading programs. These reports track progress in not only reducing SO_2 and NO_x emissions from the affected sources, but also assess the impacts of these reductions on acid deposition, air quality (e.g., ozone levels), surface water acidity, forest health, and other environmental indicators. For additional information on the program's annual reports, please see http://www.epa.gov/airmarkets/progress/progress-reports/.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Tons of sulfur dioxide emissions from electric power generation sources	Avail. 2009	8,000,000	8,000,000	8,450,000	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 in the air. 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. When inhaled, these fine particles can cause serious respiratory problems, particularly for individuals who suffer from asthma or are in sensitive populations. Numerous studies have even linked these exposures with premature mortality from heart and lung diseases. These same small particles are also a main pollutant that impairs visibility across large areas of the country, particularly damaging in national parks that are known for their scenic views.

Achieving and maintaining EPA's national air quality standards is an important step towards ensuring the air is safe to breathe. EPA, states, Tribes, and local governments work as partners toward this goal. 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 FY 2010.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$450.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$105.0) This change reflects an increase to support more accountability in the seasonal NOx program to reduce transported ozone pollution.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$27,253.7***	***$26,488.0***	***$27,179.0***	***$691.0***
Total Budget Authority / Obligations	$27,253.7	$26,488.0	$27,179.0	$691.0
Total Workyears	119.0	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 2010 Activities and Performance Plan:

In FY 2010, EPA will review criteria pollutants in accordance with an aggressive multi-year schedule.

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 2012	Ozone	March 2013
October 2011	CO	July 2012
January 2013	Lead	October 2013
Proposal	**Criteria Pollutant**	**Final**
June 2009 February 2010	Nitrogen Dioxide Primary Secondary	January 2010 October 2010
November 2009 February 2010	Sulfur Dioxide Primary Secondary	June 2010 October 2010

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 2010, resources will be devoted to the area source standards currently under court-ordered deadlines, as well as updating several MACT standards recently vacated by the courts.

EPA is working to implement program 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	Data Avail. 2011	35	36	36	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 baseline.	Avail. 2011	59	59	59	Percentage

- Performance targets for reduction of toxicity weighted emissions are also supported by work under the Federal Support for Air Toxics program.

- Implementation of the MACT standards is expected to result in the reduction of over 1.7 million tons of hazardous air pollutants.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$489.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$202.0) This change reflects an increase to support the regulatory workload associated with the upcoming NAAQS reviews.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$94,556.0***	***$96,480.0***	***$100,510.0***	***$4,030.0***
Science & Technology	$12,676.0	$11,133.0	$11,542.0	$409.0
Total Budget Authority / Obligations	$107,232.0	$107,613.0	$112,052.0	$4,439.0
Total Workyears	691.5	709.7	714.7	5.0

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, including consideration of Environmental Justice issues.

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 2010 Activities and Performance Plan:

Particulate Matter (PM) is linked to tens of thousands of premature deaths per year and repeated exposure to ozone can cause acute respiratory problems and lead to permanent lung damage. Elevated levels of lead in children have been associated with IQ loss, poor academic achievement, and delinquent behavior; while effects in adults include increased blood pressure, cardiovascular disease, and decreased kidney function.

Therefore, implementation of the PM, Ozone, and Lead standards is one of the Agency's highest priorities. EPA will continue to support these revised NAAQS by taking Federal oversight actions and developing regulations and policies to ensure continued health protection during the transition between the pre-existing and new standards. EPA will provide technical and policy assistance to states developing or revising attainment SIPs. EPA will designate areas as attaining or not attaining the 2008 ozone standards.

EPA will develop a revised Clean Air Interstate Rule (CAIR) to address a court remand, and will continue to implement the existing CAIR to ensure that the Agency maximizes the Phase I CAIR reductions that occur by FY 2010, as required, to support attainment of the $PM_{2.5}$ and ozone standards. EPA will work with states to develop information needed to designate areas for the revised lead standards, and for possible new SO_2 and NO_2 standards. EPA also will provide technical and policy assistance to states developing or revising 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 the 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. 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 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. Please see http://www.epa.gov/ttn/ for further details. 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 and integration with climate change activities.

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. This includes significant changes necessary to effectively implement revised ozone and lead NAAQS monitoring requirements. 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 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. Please see http://epa.gov/ttn/airs/airsaqs for more details. EPA also will continue to operate and maintain AirNow which provides real-time air quality data and forecasts nationwide. Further, EPA will complete the development of the new emissions inventory system (EIS) and will begin its operation and maintenance. 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. Please see http://www.epa.gov/air/oaqps/permits/ for further details.

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 revise or develop New Source Review (NSR) regulations to more effectively address sources of criteria pollutants and greenhouse gases. 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 states and industries on NSR applicability issues.

To improve the NAAQS Federal program, EPA will continue to implement program improvements, within current statutory limitations, that address deficiencies in design and implementation and identify and evaluate needed improvements that are beyond current statutory authority. To improve the Air Quality Grants and Permitting Program, 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	Avail. 2009	4	5	6	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline.	Avail. 2009	8	10	11	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percent reduction in the average number of days during the ozone season that the ozone standard is exceeded in baseline non-attainment areas, weighted by population.	Avail. 2009	19	23	26	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of major NSR permits issued	Avail. 2009	78	78	78	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	within one year of receiving a complete permit application.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of new Title V operating permits issued within 18 months of receiving a complete permit application.	Avail. 2009	97	100	100	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application.	Avail. 2009	91	95	99	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Cumulative percent reduction in the number of days to process State Implementation Plan revisions, weighted by complexity.	Avail Spring 2009	-1.2	-2.4	-2.9	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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,922.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$675.0 / +5.0 FTE) This reflects a shift of FTE and associated payroll from the Regulatory Innovation program. EPA's workforce management strategy indicates a need for project officers greater than the amount funded by the American Recovery and

Reinvestment Act (ARRA) for the Diesel Emissions Reduction Act (DERA) program. These 5 FTE and their payroll are in addition to those already covered by ARRA funds.

- (+$300.0) This increase supports increased travel needs in the Regional offices related to program requirements such as meeting with state and local officials regularly on: system audits, permitting activities where EPA has direct responsibility, Tribal air programs (technical assistance, consultation), grantee site visits (post-award monitoring), and development of SIPs and FIPs for new nonattainment areas.

- (+$133.0) This increase supports technical analyses related to SIP development.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$25,208.5***	***$22,836.0***	***$24,960.0***	***$2,124.0***
Science & Technology	$2,907.9	$2,279.0	$2,339.0	$60.0
Total Budget Authority / Obligations	$28,116.4	$25,115.0	$27,299.0	$2,184.0
Total Workyears	135.9	141.8	146.8	5.0

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 of community-based toxics programs, including assessment of air toxics outside schools. EPA also provides support for voluntary programs including: those that reduce inhalation risk or 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 toxic air pollutants, Persistent Bioaccumulate Toxics (PBT) activities, and training for air pollution professionals. In addition, the program 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 toxics, which are known to cause increased risk of cancer or other serious health effects.

FY 2010 Activities and Performance Plan:

National Emissions Inventory (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 those risks and support multipollutant analysis covering air toxics, NAAQS pollutants, and greenhouse gases. EPA will maintain the in-use version of the NEI and begin accepting and performing data quality and initial analytical work on the state national inventory files for use in developing the 2008 NEI. These files will be submitted via the new Emission Inventory System (EIS). The completed EIS will be a better-automated, more accurate, multi-pollutant inventory system integrating criteria pollutants, Hazardous Air Pollutants (HAP) data and greenhouse gases.[2]

EPA will complete initial air monitoring and analysis work of the air toxics at 50-100 schools nationwide. Initial results from this assessment will be available and opportunities for additional monitoring will be identified. EPA will continue to work with state and local agencies 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

[2] Additional information at: http://www.epa.gov/ttn/chief/net/neip/index.html

NATTS, designed to capture the impacts of widespread pollutants, is comprised of 27 permanent monitoring sites. The LSMs are comprised of scores of short-term monitoring projects, each designed to address specific local issues.[3]

EPA also will update the National Air Pollution Assessment (NAPA), an analytical effort designed to provide nationwide information on ambient levels of criteria and toxics air pollutants. These efforts replace the former National Air Toxics Assessment (NATA) analyses, integrating the analytical capabilities of both programs into a one-stop website with geographic information on all pollutants. EPA is requesting increased resources for monitoring near schools.

In addition to meeting Clean Air Act 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 an individual 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. In developing the sector and multi-pollutant approaches, EPA will evaluate several approaches currently used in pollution control (e.g. cap and trade, opt-in, plant-wide programs) and will continue to seek innovative solutions that 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 and training 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.

The Air Toxics program is working on improving monitoring systems to fill data gaps and get a better assessment of actual population exposure to toxic air pollution. This will include using the higher-quality 2008 NEI data to develop nationwide assessment of air toxics exposures and potential risks as part of the air program's NAPA effort.

Performance Targets:

Performance targets for reduction of toxicity weighted emissions are supported by work under the Federal Stationary Source Regulations program project. For measures, reference Federal Support for Air Toxics Program under Science and Technology.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,367.0/ +5.0 FTE) This increase supports updates to the National Air Pollution Assessment (NAPA), including 5 FTE and associated payroll of $828.0. Special emphasis will be placed on school monitoring analyses. These FTE will support enhanced efforts by states to monitor air toxics around school locations.

[3] Additional information at: http://www.epa.gov/ttn/amtic/airtoxpg.html

- (+$757.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

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

Radiation: Protection
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Healthier Outdoor Air; Radiation

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$10,820.8***	***$10,957.0***	***$11,272.0***	***$315.0***
Science & Technology	$2,069.1	$2,156.0	$2,242.0	$86.0
Hazardous Substance Superfund	$2,165.0	$2,295.0	$2,596.0	$301.0
Total Budget Authority / Obligations	$15,054.9	$15,408.0	$16,110.0	$702.0
Total Workyears	85.8	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). 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.[4] 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 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 2010 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[5]. EPA will conduct inspections of waste generator facilities and evaluate DOE's compliance with applicable environmental laws and regulations every five years.

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

[4] Additional information at: http://www.epa.gov/radiation/assessment/index.html
[5] Additional information at: http://www.epa.gov/radiation/wipp/background.html

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 response to a Science Advisory Board (SAB) advisory issued in January 2008, EPA prepared a draft update to its 1994 document, *Estimating Radiogenic Cancer Risks*, also referred to as the Blue Book. The 2009 revised Blue Book (draft) implements revisions to its cancer risk models and projections based on recommendations of the National Academy of Sciences report, Biological Effects of Ionizing Radiation (BEIR). The SAB Radiation Advisory Committee is now reviewing the changes in methods for estimating risks described in the new draft Blue Book. Once EPA receives the SAB's report on the Blue Book, expected in early FY 2010, it will begin revising the tables of radionuclide-specific cancer risk coefficients currently found in Federal Guidance Report No. 13 (FGR 13), *Cancer Risk Coefficients for Environmental Exposure to Radionuclides*. 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.

EPA recently developed several outcome-oriented strategic and annual performance measures for this program in response to OMB recommendations. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	92	85	90	95	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP.	50	46	53	53	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Population covered by Radiation Protection Program monitors per million dollars invested.	4,536,000	4,729,000	5,254,000	5,779,000	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.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$285.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$30.0) This reflects additional resources 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$2,899.4***	***$2,997.0***	***$3,087.0***	***$90.0***
Science & Technology	$3,780.3	$3,967.0	$4,164.0	$197.0
Total Budget Authority / Obligations	$6,679.7	$6,964.0	$7,251.0	$287.0
Total Workyears	39.7	42.3	42.3	0.0

Program Project Description:

EPA generates policy guidance and procedures for EPA radiological emergency response under the National Response Framework (NRF) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). EPA maintains its own Radiological Emergency Response Team (RERT), is a member of the Federal Radiological Preparedness Coordinating Committee (FRPCC), and also supports the federal Advisory Team for Environment, Food, and Health (the "A-Team"). EPA responds to radiological emergencies, conducts national and regional radiological response planning and training and develops response plans for radiological incidents or accidents.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA's RERT, a component of the Agency's emergency response structure, will continue to ensure that it maintains and improves the level of readiness to support Federal radiological emergency response and recovery operations under the NRF and NCP. 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.[6] 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 and develop radiological emergency response protocols and standards. The Agency 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 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.

[6] Additional information can be accessed at: http://www.epa.gov/radiation/rert/

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.

EPA recently developed several outcome-oriented strategic and annual performance measures for this program in response to OMB recommendations. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	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).	87	85	90	90	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Average time of availability of quality assured ambient radiation air monitoring data during an emergency.	0.8	1.0	0.8	0.7	Days

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Level of readiness of national environmental radiological	87	85	90	90	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for emergency response and recovery decisions).					

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 material and to minimize impacts to public health from radiation exposure.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$80.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$10.0) This reflects additional resources to support national and regional radiological response planning activities.

Statutory Authority:

Atomic Energy Act (AEA) of 1954, as amended, 42 U.S.C 2011 et seq. (1970), and Reorganization Plan #3 of 1970; Clean Air Act (CAA) Amendments of 1990; Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR 300; 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; Homeland Security Act of 2002; Post-Katrina Emergency Management Reform Act of 2006 (PKEMRA); Public Health Service Act (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.; Safe Drinking Water Act (SDWA); and Title XIV of the Natural Disaster Assistance Act (NDAA) of 1997, PL 104-201 (Nunn-Lugar II).

Stratospheric Ozone: Domestic Programs
Program Area: Air Toxics and Quality
Goal: Clean Air and Global Climate Change
Objective(s): Protect the Ozone Layer

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$4,939.0***	***$5,703.0***	***$5,844.0***	***$141.0***
Total Budget Authority / Obligations	$4,939.0	$5,703.0	$5,844.0	$141.0
Total Workyears	25.8	23.8	23.8	0.0

Program Project Description:

The stratospheric ozone layer protects life on earth by shielding the earth's surface from harmful ultraviolet (UV) radiation. Scientific evidence amassed over the past 30 years has shown that Ozone-Depleting Substances (ODS) used around the world destroy the stratospheric ozone layer.[7] Overexposure to increased levels of UV radiation due to ozone layer depletion is expected to raise the incidence of skin cancer, cataracts, and other illnesses.[8] Skin cancer is the most common cancer diagnosed in the United States. One American dies almost every hour from melanoma, the deadliest form of skin cancer.[9] Increased UV levels also have been associated with other human and non-human risks, including cataracts, immune suppression, and effects on aquatic ecosystems and agricultural crops.

EPA estimates that in the United States alone, the worldwide phaseout of ODS will avert 6.3 million deaths from melanoma and non-melanoma skin cancer, 299 million cases of non-fatal skin cancers, and 27.5 million cases of cataracts between 1990 and 2165.[10] This estimate is based on the assumption that international ODS phaseout targets will be achieved, allowing the ozone layer to recover by the middle of this century. According to current atmospheric research, the ozone layer is not expected to recover until midcentury at the earliest, due to the very long lifetimes of ODS.[11]

EPA's 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), continuing the reduction and control of ODS in the U.S. and lowering 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

[7] World Meteorological Organization (WMO). Scientific Assessment of Ozone Depletion: 2006. Geneva, Switzerland. 2007.
[8] 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.
[9] 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=
[10] 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.
[11] WMO, 2007.

gases. The Act provides for a phaseout of production and consumption 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 2010 Activities and Performance Plan:

In carrying out the requirements of the Act and the Montreal Protocol in FY 2010, 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 2010, EPA will focus its work to ensure that ODS production and import caps under the Montreal Protocol are met, including a significant reduction in the U.S. cap beginning January 1, 2010. Under the Significant New Alternatives Policy (SNAP) program, EPA will review newly-developed alternatives to ODS to assist the market's transition to safer, non-ozone-depleting alternatives. As necessary, EPA will restrict use of alternatives for given applications that are more harmful to human health and the environment on an overall basis. Under the National Recycling and Emission Reduction Program, required by Section 608 of the Act, venting of ODS and ODS Substitutes are not permitted. In addition, EPA will require recovery and recycling or reclamation of ODS, primarily in the air-conditioning and refrigeration sectors. Also, EPA will work with Federal and international agencies to curb illegal import of ODS and foster the smooth transition to non-ozone depleting alternatives in various sectors.

Given that Americans will be exposed to higher levels of UV radiation for many years, EPA will continue its work to inform the public about health risks associated with UV radiation exposure and to encourage sun safety behaviors that help to reduce risk.

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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Remaining US Consumption of HCFCs in tons of Ozone Depleting Potential (ODP).	Avail. 2009	<9,900	<9,900	<3,811	ODP MTs

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Total federal dollars spent per school joining the SunWise program	Avail. 2009	485	0	0	Dollars

- Annual performance goals are set to meet Clean Air Act requirements for the quantities and schedule for the phaseout of ODS production and import. These requirements correspond to the domestic consumption cap for class II HCFCs as set by the Parties to the Montreal Protocol. The ozone-depletion potential (ODP) of an ODS reflects the damage it does to stratospheric ozone. Beginning on January 1, 1996, HCFC consumption was capped at the sum of 2.8 percent of the domestic ODP-weighted consumption of chlorofluorocarbons (CFCs) in 1989 plus the ODP-weighted consumption of HCFCs in 1989. Consumption equals production plus import minus export.

- The next U.S cap for HCFC consumption is 3,810 ODP-weighted metric tons beginning January 1, 2010. Further incremental reductions are required through 2020, until all ODS production and import is phased out except for exempted amounts.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$98.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$43.0) Additional funding is requested for work on developing alternatives to ODS.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$9,683.0***	***$9,697.0***	***$9,865.0***	***$168.0***
Total Budget Authority / Obligations	$9,683.0	$9,697.0	$9,865.0	$168.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The stratospheric ozone layer protects life on earth by preventing harmful ultraviolet (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.[12] Increased levels of UV radiation due to ozone depletion are expected to raise the incidence of skin cancer, cataracts, and other illnesses.[13] Skin cancer is the most common type of cancer and accounts for more than 50 percent of all cancers in adults.[14] 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 ODS in developing countries. Currently, the U.S. and 192 other countries are parties to the Montreal Protocol. The U.S. affirms its commitment to this international treaty and demonstrates 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 avert 299 million cases of non-fatal skin cancer, 6.3 million cases of fatal skin cancer, and 27.5 million cases of cataracts between 1990 and 2165.[15] This estimate is based on the assumption that international ODS phaseout targets will be achieved, allowing the ozone layer to recover by the middle of this century. According to current research, the ozone layer is not expected to recover until midcentury at the earliest, due to the very long atmospheric lifetimes of ODS.[16]

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[12] World Meteorological Organization (WMO). Scientific Assessment of Ozone Depletion: 2006. Geneva, Switzerland. 2007.
[13] 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.
[14] 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=..
[15] 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.
[16] WMO, 2007.

FY 2010 Activities and Performance Plan:

EPA's contributions to the Multilateral Fund in FY 2010 will help continue support for cost-effective projects designed to build capacity and eliminate ODS production and consumption in over 60 developing countries. Today, the Multilateral Fund continues to support over six thousand activities in 148 countries, and when fully implemented, will prevent annual emissions of more than 431 thousand metric tons of ODS. Additional projects will be considered and approved in accordance with Multilateral Fund guidelines.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Remaining US Consumption of HCFCs in tons of Ozone Depleting Potential (ODP).	Avail. 2009	<9,900	<9,900	<3,811	ODP MTs

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Total federal dollars spent per school joining the SunWise program	Avail. 2009	485	0	0	Dollars

- Performance targets for ozone layer protection also are supported by work under Stratospheric Ozone: Domestic Programs.

- Annual performance goals are set to meet Clean Air Act requirements for the quantities and schedule for phasing out the production and import of ODS. These requirements correspond to 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 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 3810 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$168.0) Funding is to support the Montreal Protocol activities.

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

Brownfields
Program Area: Brownfields
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$25,200.3***	***$22,957.0***	***$25,254.0***	***$2,297.0***
Total Budget Authority / Obligations	$25,200.3	$22,957.0	$25,254.0	$2,297.0
Total Workyears	121.5	125.9	135.9	10.0

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 (i.e. Rocky Mountain arsenal, former Superfund site), enabling economic development, and maintaining or improving quality of life. This specific program is basically the administrative component of the Brownfields program, supporting human resources, travel, training, technical assistance and research activities.

EPA's work is focused on removing barriers and creating incentives for Brownfield redevelopment. 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. 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.

EPA's enforcement program develops guidances and tools that define potential liability, thereby providing greater certainty and comfort for parties seeking to reuse these properties. Through discussions and the use of enforcement tools, the enforcement program can also provide direct support to facilitate transactions by parties seeking to reuse contaminated properties.

The EPA Smart Growth[17] program works with stakeholders to create an improved economic and institutional climate for Brownfields redevelopment. The Smart Growth program removes barriers and creates incentives for Brownfields redevelopment 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.

[17] For more information please refer to http://www.epa.gov/livability/

FY 2010 Activities and Performance Plan:

In addition to supporting the operations and management of the Brownfields program, funds in 2010 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 will provide technical assistance to communities that were awarded funding to combine smart growth policies with Brownfields redevelopment. EPA will also 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, and highlight best practices that can be copied in other communities.

EPA's enforcement program will continue to work collaboratively with our partners on innovative approaches to help achieve the Agency's land reuse priorities. EPA's enforcement program will continue to develop guidances and tools to provide greater certainty and comfort regarding potential liability concerns for parties seeking to reuse these properties.

The Smart Growth program will continue to address critical issues for Brownfield redevelopment including land assembly, development permitting issues, financing, parking and street standards, accountability to uniform systems of information for land use controls, and other factors that influence the economic viability of Brownfields redevelopment. Requested funding for the Smart Growth program is $1.2 million under Brownfields program and $3.9 million under Regulatory Innovation program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$851.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (+$96.0) This change reflects a shift of resources from primarily contracts to grants.
- (+$1,350.0/ +10.0 FTE) This reflects a shift of FTE and associated payroll from the Regulatory Innovation program. EPA's workforce management strategy indicates a need for project officers greater than the amount funded by the American Recovery and Reinvestment Act (ARRA) for the Brownfields program. These 10 FTE and their payroll are in addition to those already covered by ARRA funds.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$97,364.3***	***$94,271.0***	***$111,634.0***	***$17,363.0***
Science & Technology	$17,156.3	$16,828.0	$18,975.0	$2,147.0
Total Budget Authority / Obligations	$114,520.6	$111,099.0	$130,609.0	$19,510.0
Total Workyears	217.2	213.0	223.0	10.0

Program Project Description:

EPA's climate change program targets efforts to reduce greenhouse gas emissions through voluntary programs. It also provides technical assistance and scientific and economic analysis supporting the development of climate-related policy options.

EPA's voluntary public-private partnership programs are 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 avoid greenhouse gas emissions from power plants, mobile sources, and various other sources.

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 emissions reductions of non-CO_2 greenhouse gases. 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 voluntary 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), delivered more than $75 in energy bill savings, and facilitated more than $15 in private sector investment.[18] This is based upon cumulative reductions since 1995.

EPA manages a number of voluntary 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. 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.

[18] Climate Protection Partnerships Division, U.S. Environmental Protection Agency. 2007 http://www.energystar.gov/ia/partners/publications/pubdocs/2007%20Annual%20Report%20-%20Final%20-11-10-08.pdf

EPA works with the Department of Energy (DOE) on the ENERGY STAR program; DOE manages the specification process for approximately seven product categories and EPA manages the specification process for about 55 product categories, the new and existing homes programs, and the commercial and industrial programs. The ENERGY STAR program continues to yield significant results. In 2008 alone, Americans, with the help of ENERGY STAR, prevented more than 43 million metric tons of carbon equivalent (MMTCE), saving more than $19 billion on their annual utility bills. ENERGY STAR is on track to meet its goal of avoiding 52 MMTCE of greenhouse gases in 2012. [19]

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.[20]

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.[21]

EPA manages a number of other partnership programs that tailor their approach to specific trades or organizations in the arena of climate change. The Climate Leaders program works with organizations to help them inventory their emissions and develop comprehensive climate change strategies. The Clean Energy-Environment State and Local Program provides assistance to local and state governments for improving their facilities and leading in energy efficiency-related GHG reduction efforts. EPA's Combined Heat and Power (CHP) Partnership promotes cost-effective CHP projects, while its Green Power Partnership supports the procurement of green power. The National Action Plan for Energy Efficiency is assisting state decision makers to establish the state policy framework for pursing all cost-effective energy efficiency.

In addition to EPA's voluntary climate change programs, through this program EPA provides analytical and technical support for the development of policy options for climate-related legislation. In recent years, EPA has analyzed a number of potential legislative proposals for reducing greenhouse gases (GHGs) from a wide variety of sources using a cap-and-trade approach.

- EPA's climate change analysis builds on the understanding of (1) the emission and sequestration of greenhouse gases, for all greenhouse gases and from all sectors of the

[19] Additional information at: www.energystar.gov
[20] Additional information at: www.epa.gov/methanetomarkets/
[21] Additional information at: www.epa.gov/smartway

economy; (2) the economic, technical and policy issues related to wider deployment of key mitigation technologies (e.g. energy efficiency, transportation, non-CO2 greenhouse gases, carbon capture and storage); and (3) the key design elements of a cap and trade system (including coverage and point of regulation, cost containment mechanisms, offsets, allowance distribution, and market oversight).

- EPA's economic analyses cover key questions such as: what technologies could be used to reduce GHG emissions given proposed levels of emission caps; how and when U.S. GHG emissions would be reduced; and how much such reductions would cost the U.S. economy as a whole as well as the impacts on consumption and energy prices.

FY 2010 Activities and Performance Plan:

- EPA will continue to implement its government/industry partnership efforts to achieve greenhouse gas reductions. In addition to reduce greenhouse gas emissions, these efforts 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. In FY 2010, EPA's voluntary climate change programs will:

- Continue the ENERGY STAR program across the residential, commercial, and industrial sectors, including:

    - Revising and updating specifications for ENERGY STAR product categories;
    - Expanding the ENERGY STAR residential programs to new markets around the country; and
    - Supporting more partners in the commercial and industrial sectors in the pursuit of strategic energy management through ENERGY STAR.

The FY 2010 Budget Request for the ENERGY STAR program totals $50.7 million.

Energy Star Program Funding			
Dollars in Millions			
	FY 2008 Enacted	**FY 2009 Enacted**	**FY 2010 President's Budget**
Energy Star Total:	$48.2	$49.7	$50.7
-Residential	$24.0	$25.0	$25.5
-Commercial and Institutional	$21.7	$22.2	$22.7
-Industrial	$2.5	$2.5	$2.5

- 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. SmartWay also will be expanding its efforts to:

- develop GHG measurement protocols for heavy-duty diesel trucks and for the freight supply chain network;
- promote SmartWay certified light duty and heavy duty vehicles that meet SmartWay's criteria for environmentally superior performance;
- streamline and expand our SmartWay partner recruiting and management efforts;
- create a definition for low GHG emitting vehicles and develop guidance for implementation of EEISA section 141 Federal vehicle purchase requirements.

The FY 2010 Budget Request for the Smartway Transport Partnership program totals $2.9 million.

- Continue 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. The FY 2010 Budget Request for the Methane to Markets program totals $4.6 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.

In addition, EPA will continue to implement the Greenhouse Gas Registry Rule and provide technical expertise in analyzing proposed GHG limiting legislation:

- In FY 2010, EPA will continue its efforts to implement the Greenhouse Gas Reporting Rule, in which affected facilities will begin collecting emissions data. To ensure a prompt and effective start to the program, EPA will need to (1) design, develop, and test the data management system, (2) develop guidance and training materials to assist the regulated community, and (3) prepare for the review and dissemination of data collected in FY 2011. The funding request for the Greenhouse Gas Registry Rule is $17.0 million, an increase of $10.6 million.

- In 2010, developing cap and trade legislative options will be a focus of efforts to reduce greenhouse gases. Cap and trade legislation can meet the necessary environmental goals efficiently and with flexibility for affected entities to ensure reductions are achieved at the lowest possible costs. EPA will support Administration efforts to design an effective cap

and trade system in cooperation with Congress. EPA also will focus on key analytical and implementation issues related to the use of offsets in a GHG trading system.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the buildings sector.	Avail. 2009	32.4	35.5	39.0	MMTCE

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the industry sector.	Avail. 2009	67.7	72.9	82.9	MMCTE

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	1.60	1.5	2.6	4.3	MMTCE

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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$774.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$5,000.0) This funding will support EPA's efforts to provide technical expertise and analysis on effective, environmentally sound approaches to possible cap and trade programs, including the use of offsets. In addition, these resources would be used to develop protocols for monitoring and verifying the effectiveness of offset projects to ensure there are adequate performance standards and monitoring methods for all appropriate offset project categories.

- (+$10,617.0/ +10.0 FTE) This funding will support efforts to implement the Greenhouse Gas Registry Rule, including 10 FTE and associated payroll of $1,643.0. To ensure a prompt and effective start to the program, in FY 2010 EPA will need to (1) design, develop, and test the data management system, (2) develop guidance and training materials to assist the regulated community, and (3) prepare for the review and dissemination of collected data. These FTE will support implementation of the Greenhouse Gas Registry Rule

- (+$68.0) This funding will support additional outreach efforts for the Methane to Markets program.

- (+$697.0) Increased funding will support enhanced outreach and partner support activities for ENERGY STAR.

- (+$207.0) Increased funding will support voluntary programs including SmartWay, Climate Partners and AgStar.

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

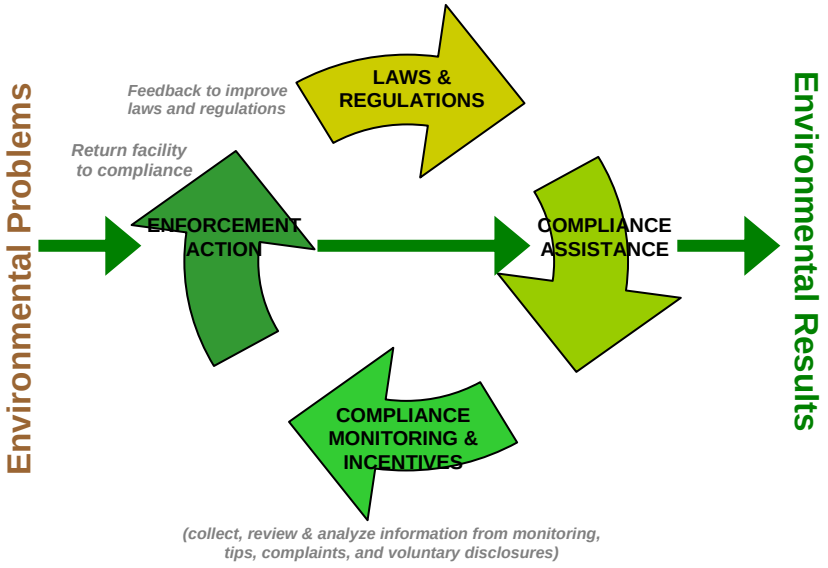
Compliance Assistance and Centers
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$28,063.5***	***$23,770.0***	***$26,070.0***	***$2,300.0***
Leaking Underground Storage Tanks	$787.5	$817.0	$788.0	($29.0)
Oil Spill Response	$285.3	$277.0	$317.0	$40.0
Hazardous Substance Superfund	$33.1	$22.0	$0.0	($22.0)
Total Budget Authority / Obligations	$29,169.4	$24,886.0	$27,175.0	$2,289.0
Total Workyears	197.0	181.1	180.1	-1.0

Program Project Description:

The Enforcement and Compliance Assurance program provides compliance information and assistance to the regulated community, monitors compliance with environmental laws, and takes civil or criminal enforcement action when needed. The primary goal is to ensure that the environmental and public health benefits that are promised by our nation's environmental laws are realized. The diagram below illustrates how these activities work together to accomplish that goal.



Ensuring that the entities subject to environmental requirements understand those requirements, and what they need to do to be sure they are in full compliance is critical to the life cycle of the enforcement program. Regulated entities have a right to fair notice about legal requirements that

apply to them, and a chance to understand their obligations. Compliance can then be monitored, which may identify additional areas for future education. If appropriate, EPA can offer incentives for returning to compliance, and compel compliance through enforcement actions. EPA's success in returning facilities to compliance relies on using the appropriate combination of approaches to effectively confront noncompliance problems.

EPA's compliance assistance programs provide information to millions of regulated entities, Federal agencies, particularly small businesses and local governments, to help them understand and meet their environmental obligations. This information lets regulated entities know of their legal obligations under federal environmental laws. Compliance assistance resources include comprehensive Web sites, compliance guides, emission calculators, and training materials aimed at specific business communities or industry sectors. Also, onsite compliance assistance and information is sometimes provided by EPA inspectors during an inspection.

The primary audiences for EPA's assistance resources are the nation's 20 million small businesses, 80,000 small local governments, and over 560 Tribal communities, all of whom typically do not have the resources for in-house staff or consultants to help manage environmental compliance. Reports by the Small Business Administration (SBA) have specifically highlighted and praised EPA's compliance assistance efforts as examples of effective federal agency interaction with small businesses. EPA was the leading example in the SBA's 2007 Report to Congress of how federal agencies can foster fair enforcement by providing compliance assistance.

Consistent with the lifecycle of the compliance assurance program described above, compliance assistance often precedes consideration of enforcement. Initial outreach to the regulated community not only enables EPA to provide "fair notice" regarding new requirements, it also helps prevent violations. In some instances, EPA is required to provide compliance assistance to regulated entities. The Small Business Regulatory Enforcement Fairness Act (SBREFA) requires EPA to develop compliance guides or checklists for small businesses that are significantly impacted by new EPA regulations.

There are a number of Presidential Executive Orders that require EPA to provide assistance to Federal facilities. In FY 2010, the Federal Facility Enforcement program will provide technical guidance to other Federal agencies on compliance with applicable Executive Orders and environmental laws. EPA will continue to ensure continued support of the Federal Facilities Stewardship and Compliance Assistance Center.[22]

FY2010 Activities and Performance Plan:

In FY 2010, the compliance assistance resources and activities EPA provides fall into three categories: direct assistance, indirect assistance, and capacity building.

- Direct compliance assistance activities include in-person activities such as on-site assistance visits, workshops, trainings, and responses to inquiries about specific requirements. These activities help achieve measurable changes in behavior (e.g.,

[22] For more information visit: http://www.fedcenter.gov/

modification to operations or practices in order to return to compliance) that in turn have an impact on human health or the environment (e.g., reduction, elimination or treatment of pollution). These activities are generally more resource intensive than the indirect assistance activities.

- Indirect assistance includes the creation and dissemination of information through targeted mailings and Web sites. EPA provides effective and efficient compliance information to regulated entities, primarily small businesses, through 17 Web-based Compliance Assistance Centers. The Centers assist users by providing compliance tools and contacts for over 20 topics, including federal requirements for control of contaminated stormwater, air and hazardous waste, lead, and mercury. The Centers provide easy access to state-specific regulations and compliance resources.

    - The regulated community relies heavily upon the Compliance Assistance Centers. During FY 2008, EPA reached more than 2.2 million entities through online compliance assistance activities. The Centers reach a much larger audience than other methods of compliance assistance, and have provided an increasingly large proportion of EPA's compliance assistance over the past five years.

- Capacity building enables state and local agencies to efficiently and effectively provide a consistent message about national regulatory requirements while allowing the state and local agencies to tailor the message if they have their own additional requirements. National consistency for compliance information is important, particularly for businesses that operate in more than one jurisdiction.

The Agency uses all three forms of assistance to support both core programs and national priorities. In FY 2010, EPA will continue to rely on the Integrated Compliance Information System (ICIS) to track and report on its compliance assistance activities.

Core/National Priority Compliance Assistance: 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 federal and private entities. EPA will encourage the use of cost-effective webinars, over in-person workshops, as a means for helping regulated entities understand their environmental obligations. Guides, check-lists, fact sheets, and similar assistance tools will be produced as on-line versions. Regional initiatives will focus on a limited number of sectors and greater efficiencies will be explored in an effort to continue providing capacity building to local governments and States.

EPA will also focus on assistance aspects of the integrated strategies supporting three of the nine National Compliance and Enforcement Priorities: Mineral Processing, Indian Country, and Financial Assurance. For Mineral Processing, EPA will complete the development of two compliance tools – one for industry and one for inspectors. For Indian Country, EPA will focus national attention on three key compliance assurance and enforcement issues: (1) drinking water

systems, (2) illegal dumping and solid waste management, and (3) schools. For Financial Assurance, EPA will provide assistance to the Resource Conservation and Recovery Act (RCRA) Subtitle C regulated universe that has not been assessed for compliance, and to certain entities in the Underground Injection Control program. EPA will continue to measure outcomes from direct compliance assistance as a statistically valid indicator of the results achieved through assistance activities.

Indian Country Compliance Assurance: In FY 2010, EPA will support up to five circuit riders to provide on-the-ground technical assistance, training and investigations. Circuit riders are expected to reach approximately 270 of the 981 drinking water systems in Indian country, covering approximately 227,000 residents in Indian country (which is about 22 percent of the Indian country residents). The waste management circuit riders are expected to reach approximately 95 tribes of the 562 tribes nationwide. Funding these circuit riders is consistent with the National Enforcement Priority for Indian Country. Focused training and capacity building to tribal regulators will be provided in the most seriously impacted areas.

Web-Based Compliance Assistance Centers: In FY 2010, EPA will provide $1.4 million for the operation, maintenance, and enhancement of EPA's 17 on-line compliance assistance centers. Specifically, the content of the 17 Centers[23] will be updated to include environmental requirements and best practices, as well as new compliance resources and training information as it is developed. In addition, the state-specific compliance information managed by the Centers program (State Resources Locator) will expand to include more focus areas. The Agency will continue to realize cost-efficiencies in managing the Centers through reliance on the Center Platform, which provides centralized resources and infrastructure for most existing Centers. In addition, EPA will continue working with other Federal agencies to ensure continued support of the Federal Facilities Stewardship and Compliance Assistance Center[24]. The Centers are a key information resource, especially for small businesses and communities seeking plain language information on how to comply with environmental laws. They were visited over 2 million times last year through Internet Web sites, telephone assistance lines, and e-mail discussion groups. The Centers provide a "first-stop" and "one-stop" easy-to-access forum to help businesses, local governments, and Federal facilities understand Federal environmental requirements and save money through pollution prevention techniques.

Compliance Assistance users have provided positive feedback that supports the Enforcement and Compliance Assurance program goal to ensure that environmental and public health benefits are realized. Over 85 percent of on-line users surveyed report the Centers helped them understand applicable environmental requirements, over 70 percent reported improved environmental management practices, and over 40 percent reported reduced, treated, or eliminated pollution at their establishments as a result of Center use[25].

[23] The 17th Center is expected to come on-line in May 2009.
[24] For more information visit: http://www.fedcenter.gov/
[25] These performance measures are not calculated from a representative sample of the regulated entity universe. The percentages are based on the number of regulated entities that answer affirmatively to these questions on our voluntary surveys. The percentages do not account for the number of regulated entities who chose not answer these questions or the majority of entities who chose not to answer the survey.

As part of the Agency's transition to a new strategic plan for FY 2009-2014, the Enforcement and Compliance Assurance program is shifting from a tool-based approach to a problem-based approach for program measurement. This will allow the program to highlight its results from its national priority work in the problem-based areas of the strategic plan - air, water, and waste; and to better characterize results by pollutants and impacts on ecological and human health benefits. Measures pertaining to enforcement and compliance actions are under review and may be modified in the coming months.

Performance Targets: These three measures on the total entities that change behavior resulting in direct and preventative environmental benefits are new performance measures beginning in FY 2010; no performance targets exist for these new measures for FY 2008-2009.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for air as a result of EPA enforcement and compliance actions.				127	Entities
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for water as a result of EPA enforcement and compliance actions.				608	Entities
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the				213	Entities

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	environment for land as a result of EPA enforcement and compliance actions.					

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$848.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$56.0) This reflects an increase for IT and telecommunications resources.
- (+$1,408.0) This change reflects an increase to fund the Agency's on-line Compliance Assistance Centers.
- (-$12.0 \ -1.0 FTE) This reflects the redirection of nonpayroll resources and a FTE supporting international capacity building to the Civil Enforcement program.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NEPA; CERCLA; NAAEC; LPA-US/MX-BR; EPAct.

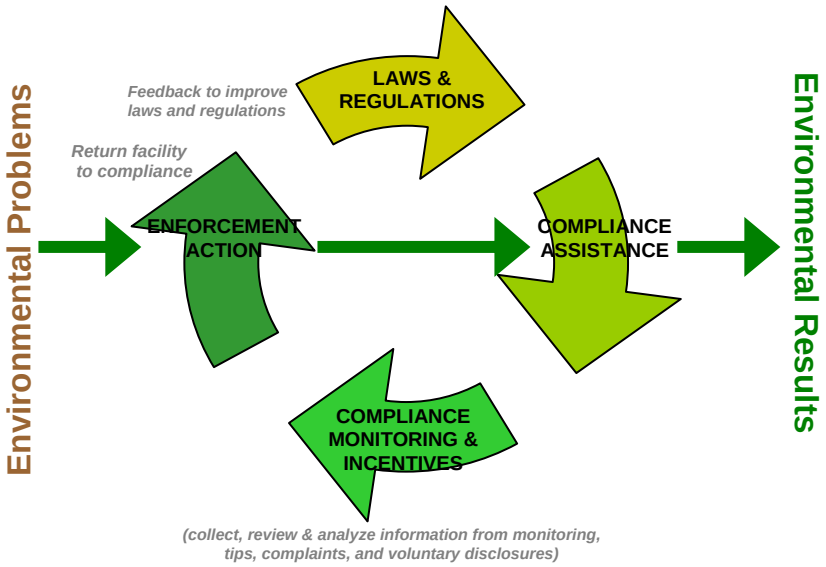
Compliance Incentives
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$10,250.7***	***$8,992.0***	***$10,702.0***	***$1,710.0***
Hazardous Substance Superfund	$58.7	$137.0	$0.0	($137.0)
Total Budget Authority / Obligations	$10,309.4	$9,129.0	$10,702.0	$1,573.0
Total Workyears	68.1	61.8	69.4	7.6

Program Project Description:

The Enforcement and Compliance Assurance program provides compliance information and assistance to the regulated community, monitors compliance with environmental laws, and takes civil or criminal enforcement action when needed. The primary goal is to ensure that the environmental and public health benefits that are promised by our nation's environmental laws are realized. The diagram below illustrates how these activities work together to accomplish that goal.



EPA uses four distinct but integrated tools to maximize compliance with the nation's environmental laws. This includes: compliance assistance (i.e., educating regulated entities how to comply with often complex regulations), compliance monitoring (i.e., identifying existing violations through on-site inspections, investigations, and collection and analysis of compliance data), compliance incentives (i.e., motivating regulated facilities/companies to identify, disclose, and correct violations), 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. EPA uses a variety of approaches to encourage entities to self-disclose environmental violations under various environmental statutes. EPA's Audit Policy encourages internal audits of environmental compliance and subsequent correction of self-discovered violations, providing a uniform enforcement response toward disclosures of violations and accelerating compliance.

FY 2010 Activities and Performance Plan:

The Agency's Enforcement program will continue to implement the Self-Policing (Audit), Small Business Compliance, and Small Local Governments Compliance Assistance policies as core elements of the Enforcement and Compliance Assurance Program. Since FY 2001, nearly 7,000 facilities at more than 3,400 companies resolved violations under EPA's Voluntary Disclosure Policies. Under the Audit Policy and the Small Business Compliance Policy, when companies voluntarily discover, promptly disclose, expeditiously correct and prevent recurrence of environmental violations, and can satisfy the criteria of either policy, EPA may waive or substantially reduce civil penalties. For the purposes of the Small Business Compliance Policy, a small business is one that employs 100 or fewer individuals across all facilities and operations that the business owns. When entities meet the conditions of the Audit or Small Business Compliance Policies then penalties are lower than the penalty given to entities that do not self-disclose environmental violations.

The Small Local Government Compliance Assistance Policy promotes environmental compliance by allowing penalty reductions for small local governments that achieve comprehensive compliance or implement an Environmental Management System (EMS). The policy explains how EPA will generally defer to a state's decision to reduce or waive the normal noncompliance penalty for a small local government that either commits to (and subsequently achieves) compliance with all of the environmental requirements that apply to its governmental operations, or commits to correct all of its known violations and to develop and implement an EMS for its governmental operations. Removing the fear of a large penalty has been instrumental in persuading local governments to participate in state programs to assess small local governments' environmental performance conditioned on the local government entering into binding agreements to correct any violations that are found.

In FY 2010, the Agency will continue to use the Audit Policy through outreach to industries. 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.

Also, in FY 2010, the Agency will continue its efforts to encourage audits and to increase disclosure and settlement of violations that, once corrected, will yield significant pollutant

reductions and environmental benefits. In particular, the Agency will encourage new owners to utilize the "*Interim Approach to Applying the Audit Policy to New Owners,*" which tailors incentives to encourage new owners to use the Audit Policy to address violations that began at their recently acquired facilities prior to their ownership, which will help EPA efficiently secure high quality environmental improvements.

EPA began a pilot system in late FY 2008 to disclose Emergency Planning and Community Right-to-Know Act (EPCRA) violations through EPA's Web site and to streamline the process for resolving routine Audit Policy disclosures of recordkeeping and reporting violations. EPA will evaluate whether to expand the system to other types of violations in FY 2010.

EPA also will track 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 2010. This site provides communities with compliance status information and averages 75,000 queries per month.

As part of the Agency's transition to a new strategic plan for FY 2009-2014, the Enforcement and Compliance Assurance program is planning to shift from a tool-based approach to a problem-based approach for program measurement. This will allow the program to highlight its results from its national priority work in the problem-based areas of the strategic plan - air, water, and waste; and to better characterize results by pollutants and impacts on ecological and human health benefits. Measures pertaining to enforcement and compliance actins are under review and may be modified in the coming months.

Performance Targets: The last three measures on the total entities that change behavior resulting in direct and preventative environmental benefits are new performance measures beginning in FY 2010; no performance targets exist for these new measures for FY 2008-2009.

Outcome	Pounds of pollutants estimated to be reduced, treated, or eliminated, as a result of audit agreements.	5.40	0.4	0.4	0.4	Million Pounds
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for air as a result of EPA enforcement and compliance actions.				127	Entities

Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for water as a result of EPA enforcement and compliance actions.				608	Entities
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for land as a result of EPA enforcement and compliance actions.				213	Entities

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,499.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$211.0) This reflects an increase for IT and telecommunications resources.
- (+8.5 FTE) This change reflects EPA's increased efforts in promoting compliance by encouraging regulated entities to identify and address violations consistent with incentives policies such as the Self-Policing Audit, Small Business Compliance, and Small Local Governments Compliance Assistance policies.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBHRA; FIFRA; ODA; NEPA; NAAEC; LPA-US/MX-BR.

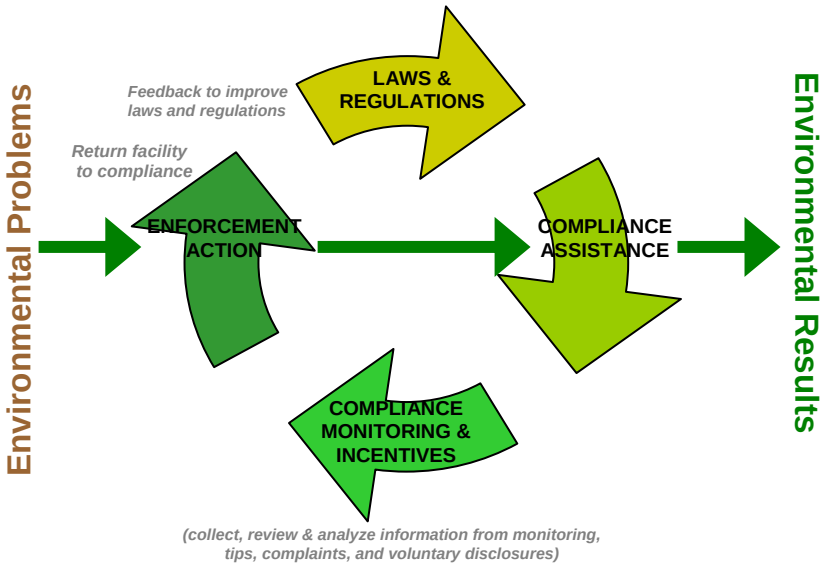
Compliance Monitoring
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$92,048.1***	***$96,064.0***	***$99,859.0***	***$3,795.0***
Hazardous Substance Superfund	$1,251.3	$1,192.0	$1,247.0	$55.0
Total Budget Authority / Obligations	$93,299.4	$97,256.0	$101,106.0	$3,850.0
Total Workyears	600.6	623.0	612.3	-10.7

Program Project Description:

The Enforcement and Compliance Assurance program provides compliance information and assistance to the regulated community, monitors compliance with environmental laws, and takes civil or criminal enforcement action when needed. The primary goal is to ensure that the environmental and public health benefits that are promised by our nation's environmental laws are realized. The diagram below illustrates how these activities work together to accomplish that goal.



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 regulations), compliance monitoring (i.e., identifying existing violations through on-site inspections, evaluations, and investigations to document compliance or non-compliance, and collection and analysis of compliance data), compliance incentives (i.e., policies to motivate regulated facilities/companies to identify, disclose, and correct violations), 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.

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, and reviews of facility records and monitoring reports. 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 entities are in compliance with environmental laws and regulations. The multi-media approaches such as cross-media inspections, sector initiatives, and risk-based targeting allow the Agency to take a more holistic approach to protecting ecosystems and to solving the more intractable environmental problems. EPA's Compliance Monitoring program includes the management of compliance and enforcement data and data systems, and the use of the data to target and manage the compliance and enforcement program.[26]

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.[27]

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 programs or EPA statutory authority. EPA's activities target areas that pose significant 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 2010 Activities and Performance Plan:

In FY 2010, the program will emphasize the core programs and priorities identified in the Enforcement and Compliance Assurance's FY 2008-2010 National Program Manager's Guidance as well as on supporting and overseeing authorized state/Tribal programs.[28] After consulting with EPA programs and regions, states, and tribes, these enforcement and compliance assurance priorities include:

- Clean Air Act: Air Toxics
- Clean Air Act: New Source Review & Prevention of Significant Deterioration

[26] For more information, refer to: www.epa.gov/compliance/monitoring /index.html.
[27] For more information about the Import/Export program, refer to: www.epa.gov/compliance/international/importexport.html.
[28] For more information, refer to: www.epa.gov/ocfopage/npmguidance/index.htm.

- Indian Country Drinking Water Systems, Schools and Waste
- Reduction of Water Pollution from Concentrated Animal Feeding Operations, Sewers, and Stormwater under the Clean Water Act
- Financial Responsibility for Hazardous and Toxic Waste
- Resource Conservation and Recovery Act Mineral Processing

To ensure the quality of compliance inspections/evaluations/investigations, EPA is continuing to develop national policies, update inspection manuals, provide required training for inspectors, and issue inspector credentials (prior to issuing credentials, EPA negotiates an authorization agreement and ensures that state and Tribal inspectors are adequately trained). EPA also conducts training to ensure that the inspectors/investigators are: 1) knowledgeable of environmental requirements and policies, 2) technically proficient in conducting 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 and authorizing states/tribes employees to conduct inspections and evaluations on EPA's behalf.

EPA's Enforcement and Compliance program will improve its efficiency by integrating technology, especially software and portable personal computers, into the inspection and evaluation process. Adopting 21st century tools provides an opportunity to improve the timeliness and accuracy of data collection and entry, endows the program with uniformity in the inspection and evaluation process, and increases the speed for submitting inspection and evaluation reports.

The Agency will continue its multi-year project to modernize its national enforcement and compliance data system, called the Integrated Compliance Information System (ICIS). ICIS is being developed in three major phases. The FY 2010 budget for ICIS totals $11.2 million. In addition to supporting Compliance Monitoring, ICIS also supports Civil Enforcement, Compliance Assistance, and Compliance Incentives. ICIS is being developed in three phases, including:

- 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 Government Performance Results Act (GPRA) reporting.

- Phase II of ICIS is the modernization of the Permit Compliance System (PCS), which supports EPA and state management of the National Pollutant Discharge Elimination System (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. In FY 2008, an additional 6 states and 1 territory were brought into the new system; by the end of FY 2009 the total number of states using ICIS-NPDES will be 31. EPA is working on additional releases of the modernized system to move the remaining states to ICIS-NPDES. In FY 2010, we will

also begin development efforts of the functionality that would allow electronic transfer of all NPDES data by states that run their own systems to ICIS–NPDES.

- Phase III of ICIS is expansion of the system to include the unique requirements of the Clean Air Act compliance and enforcement program. This is done by modernizing the Air Facility System (AFS) to improve EPA, state, and local tracking of permit compliance and enforcement data for stationary sources of air pollution. In FY 2010, EPA will incorporate into ICIS system design, detailed business requirements and alternatives analysis for use in ICIS system development.

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 2010. This site, and its powerful companion tool that serves more than 400 government entities, the Online Targeting and Information System (OTIS), provides communities and regulators with compliance status information, averaging approximately 75 thousand queries per month.

EPA will continue to review all notices for trans-boundary movement of hazardous waste and notices for export of Cathode Ray Tubes to ensure compliance with domestic regulations and international agreements. 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 2008, EPA responded to 1,266 notices representing 643 import notices and 623 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.

As part of the Agency's transition to a new strategic plan for FY 2009-2014, the Enforcement and Compliance Assurance program is planning to shift from a tool-based approach to a problem-based approach for program measurement. This will allow the program to highlight its results from its national priority work in the problem-based areas of the strategic plan - air, water, and waste, and to better characterize results by pollutants and impacts on ecological and human health benefits.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate air pollutants through concluded enforcement actions.				480	Million Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate water pollutants through concluded enforcement actions.				320	Million Pounds
Outcome	Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.				3.8	Million Pounds
Outcome	Reduce, treat, or eliminate hazardous waste through concluded enforcement actions.				6,500	Million Pounds

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$3,242.0) This reflects an increase for payroll and cost of living for all FTE.
- (-10.7 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. These resources will be redirected to the Civil Enforcement program to support the hiring of additional staff to support new and on-going case work.
- (-$163.0) This reflects a decrease for IT and telecommunications resources.
- (+$716.0) This change reflects increases in contract and travel resources to support the Agency's inspectors in conducting inspections and other enforcement-related activities of the Compliance Monitoring program.

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

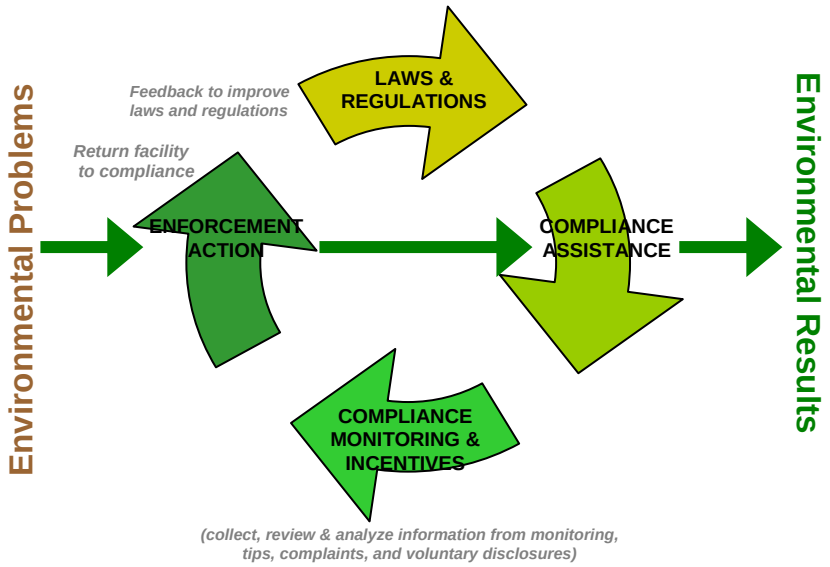
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$131,986.8***	***$137,182.0***	***$145,949.0***	***$8,767.0***
Oil Spill Response	$1,851.0	$2,117.0	$2,406.0	$289.0
Hazardous Substance Superfund	$591.0	$0.0	$0.0	$0.0
Total Budget Authority / Obligations	$134,428.8	$139,299.0	$148,355.0	$9,056.0
Total Workyears	940.6	974.2	988.5	14.3

Program Project Description:

The Enforcement and Compliance Assurance program provides compliance information and assistance to the regulated community, monitors compliance with environmental laws, and takes civil or criminal enforcement action when needed. The primary goal is to ensure that the environmental and public health benefits that are promised by our nation's environmental laws are realized. The diagram below illustrates how these activities work together to accomplish that goal.



The Civil Enforcement program's overarching goal is to protect human health and the environment, targeting enforcement actions according to the 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 also to deter future violations. The civil enforcement program develops, litigates, and settles administrative and civil judicial cases against serious violators of environmental laws.[29]

EPA uses four distinct but integrated tools to maximize compliance with the nation's environmental laws. This includes: compliance assistance (i.e., educating regulated entities how to comply with often complex regulations), compliance monitoring (i.e., identifying existing violations through on-site inspections, investigations, and collection and analysis of compliance date), and compliance incentives (i.e., motivating regulated facilities/companies to identify, disclose, and correct violations). In addition to EPA's direct role in utilizing these tools, the enforcement program provides focused oversight of state performance and ensures that national environmental laws are enforced in a consistent, equitable manner that protects public health and the environment. This approach ensures that work necessary for the 28 programs and the national priorities is conducted.

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 Federal and private 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.

FY 2010 Activities and Performance Plan:

In FY 2010, the Agency will aggressively implement its core Civil Enforcement program, as well as the National Compliance and Enforcement Priorities established for calendar years 2008-2010. The nation's top priorities for enforcement include 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 Financial Responsibility requirements for the RCRA, Safe Drinking Water Act, and Toxic Substances Control Act programs, and ensuring compliance in Indian Country. EPA's Civil Enforcement program will continue to rely heavily on the Integrated Compliance Information System to manage its enforcement cases by tracking the status of all civil judicial and administrative enforcement actions, including their projected and actual results. In FY 2008, through its efforts in the core program and national priorities, EPA achieved $11.8 billion in future pollution controls and pollution reduction commitments totaling 3.9 billion pounds, and similar results are expected in FY 2010.

[29] For more information visit: www.epa.gov/compliance/civil/index.html; www.epa.gov/epaoswer/hazwaste/ca/backgnd.htm.

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 Bureau of Prison Facilities, RCRA, Small Quantity Generators, 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. 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.

The passage of the Energy Independence and Security Act (EISA) of 2007 requires a dramatic increase in usage of renewable fuels. All renewable fuel will have to fit within four separate lifecycle categories based upon the fuel type, the feedstock used to produce the fuel, and the production process used to produce the fuel. In order to ensure compliance with these mandates, EPA will have to monitor and inspect the sources of various feedstocks, the production processes, and the quality of the renewable fuel. The Agency anticipates that importers will significantly increase the amount of renewable fuel being brought in from abroad to meet EISA requirements. EPA will have to devote additional resources crafting and implementing a plan to ensure importers comply with the feedstock, production, and product standards. Where violations are found, EPA will need to determine the appropriate enforcement response (e.g. issue Administrative Orders, or refer cases to the Department of Justice).

As part of the Agency's transition to a new strategic plan for FY 2009-2014, the Enforcement and Compliance Assurance program is planning to shift from a tool-based approach to a problem-based approach for program measurement. This will allow the program to highlight its results from its national priority work in the problem-based areas of the strategic plan - air, water, and waste, and to better characterize results by pollutants and impacts on ecological and human health benefits.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate air pollutants through concluded enforcement actions.				480	Million Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate water pollutants through concluded enforcement actions.				320	Million Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.				3.8	Million Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate hazardous waste through concluded enforcement actions.				6,500	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. There are many programs evaluated under the Civil Enforcement OMB program 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 OMB program assessment 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 of 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.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$8,309.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$90.0) This reflects an increase for travel, IT, and telecommunications resources to support the additional enforcement staff.
- (+13.3 FTE) This change reflects EPA's strengthening the Civil Enforcement program. These additional FTE will allow EPA to hire additional enforcement staff, including staff to support implementation of the Energy Independence and Security Act (EISA) of 2007.
- (+$12.0 \ +1.0 FTE) This reflects the redirection of nonpayroll resources and a FTE supporting international capacity building from the Compliance Assistance program to the Civil Enforcement program.

- (+$356.0) This change reflects an increase in contracts resources for case support activities, including implementation of EISA.

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.

Criminal Enforcement
Program Area: Enforcement
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$40,128.8***	***$45,763.0***	***$49,399.0***	***$3,636.0***
Hazardous Substance Superfund	$7,687.0	$7,767.0	$8,336.0	$569.0
Total Budget Authority / Obligations	$47,815.8	$53,530.0	$57,735.0	$4,205.0
Total Workyears	254.8	281.1	291.8	10.7

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 of 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 utilizing forensics techniques, and may then request 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 maintain an effective criminal enforcement program that is a key component of 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.[30]

FY 2010 Activities and Performance Plan:

In FY 2010, the criminal enforcement program will continue to expand its identification and investigation of cases with significant environmental, human health, and deterrence impact while balancing its overall case load of "core" cases across all pollution statutes (e.g., traditional cases

[30] For more information visit: http://www.epa.gov/compliance/criminal/index.html.

involving wastewater; hazardous waste; the Federal Insecticide, Fungicide, and Rodenticide Act; the Toxic Substances Control Act, etc.). The program will increase the number of agents to complete its three-year hiring strategy of raising its special agent workforce to 200 criminal investigators. With these resources, the program will expand its capacity in supporting efforts to address complex environmental cases.

The criminal enforcement program will emphasize six priority areas: national compliance and enforcement priorities, regional enforcement priorities, stationary source air cases, high impact cases, repeat or chronic civil noncompliance, and import/export violations. Working with its Federal, state and local law enforcement partners, the program's emphasis on these priorities will yield greater environmental and public health benefits and deter illegal corporate and individual behavior.

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. Enforcement is accomplished by employing 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 program 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 2010, the program will use data from the electronic Criminal Case Reporting System. 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 Agencywide, program-specific, or Regional enforcement priorities. 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 Web site. Established in 2006, the Web site has resulted in two successful prosecutions of criminal enforcement cases initiated by public feedback.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of recidivism				<1%	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of closed cases with criminal enforcement consequences (indictment, conviction, fine, or penalty).				33%	Percentage

During FY 2010, the two primary criminal enforcement program performance measures will be:

- recidivism (current measure, with target and baseline established in FY 2008)
- cases with an enforcement consequence (new measure, with target and baseline to be determined)

Data for the measures will be collected through the Criminal Case Reporting System**.**

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,715.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$170.0) This reflects an increase in IT and telecommunications resources.

- (+$1,751.0) These increased resources will support new criminal investigators' permanent change of station and mandatory training courses.

- (+10.7 FTE) These additional FTE will be used to hire additional criminal investigators and technical support for the field-based investigators, expanding the program's ability to punish and deter serious environmental offenses.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$2,924.9***	***$2,938.0***	***$3,097.0***	***$159.0***
Hazardous Substance Superfund	$785.1	$793.0	$851.0	$58.0
Total Budget Authority / Obligations	$3,710.0	$3,731.0	$3,948.0	$217.0
Total Workyears	22.0	20.9	20.8	-0.1

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.

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.[31]

FY 2010 Activities and Performance Plan:

In FY 2010, NETI will continue to develop and deliver training 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 materials, 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.

Performance Targets:

Currently, there are no specific performance measures for this program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$66.0) This reflects an increase for payroll and cost of living for existing FTE.

[31] For more information, refer to: http://www.epa.gov/compliance/training/neti/index.html

- (+$93.0) This reflects an increase for IT and telecommunications resources.

Statutory Authority:

PPA; RLBPHRA; RCRA; CWA; SDWA; CAA; TSCA; EPCRA; TSCA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA.

Environmental Justice
Program Area: Enforcement
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$4,332.1***	***$6,993.0***	***$7,203.0***	***$210.0***
Hazardous Substance Superfund	$502.1	$818.0	$822.0	$4.0
Total Budget Authority / Obligations	$4,834.2	$7,811.0	$8,025.0	$214.0
Total Workyears	21.5	20.9	32.9	12.0

Program Project Description:

The Environmental Justice (EJ) program addresses the environmental and public health concerns of communities disproportionately burdened by environmental harms and risks by promoting integration of environmental justice principles into EPA's day to day activities and by supporting community efforts to better understand environmental risks in their neighborhood and better participate in efforts to address those risks.

This program facilitates the integration of EJ into all EPA programs, policies, and activities to improve environmental and public health protection for minority, low income, Tribal, and other disproportionately burdened communities. It supports proactive and meaningful approaches to encourage informed public participation, particularly among traditionally underrepresented groups, in EPA's decision-making process. The EJ program also provides financial and technical assistance to build the long-term capacity for communities to protect and improve the conditions in their own environments. Finally, EPA's EJ program provides leadership and assistance to other Federal agencies consistent with Executive Order (EO) 12898. EO 12898 requires each Federal agency to make achieving environmental justice part of its mission by identifying and addressing disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority populations and low-income populations.[32]

FY 2010 Activities and Performance Plan:

In FY 2010, EPA's environmental justice program will lead the integration of EJ considerations into EPA's programs and operations and its strategic planning process. The Agency's Strategic Plan includes a strategic target for identifying the cumulative number of communities with potential environmental justice concerns that achieve significant measurable environmental or public health improvements through collaborative problem-solving strategies. In order to effectively achieve the activities discussed below, 12 additional FTE will also support the EJ program. The program will dedicate 10 FTE to the Regions (1 per EPA Region) and 2 to the Office of Environmental Justice. The FTE will be used to promote the environmental justice

[32] For more information on EO 12898, please refer to: http://www.hud.gov/offices/fheo/FHLaws/EXO12898.cfm

integration, assist in the administration of the environmental justice grant programs, and plan for and capture measurable results in communities disproportionately burdened.

In addition, the EJ program supports each EPA Regional office and program office's efforts to implement a biennial "EJ Action Plan" that provides a roadmap for enhancing the integration of EJ into its daily work. These plans will strengthen the Agency's EJ integration efforts by establishing measurable EJ commitments from every program and regional office that will be tracked for their contributions to improvements in minority, low-income, Tribal, and other disproportionately burdened communities. The program will analyze the results of EJ program reviews conducted in FY 2009 and will be making a recommendation to the EJ Executive Steering Committee (EJ ESC) on the approach for on-going environmental justice reviews of Agency programs. In addition, the EJ program will continue to maintain an inventory of successful efforts to track and report progress in achieving results in communities disproportionately impacted.

The EJ program will work with other EPA offices to develop customized on-line tools to support the integration of EJ considerations into their day-to-day work. In addition, EPA will upgrade and maintain the on-line Environmental Justice Geographic Assessment Tool (EJGAT) to help the public, government, industry, and organizations better identify and assess environmental and public health issues in areas with EJ concerns. Available on EPA's website, the EJGAT provides ready public access to environmental, public health, and demographic information from EPA and other Federal agencies.

In FY 2010, EPA will intensify its efforts to incorporate EJ considerations in the rulemaking process. An ongoing challenge for EPA has been to develop rules that implement existing statutory authority while working to reduce disproportionate pollutant burdens and cumulative impacts from multiple sources. In FY 2010, EPA will promote a review of the statutory basis and strengthen the science to support the integration of environmental justice considerations in EPA's actions.

The EJ program also will inventory data and analytical methods suitable for decisionmaking, with regard to disproportionate environmental health impacts on minority, low-income populations. To ensure public input and knowledge about such data and analytical methods, the EJ program will host a symposium on the science of disproportionate environmental health impact analysis. The intent of this effort is to lay the foundation for developing analytical tools that can be used by Federal, state, and local governments to better quantify and characterize disproportionate environmental health impacts on minority and low income populations that may result from their programs, policies, and activities.

In FY 2010, the EJ program 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. Specific topics will include EJ integration principles, incorporating EJ in regulatory analysis, and discussions of pertinent statutory authorities.

The EJ program will continue to strengthen the infrastructure for the governance and implementation of EPA activities by supporting quarterly meetings of the EJ ESC, the senior policy body for environmental justice whose leadership is critical for Agency-wide integration of environmental justice. In FY 2010, the EJ program will convene two full meetings of the National Environmental Justice Advisory Council (NEJAC), the Agency's formal advisory committee on environmental justice issues. These meetings will be augmented by meetings of issue-specific workgroups and public teleconferences. The NEJAC is an important part of the Agency's commitment to transparency and meaningful involvement. Not only will the NEJAC be charged with providing advice to EPA on broad policy issue areas such as regulatory development, climate change, fostering a green economy, and EJ integration; it will be called upon to organize community input regarding specific Agency actions such as the development of tools, monitoring plans, and community-based initiatives.

In FY 2010, 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 also will continue to manage its Environmental Justice Small Grants program, which assists community-based organizations developing solutions to local environmental issues. Since its inception in 1994, the EJ program has awarded more than $32 million to over 1,100 community-based organizations and others to address local environmental and/or health issues. The Agency's support of collaborative problem-solving efforts will include the annual EJ Achievement Awards, which will recognize best practices in addressing EJ issues by multiple stakeholder partnerships.

Finally, in FY 2010, the EJ program will work to promote the integration of EJ principles in the programs, policies, and activities of other Federal agencies. Pursuant to EO 12898, EPA will continue to convene the Interagency Working Group (IWG) on Environmental Justice and the EJ Program will use this mechanism to provide and foster training and technical assistance to other Federal agencies on the integration of EJ in their programs. Moreover, the EJ program will use the IWG to identify collaborative opportunities to support the achievement of environmentally sound and economically vibrant communities in keeping with environmental justice and green economy goals.

Performance Targets:

Work under this program supports the Healthy Communities objective 4.2.2. In FY 2010, eight communities with potential environmental justice concerns will achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies. However, measure(s) pertaining to environmental justice are under review and may be modified in the coming months.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,652.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$30.0) This reflects an increase for contracts.

- (-$1,472.0) This change reflects a shift in grants resources to support the increase in FTE.

- (+12.0 FTE) This change reflects EPA's enhanced efforts in Environmental Justice (EJ). These resources will be used to integrate EJ considerations in EPA's programs, policies, and activities, and to provide increased support for capacity building of communities disproportionately burdened by environmental harms and risks.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$14,690.1***	***$16,281.0***	***$18,295.0***	***$2,014.0***
Total Budget Authority / Obligations	$14,690.1	$16,281.0	$18,295.0	$2,014.0
Total Workyears	111.5	106.0	116.0	10.0

Program Project Description:

As required by the 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 while making the comments available to the public and allowing public input. 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).[33]

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will continue to work with other Federal agencies to streamline and to improve their NEPA processes. Work also will focus on a number of key areas such as review and comment on 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. The program will continue to use the web-based NEPAssist environmental assessment tool, which assists Federal, state, and

[33] For more information, refer to: www.epa.gov/compliance/nepa.

local agencies to identify nationally/regionally significant environmental features/resources and streamline their respective environmental review processes. 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. In FY 2010, at least 70 percent of the significant impacts identified by EPA during the NEPA review of all major proposed federal actions will be mitigated in order to preserve air and water quality, wetlands, aquatic and terrestrial habitats, and endangered species; protect Environmental Justice communities; and prevent degradation of valued environmental resources.

Special emphasis will be placed in FY 2010 on implementing our NEPA responsibilities with respect to projects funded under the American Recovery and Reinvestment Act (ARRA). The ARRA is expected to increase the number of Federal projects that will require environmental review by EPA pursuant to Section 309 of the Clean Air Act and NEPA. In FY 2010, additional personnel resources will enable EPA to meet these increased environmental review responsibilities, which will help with the expeditious approval and implementation of Federal economic stimulus projects. Where appropriate, EPA will seek reimbursement for providing assistance to other agencies conducting expedited NEPA reviews under ARRA; however, such reimbursement cannot compensate the Agency for discharging its mandatory duties under section 309 of the Clean Air Act.

The NEPA Implementation program also guides EPA's own compliance with NEPA, other applicable statutes and EOs, and related Environmental Justice requirements. 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 2010, 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.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$569.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$29.0) This reflects an increase for IT and telecommunications resources.
- (+$1416.0 \ +10.0 FTE) This increase in payroll costs and FTE will be used to support NEPA-related responsibilities associated with projects funded by the American Recovery and Reinvestment Act (ARRA).

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$36,494.1***	***$31,001.0***	***$35,139.0***	***$4,138.0***
Total Budget Authority / Obligations	$36,494.1	$31,001.0	$35,139.0	$4,138.0
Total Workyears	22.6	22.7	22.7	0.0

Program Project Description:

The Chesapeake Bay Program (CBP) is a unique regional partnership that has coordinated and conducted the restoration of the Chesapeake Bay since 1983. Partners of the Chesapeake Bay Program include the states of Delaware, Maryland, New York, Pennsylvania, Virginia and West Virginia; the District of Columbia; the Chesapeake Bay Commission (CBC), a tri-state legislative body; the Environmental Protection Agency, representing the Federal government; and advisory groups of citizens, scientists and local government officials.

In the last 25 years, the CBP partners have:

- Adopted the nation's first consistent water quality standards and assessment procedures, prompting major state and local investments in nutrient removal technologies across hundreds of wastewater treatment facilities;
- Established nutrient management plans on 3.2 million farmland acres
- Preserved nearly 1 million acres of forests, wetlands, farmland and other natural resources, meeting the Program's Land Preservation goal two years early;
- Developed science, data monitoring, models, and measures that are recognized as some of the best and most extensive in the country and often around the world;
- Placed moratoria on striped bass harvests, leading to restoration of the stock that supports 90 percent of the Atlantic Coast population;
- Advanced use of conservation tillage is practiced on more than 2 million acres;
- Planted 5,722 miles of streamside forested buffers;
- Restored 12,532 acres of wetlands; and
- Removed blockages to more than 2,000 miles of spawning grounds to help restore migratory fish.

Despite 25 years of progress, the health of the Bay and its watershed remains severely impaired, primarily by nutrients (nitrogen and phosphorus) and sediments from agriculture, development, wastewater, and air deposition. Agriculture accounts for over 40% of the nutrient loads and over 70% of the sediment loads to the Bay. Increasingly, the pressures of population growth and development are the greatest challenge to restoring and protecting the Chesapeake Bay and its watershed. Nutrients and sediments from stormwater runoff from suburban and urban sources are the only source of pollution that is increasing. Only by working more closely with roughly

1,800 local governments, who have control over development and zoning, can stormwater challenges be met.

In July 2008, the Agency submitted a report summarizing the new Chesapeake Action Plan (CAP) to Congress. The CAP is the means to enhance coordination of and accountability for the full spectrum of Federal, State, local and private partners' actions to restore the Watershed and Bay. The CAP:

- Aligns the Program's strategies and actions to the five goals of the Chesapeake 2000 agreement;
- Includes an activity database that captures the implementation actions of ten Federal agencies, six states, DC, the CBC and other partners. In 2007, the database identified over $1 billion in restoration action. 2008 data is being quality assured now;
- Includes performance management dashboards that show status, projected progress, and set the stage for identifying obstacles and needs.

All CBP partners have access to the CAP database which will result in enhanced coordination and synergy. In 2008, the Government Accountability Office (GAO), at the request of Senator Mikulski, reviewed the Program's progress to improve reporting and to create a comprehensive, coordinated implementation strategy. GAO acknowledged recent positive actions with the development of the Chesapeake Action Plan. The GAO is expected to re-evaluate the Program's progress later in 2009.

The Program partners have approved and implemented (March 2009) a new organizational structure aligned with the CAP goals better emphasizing and focusing the critical goals and priorities of the program to:

- Change the business model of the Program to include specific adaptive management principles outlined in the CAP, clarify roles, and expand contributions of other partners;
- Coordinate specific actions and strategies, through Six Goal Implementation Teams, aligned to the major Chesapeake 2000 goals, to achieve focus and outcome-oriented results.

FY 2010 Activities and Performance Plan:

EPA continues to apply rigor to the adaptive management of the Bay Program emphasizing implementation and effective management, coordination and accountability through expanded use of the Chesapeake Action Plan and partner participation on Goal Implementation Teams. The CAP database aids articulation and tracking of partner actions with current and expected progress against explicit environmental measures and outcomes (i.e., restored water quality, aquatic habitat and fisheries, healthy watersheds, and fostered stewardship).

EPA will work with key partners to integrate their existing internal partner performance management data systems with the CAP and refine the CAP database to better support state and Federal implementation efforts. The partnership will develop interactive performance

dashboards through the Goal Implementation Teams that will help articulate and support the implementation activities and resources needed to close the gap between expected outcomes and established program goals. This will lead to better targeting of implementation activities in those sub-watersheds that will yield the greatest nutrient and sediment reductions and understanding of options to accelerate implementation.

The CAP will be further refined to develop state accountability and performance systems which will assist in coordinating and targeting implementation across the Chesapeake watershed and improve the cross-program implementation of the adaptive management system. EPA will augment funding for states and other monitoring and implementation activities to further leverage critical investments to reduce nutrient and sediment loads to the Chesapeake Bay.

EPA will develop an explicit strategy to engage local governments and local watershed groups in response to a program commitment to EPA's Inspector General. EPA will invest in key local governments and watershed organizations based on their ability to reduce nutrient and sediment loads via key sectors such as development and agricultural in urban and rural areas.

EPA's IG has also designated the Bay Program as a "management challenge" under the Federal Managers' Financial Integrity Act indicating that EPA lacks the tools, resources or authorities to be fully successful. In response, EPA is developing specific ideas for explicit actions, new tools, programs, authorities and resources to accelerate and improve restoration progress. The EPA CBPO will be reporting annually to the Deputy Administrator on progress addressing these challenges.

The Bay Program partnership is using independent program performance evaluation to critically review components of the Chesapeake Bay Program and support enhanced "adaptive management" efforts.

EPA is developing the nation's largest and most complex Total Maximum Daily Load (TMDL) for the entire Chesapeake Bay watershed. The Agency has committed to accelerate its completion from May 2011 to December 2010. The TMDL will rely on the latest science to set new nutrient and sediment allocations for each of the states. It is expected that the TMDL will be accompanied with detailed state implementation plans (e.g., tributary strategies) that describe how point and nonpoint source allocations will be achieved.

In November 2008, the Executive Council (EC) adopted a new strategy to speed up the pace of Bay restoration and become more accountable by setting two-year milestones to reduce pollution to the Bay and its rivers. The EC is scheduled to meet on May 12, 2009. Significant emphasis will be on actions to accelerate implementation, management and accountability. The chair of the EC has set the clear expectation that the May meeting will address:

- Setting two year milestones of progress to drive action and accountability;
- Devising "contingencies" and "consequences" if milestones are not met; and
- Setting a new "end date" for restoration measures to achieve needed nutrient and sediment reductions to the Bay.

The Bay Program will develop a Climate Change Action Plan in response to the Program's Scientific and Technical Advisory Committee (STAC) report, *Climate Change and the Chesapeake Bay: State-of-the-Science Review and Recommendations*, describing the impacts of climate change during the next century:

- Rising sea levels and increased coastal flooding and submergence of wetland;
- Elevating water temperatures which will promote growth of harmful algae, loss of underwater bay grasses and favor warmer water fish and shellfish;
- More erratic climate and weather conditions.

Near term actions to restore the Bay can also help address the anticipated impacts of climate change.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Total nitrogen reduction practices implementation achieved a a result of agricultural best management practice implementation per million dollars to implement agricultural BMPs.	45,533	48,134	49,237	48,134	Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of point source phosphorus reduction goal of 6.16 million pounds achieved.	87	85	87	89	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	66	64	66	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	64	64	67	71	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of point source nitrogen reduction goal of 49.9 million pounds achieved.	69	74	74	79	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	47	50	50	52	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of forest buffer planting goal of 10,000 miles achieved.	57	60	62	65	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Total nitrogen reduction practices implementation achieved as a result of agricultural best management practice implementation per million dollars to	45,533	48,134	49,237	48,134	Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	implement agricultural BMPs.[34]					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of point source phosphorus reduction goal of 6.16 million pounds achieved.	87	85	87	89	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	66	64	66	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	64	64	67	71	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of point source nitrogen reduction goal of 49.9 million pounds achieved.	69	74	74	79	Percent goal achieved

[34] The FY 2010 Performance Target assumes that the FY09 Farm Bill funds for the Chesapeake Bay watershed will have been spent on conservation practices that will help to reach the FY 2010 Performance Target for total nitrogen reduction.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	47	50	50	52	Percent goal achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of forest buffer planting goal of 10,000 miles achieved.	57	60	62	65	Percent goal achieved

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+ $145.0) This reflects increases in payroll and cost of living existing FTE.

- (+ $3,993.0) This reflects an increase for improving coordination and accountability of the Bay Program partners including Federal, State, local, NGOs and others while further targeting implementation and monitoring activities that will accelerate the reduction of nutrient and sediment loadings to the Bay through continued enhancements of the Chesapeake Action Plan (with at least one-half of this increase for competitive grants); augmented competitive funding for state and local efforts to achieve nutrient and sediment loading reductions; and an independent program performance evaluator to critically review progress and efficacy of program implementation.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$22,968.4***	***$23,000.0***	***$0.0***	***($23,000.0)***
Total Budget Authority / Obligations	$22,968.4	$23,000.0	$0.0	($23,000.0)
Total Workyears	57.1	63.1	0.0	-63.1

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 two nations, eight 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);[35]
- 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; and
- Addresses invasive species, though collaboration with partners, by emphasizing prevention of additional introductions.

(See http://www.epa.gov/glnpo/ for more information.)

[35] 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.

FY 2010 Activities and Performance Plan:

In FY 2010, this program combines with existing Great Lakes efforts and the Great Lakes Restoration Initiative (GLRI) which targets the most significant problems in the region such as aquatic invasive species, nonpoint source pollution, and toxic and contaminated sediment.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Average annual percentage decline for the long-term trend in concentrations of PCBs in the air in the Great Lakes Basin.	7	7	7	7	Percent Annual Decrease

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of Beneficial Use Impairments removed within Areas of Concern.	16	11	21	26	Cum. Number of BUI removed

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$8,795.0 / 63.1 FTE) This reflects transferring GLNPO FTE and associated payroll resources to the new Great Lakes Restoration Initiative in FY 2010.
- (-$14,205.0) This reflects transferring GLNPO extramural resources to the new Great lakes Restoration Initiative in FY 2010.

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: Gulf of Mexico
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$4,429.0***	***$4,578.0***	***$4,638.0***	***$60.0***
Total Budget Authority / Obligations	$4,429.0	$4,578.0	$4,638.0	$60.0
Total Workyears	13.0	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 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 formed 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 II* to be released in June 2009. Building on the success of the first Action Plan released in 2006, the Alliance has expanded 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.

(See http://www.epa.gov/gmpo for more information)

FY 2010 Activities and Performance Plan:

The Gulf of Mexico's environmental issues broadly affect water quality, public health, nutrient reductions, coastal restoration, and resilience. FY 2010 activities of the Gulf of Mexico Program and its partners will include:

- Supporting efforts to achieve the FY 2010 target to restore 96 impaired segments in the 13 priority coastal areas to water and habitat quality levels that meet state water quality standards;

- Supporting projects with the goal of creating, restoring or protecting 27,500 acres of important coastal and marine habitats in the Gulf of Mexico and addressing coastal community resilience;

- Supporting state and coastal community efforts to manage Harmful Algal Blooms (HABs) by continuing to implement integrated bi-national early-warning system pilot projects in Mexico. A system in Tabasco, Mexico, should be operational in 2010 with a 36-month period of performance for evaluation by supporting state and coastal community efforts to manage Harmful Algal Blooms (HABs) by continuing to implement integrated bi-national early-warning system pilots across the Northern Gulf of Mexico;

- 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;

- Coordinating and standardizing state and Federal water quality data collection activities to maximize the efficiency and utility of water quality monitoring efforts for local managers in the Gulf region and to assure the continued effective implementation of core clean water programs;

- Supporting efforts to reduce nutrient loadings to watersheds and reduce the size of the hypoxic zone by focusing on both localized pollutant addition throughout the Basin and on nutrient loadings from the Mississippi River. EPA will increase watershed partnerships to implement best management practices, identify significant nutrient sources, identify opportunities for significant load reductions, and pilot new nutrient reduction technologies;

- Supporting coastal nutrient criteria and standards development with a Gulf State pilot and developing science and management tools for the characterization of nutrients in coastal ecosystems;

- Assisting with the development of information, tools, technologies, products, policies, or public decision processes that can be used by coastal communities to increase resilience to coastal natural hazards and sea level rise;

- 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority coastal areas (cumulative starting in FY 07).	Data Avail 4/2008	64	96	96	impaired segmts

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats.	25,215	18,200	26,000	27,500	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	2.2	2.5	2.5	2.5	Scale

The Gulf of Mexico Program's support for restoration of coastal and marine habitat is through cooperative and partnership agreements for projects. Regional collaboration of industry partners coordinated efforts of more than 72 organizations to restore a total of 25,215 acres.

The bi-national red tide monitoring system framework (HABSOS) was expanded to Veracruz, Mexico, and will continue to expand to additional Mexican states. The Gulf of Mexico Program will continue to support the Gulf States' allied efforts to manage harmful algal blooms by implementing an integrated bi-national early-warning system and timely forecasts to improve the ability of U. S. and Mexican border state agencies to protect public health, warn fishermen and coastal resource harvesters, and disseminate relevant and accurate information to the public to reduce adverse economic impacts from harmful algal blooms.

The Gulf of Mexico Program continues to underpin the Gulf States Governors' Alliance and the 36-month Action Plan I of 73 specific challenges designed to enhance the environmental and economic health of the Gulf of Mexico. Progress reported toward the number of near-term actions, with the leverage of the Federal Workgroup partnership, exceeded expectations at an overall 99% on track or completed. The success of the state-led and federally-supported Gulf of Mexico Alliance shows that the Gulf region is meeting tremendous challenges and has emerged as a governance model for the nation.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$50.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$10.0) This reflects an overall increase for EPA's efforts in supporting Gulf States and stakeholders in developing a regional, ecosystem-bases framework for restoring and protecting the Gulf of Mexico.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$2,919.9***	***$3,000.0***	***$1,434.0***	***($1,566.0)***
Total Budget Authority / Obligations	$2,919.9	$3,000.0	$1,434.0	($1,566.0)
Total Workyears	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 management plan for the watershed, "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 2010 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 2010 activities include:

- Continuing to work with Federal, state, provincial, and local partners to address high levels of phosphorous, which encourages algal blooms in parts of the lake, 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);

- Collaborate with the International Joint Commission (IJC) to determine critical source areas of phosphorus in the Missisquoi Bay sub-basin;

- Carrying out needed activities resulting from the Lake Champlain TMDL lawsuit and the Vermont NPDES withdrawal petition;

- Finalizing revisions and publishing the third edition of the Lake Champlain Basin Management Plan, incorporating recent developments and ongoing work in the Basin, and emphasizing phosphorus load reduction work that can be quantified;

- Implementing an ecological report card which tracks ecological status and restoration progress in the Lake Champlain Basin, and which reflects the updated Management Plan, the results of the critical source area work, and the outcomes of the lawsuit and petition;

- Preventing the introduction of an invasive form of *Didymosphenia geminata* into the Lake Champlain basin from the neighboring Connecticut River watershed by expanding education and outreach on detection and spread prevention methods;

- Monitoring the Basin for possible introduction of Asian clam and spiny waterflea;

- Monitoring the population of alewives, a recent invasive species affecting Lake Champlain, expanding efforts to educate the public on the perils of transporting baitfish, harmonizing baitfish regulations in Vermont and New York, 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;

- Working with partners such as the Army Corps of Engineers and the New York State Canal Corporation to devise means to reduce the likelihood that new invasive species can enter Lake Champlain from the Great Lakes through the Champlain Canal;

- 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.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$1,566.0) This reduces congressional directed funding in FY 2009 for the Lake Champlain Basin. This reduction will reduce EPA support for the implementation of the Lake Basin Implementation Plan, "Opportunities for Action", including monitoring and assessment, and addressing high nutrient levels and invasive species.

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 and 2007.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$4,827.0***	***$3,000.0***	***$3,000.0***	***$0.0***
Total Budget Authority / Obligations	$4,827.0	$3,000.0	$3,000.0	$0.0
Total Workyears	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 2007, the States were below the yearly Total Maximum Daily Load (TMDL) nitrogen target by discharging 517 pounds per day or 95 tons per year better than TMDL levels. In 2008, the states restored or protected 1,199 cumulative acres of critical coastal habitat, and reopened 124 cumulative miles of river corridors to anadromous fish passage through construction of fishways or removal of barriers to fish passage, surpassing 2008 annual cumulative targets for these areas of 862 acres and 105.9 miles, respectively.

(See http://www.longislandsoundstudy.net and http://www.epa.gov/region01/eco/lis for further information.)

FY 2010 Activities and Performance Plan:

EPA will continue to oversee implementation of the Long Island Sound Study (LISS) CCMP in FY 2010 by coordinating the cleanup and restoration actions of the LISS Management Conference as authorized under Sections 119 and 320 of the CWA. In FY 2010, EPA will dedicate $3.0 million to focus on the following LISO efforts:

- Reducing the area of the seasonally impaired fish and shellfish habitats through continued emphasis on lowering Sound nitrogen loads to alleviate low oxygen levels (a condition called hypoxia). Specifically, 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. Restoration and protection efforts will increase streamside buffer zones as natural filters of pollutants and runoff.

- Monitoring (year-round and seasonal) for water quality indicators including: biological indicators such as chlorophyll *a*, and environmental indicators, such as dissolved oxygen levels, temperature, salinity, and water clarity. 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 with 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 with 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of goal achieved in reducing trade-equalized (TE) point source nitrogen discharges to the Long Island Sound from the 1999 baseline of 59,146 TE/lbs/day).				60	Percent Goal Achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of goal achieved in restoring, protecting or enhancing 240 acres of coastal habitat from the 2008 baseline of 1,199 acres.			16	33	Percent Goal Achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of goal achieved in reopening 50 river and stream miles to diadromous fish passage from the 2008 baseline of 124 miles.			16	33	Miles

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	40,440	37,323	37,323		Pounds per day

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Restore or protect acres of coastal habitat, including tidal wetlands, dunes,	1,199	862	912		Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	riparian buffers, and freshwater wetlands.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reopen miles of river and stream corridor to anadromus fish passage through removal of dams and barriers or installation of by-pass structures such as fishways.	124.3	105.9	114		Miles

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of goal achieved in reducing trade-equalized (TE) point source nitrogen discharges to the Long Island Sound from the 1999 baseline of 59,146 TE/lbs/day).				60	Percent Goal Achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of goal achieved in restoring, protecting or enhancing 240 acres of coastal habitat from the 2008 baseline of 1,199 acres.			16	33	Percent Goal Achieved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of goal achieved in reopening 50 river and stream miles to diadromous fish passage from the 2008 baseline of 124 miles.			16	33	Miles

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	40,440	37,323	37,323		Pounds per day

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Restore or protect acres of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands.	1,199	862	912		Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reopen miles of river and stream corridor to anadromus fish passage through removal of dams and barriers or installation of by-pass structures such as fishways.	124.3	105.9	114		Miles

FY 2010 Change from FY 2009 Enacted Budget (Dollar's in Thousands):

- No change in program funding.

Statutory Authority:

Long Island Sound Restoration Act, P.L. 106-457 as amended by P.L. 109-137; 33 U.S.C. 1269.
Long Island Sound Stewardship Act, P.L. 109-353; 33 U.S.C. 1269 NOTE

Geographic Program: Other
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Communities; Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$18,020.6***	***$31,380.0***	***$31,919.0***	***$539.0***
Total Budget Authority / Obligations	$18,020.6	$31,380.0	$31,919.0	$539.0
Total Workyears	9.4	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. EPA implements, coordinates, and facilitates 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 Puget Sound Program works to protect and restore Puget Sound: an important ecosystem. EPA efforts are focused on the following high priority environmental activities consistent with Washington's 2020 Action Agenda:

- Improving water quality and upgrading shellfish bed classifications;
- Managing stormwater by implementing effective local watershed protection plans;
- Reducing sources of toxics and nutrients;
- Restoring and protecting near shore habitat; and
- Improving monitoring and science.

The San Francisco Bay Watersheds Program works to protect and restore water quality and ecological health of watershed and bay habitats through partnerships, interagency coordination, and project grants. Water quality priorities include:

- Invasive species prevention and management;
- Reduction of trash in waterways;
- Wetlands protection and restoration;
- Stormwater management including:
    - Urban stream restoration;
    - Low Impact Development (LID) and green infrastructure promotion;
- Water quality improvements through the implementation of TMDLs, watershed plans, and upgrading aging infrastructure; and
- Predicting, mitigating and adapting to climate change impacts on water quality.

Community Action for a Renewed Environment (CARE)

Through the CARE program, EPA provides funding tools and technical support that enable communities to create collaborative partnerships that take effective actions to address local environmental problems. Since 2005, the CARE program has awarded 64 community partnerships across 32 states for $10.4 million in grant awards with over 860 partners engaged.

FY 2010 Activities and Performance Plan:

In FY 2010, 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. EPA's FY 2010 efforts will focus on the following:

South Florida

EPA is investing $2.1 million in the South Florida Program in FY 2010 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
    - Regional Environmental Monitoring and Assessment Program (REMAP) 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 National Pollutant Discharge Elimination System NPDES and other permits including discharge limits that are consistent with state and Federal law, and Federal Court consent decrees.

In FY 2010, EPA will continue to focus on the strategic targets in the 2009-2014 Strategic Plan 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. The implementation of the Water Quality Protection Program for the Florida Keys National Marine Sanctuary is congressionally mandated and all work on coral reef protection issues is consistent with the directives issued and priorities identified by the U.S. Coral Reef Task Force.

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 2010, EPA will invest $1.3 million in the Northwest Forest Program for the following activities:

- Complete stream reach and watershed condition/trend monitoring in 1,200 sub-watersheds in California, Oregon, Idaho, Montana, and Washington.

- Use remote sensed data and GIS data layers to complete a 15 year roll-up assessment of 1,000 watersheds in western Oregon, Washington, and Northern California.

- Utilize upslope analysis, in-channel assessments, emerging research, and decision support models to inform management decisions and refine future monitoring efforts.

- Compile temperature and macroinvertebrate data from monitored streams to support state water quality and aquatic habitat reporting.

- Complete/utilize field reviews of grazing activities and tie back to monitoring trends, monitoring protocols, and necessary changes to management actions.

- Refine shade models to assist managers in prioritizing restoration opportunities to address stream temperature issues.

- Utilize aquatic monitoring to detect invasive species in streams and riparian areas.

Lake Pontchartrain

The program will work to restore the ecological health of the Lake Pontchartrain Basin. In FY 2010, EPA will invest $978,000 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
    - Investigation 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;
    - Protecting and restoring critical habitats and encouraging sustainable growth by providing information and guidance on habitat protection and green development techniques; and
    - Reducing pollution at its source.

Puget Sound Basin

In FY 2010, EPA is investing $20 million to improve water quality and minimize the adverse impacts of rapid development in the Puget Sound Basin. The program will significantly leverage federal funds with state and local partners to implement of Washington's 2020 Action Agenda in the following areas:

- Improving water quality by supporting local efforts to identify sources of pathogen pollution and implementing improved practices to reduce those sources. The goal is to protect human health by upgrading harvest classifications of approximately 125 acres of commercial shellfish beds in FY 2010;

- Restoring and protecting near shore habitat by implementing projects identified as priorities in consultation with federal, state, and local partners. Our target is to restore

- Providing technical and financial support to local governments to reduce the adverse impacts of stormwater on the health of watersheds. Stormwater is a leading stressor on watershed health as identified in the 2020 Action Agenda;

- Reducing discharges of toxics and nutrient pollution by implementing reduction strategies developed with federal, state, and local partners. Quantitative targets will be developed in 2010;

- Supporting species recovery efforts with federal, tribal, state, and local partners; and

- Strengthening monitoring and science consistent with the Science Plan, developed by the Puget Sound Partnership Science Panel, and the advice of Federal Caucus and Canadian partners. Areas likely to receive support will include monitoring of indicator measures for accountability purposes; database support; refinement of nutrient and toxics loading, circulation, and fate models; and improved watershed assessment work to support more effective implementation activities related to water quality and salmon recovery.

San Francisco Bay

In FY 2010, EPA will invest $5 million in the San Francisco Bay Watersheds Program for the following activities:

- Coordinate and facilitate the ongoing implementation of the San Francisco Estuary Project Comprehensive Conservation and Management Plan;

- Conduct studies effects of climate change in the Bay and its watersheds;

- Continue to provide monetary support for priority environmental projects that improve water quality, minimize the effects of urban runoff, reduce invasive species in bay and watershed habitats, and increase the sustainability of water and wastewater infrastructure;

- Continue to support restoration of wetlands acreage; and

- Provide monitoring information to state partners to assist in CWA reporting and TMDL implementation.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Improve water quality and enable the lifting of harvest restrictions in acres	1,566	450	600	1,800	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	of shellfish bed growing areas impacted by degrading or declining water quality (cumulative from FY06).					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Remediate acres of prioritized contaminated sediments (cumulative starting in FY09).	123	100	125	123	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Restore the acres of tidally and seasonally influenced estuarine wetlands (cumulative starting in FY06).	4,413	2,310	3,000	6,500	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	Small Loss	No net loss	No net loss	No net loss	Mean Percent of Area

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Annually maintain the overall water quality of the near shore and coastal waters of the Florida Keys Nat'l	Not Maintained	Maintain	Maintain	Maintain	Water Quality

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	Marine Sanctuary (FKNMS).					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Annually maintain the overall health and functionality of sea grass beds in the Florida Keys National Marine Sanctuary (FKNMS) as measured by the long-term sea grass monitoring project.	Not Maintained	Maintain	Maintain	Maintain	Sea Grass Health

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 and the effluent limits to be established for discharges from stormwater treatment areas.	Not Maintained	Maintain	Maintain	Maintain phosphorus baseline and meet discharge limits	Parts per Billion

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Improve water quality and enable the lifting of harvest restrictions in acres of shellfish bed growing areas impacted by degrading or declining water quality (cumulative	1,566	450	600	1,800	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	from FY06).					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Remediate acres of prioritized contaminated sediments (cumulative starting in FY09).	123	100	125	123	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Restore the acres of tidally and seasonally influenced estuarine wetlands (cumulative starting in FY06).	4,413	2,310	3,000	6,500	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	Small Loss	No net loss	No net loss	No net loss	Mean Percent of Area

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Annually maintain the overall water quality of the near shore and coastal waters of the Florida Keys Nat'l Marine Sanctuary (FKNMS).	Not Maintained	Maintain	Maintain	Maintain	Water Quality

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Annually maintain the	Not	Maintain	Maintain	Maintain	Sea Grass

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	overall health and functionality of sea grass beds in the Florida Keys National Marine Sanctuary (FKNMS) as measured by the long-term sea grass monitoring project.	Maintained				Health

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 and the effluent limits to be established for discharges from stormwater treatment areas.	Not Maintained	Maintain	Maintain	Maintain phosphorus baseline and meet discharge limits	Parts per Billion

FY 2010 Change from FY 2009 Enacted Budget (Dollar's in Thousands):

- (+ $64.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+ $27.0) This increase will be used to protect and restore various communities and ecosystems impacted by environmental problems.
- (+ $448.0) This increase will be used to create local collaborative partnerships that implement local solutions to minimize exposure to toxic pollutants and reduce their release.

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.

Great Lakes Restoration
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$0.0***	***$0.0***	***$475,000.0***	***$475,000.0***
Total Budget Authority / Obligations	$0.0	$0.0	$475,000.0	$475,000.0
Total Workyears	0.0	0.0	83.1	83.1

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. In 2010, EPA, in concert with its federal partners, begins implementation of a new Great Lakes Restoration Initiative. The Initiative identifies$475 million for programs and projects strategically chosen to target the most significant environmental problems in the Great Lakes ecosystem. The planning, structure, programs, and projects of the Initiative are built upon the extensive work of the Great Lakes Interagency Task Force and its wide variety of stakeholders and non-governmental partners. This Initiative represents the federal government's commitment to significantly advance Great Lakes protection and restoration pursuant to that work. Consequently, the Initiative is directing Great Lakes protection and restoration funding to the following focus areas:

- Toxic Substances and Areas of Concern
- Invasive Species
- Nearshore Health and Nonpoint Source Pollution
- Habitat and Wildlife Protection and Restoration
- Accountability, Monitoring, Evaluation, Communication, and Partnerships

Pursuant to the Initiative, EPA will work with its partners to select the best combination of programs and projects for Great Lakes protection and restoration, using principles and criteria such as:

- Ability to achieve strategic and measurable environmental outcomes.
- Feasibility for prompt implementation, for achieving visible results soon, and the ability to leverage resources.
- Opportunities for inter-agency/inter-organizational coordination and collaboration.

Funds will be used to strategically implement both federal projects and projects with states, tribes, municipalities, universities, and other organizations. Projects and activities pursuant to the Initiative will be at multiple scales (local, lake-wide, and basin-wide). (Note: These funds will not be directed toward water infrastructure activities that are addressed under the Clean Water or Drinking Water State Revolving Fund program.) EPA will transfer appropriated funding expeditiously to its partner federal agencies for subsequent use and distribution. Grants will generally be issued competitively. Agencies will be expected to maintain their base level[36] of Great Lakes activities and to identify new activities and projects that will support the Initiative's environmental outcomes. Priority-setting, coordination, and oversight will be done through oversight groups of the Interagency Task Force. Transparency and accountability are priorities. EPA will work with the Interagency Task Force and stakeholders in the development of an Initiative plan for 2011 and beyond.

(A Great Lakes Restoration Initiative website is under development.)

FY 2010 Activities and Performance Plan:

The Initiative begins in 2010 by providing $475 million for programs and projects strategically chosen to target the most significant environmental problems in the Great Lakes ecosystem through direct program implementation by EPA and Interagency Task Force members and by the issuance of grants and other agreements with states, tribes, municipalities, universities, and other organizations. Programs and projects expected to be initiated in FY2010 were selected in a planning process conducted through the through the Great Lakes Interagency Task Force. Specific efforts were made to determine up-front what the Initiative could accomplish in its first year and how best to make progress toward the Initiative's environmental outcomes, recognizing each agency's mission and strengths. Emphasis has been placed upon implementation and, for this first year, establishment of baselines. This process includes competitive grant programs to implement the Initiative by funding States and other partners. Interagency Task Force members plan to work together to issue requests for proposals in the summer of 2009 in order that some grants could commence as early as December, 2009.

As the lead agency for the Great Lakes Restoration Initiative, EPA has worked closely with the members of the Interagency Task Force to develop a provisional funding plan for 2010. Some details of the plan may change as we work with our Federal partners to further refine our 2010 activities; the summary below represents plans as of the time this document went to press.

Upon receiving the FY2010 appropriation for the Initiative, EPA will determine final funding targets and will develop a final 2010 funding plan, including grant programs, to present to the EPA Administrator. The Administrator, in consultation with the members of the Interagency Task Force, will select the programs and projects for funding and EPA will transfer the funds.

Toxic Substances and Areas of Concern: Persistent toxic substances, such as mercury and PCBs, are still present in the Great Lakes at levels which warrant fish consumption advisories in all five Lakes. Thirty (30) US Great Lakes Areas of Concern (AOCs) remain degraded with an

[36] As a starting point for identifying their base, Agencies were asked to use the March 2008 OMB Great Lakes Restoration Crosscut Report to Congress.

estimated 43 millions cubic yards of contaminated sediments. Ongoing sources of persistent toxic sustances to the Great Lakes include releases from contaminated bottom sediments, industrial and municipal point sources; nonpoint sources including atmospheric deposition, agricultural and urban runoff, and contaminated groundwater; and cycling of the chemicals within the Lakes. Chemicals of emerging concern may pose ecosystem health threats and must be better understood with respect to their hazards and routes of exposure, so that effective responses in a timely fashion. Principal actions proposed to protect the Great Lakes from toxic substances, clean up contaminated sediments, and restore AOCs include:

- **AOC Restoration:** EPA will issue grants to states and other stakeholders to fund projects in the AOCs to restore beneficial uses. Through the Legacy Act, four to six sediment remediation projects will commence, and will be supplemented with strategic navigational channel dredging by the US Army Corp of Engineers (USACE), habitat enhancements by US Fish and Wildlife (USFWS), and brownfield restoration and green infrastructure developments by the US Forest Service (USFS). Long term results from these activities are expected to include remediation of more than 1 million cubic yards of contaminated sediments and delisting of 5 AOCs.
- **Collections:** EPA will award grants to states, tribes, and local governments to collect up to 10 million pounds of e-waste, 10 million pills of unwanted medicines, and 1 million pounds of hazardous waste, including mercury, PCBs, and unused pesticides.
- **Human Health/Safe Fish Consumption**: EPA and Agency for Toxic Substances and Disease Registry (ATSDR) will issue grants to states and tribes to enhance and improve existing state/tribal fish consumption advisory programs. Federal agencies will issue challenge grants to health care provider associations to educate the general public with regard to benefits and risks of fish consumption. Long term results are expected to include measurable declines in mercury blood levels.
- **Total Maximum Daily Loads (TMDLs):** EPA will award grants and support contracts to define the extent of mercury and/or PCB contamination in 400 impaired Great Lakes subwatersheds and identify potential sources of mercury and/or PCB pollution in 400 impaired Great Lakes subwatersheds. Long term results are expected to include TMDLs addressing 400 impaired watersheds which identify pollutant loading capacities to guide pollutant reduction efforts in support of plans for restoring polluted watersheds. EPA will also encourage and fund implementation of the TMDLs once they are developed.
- **Early Warning System to Detect New Toxic Threats:** To inform management interventions in a timely fashion, federal agencies, including EPA, the National Oceanic and Atmospheric Administration (NOAA), USFWS, the US Geological Survey (USGS), the Agency for Toxic Substances and Disease Registry (ATSDR), and the National Park Service (NPS) will establish an early warning system to detect new toxic threats to the Great Lakes utilizing enhanced monitoring programs for Great Lakes fish, birds, mussels, and human biomonitoring, as well as sediments, tributary source loads, and air deposition studies. Agencies will also assess toxicant effects on food web dynamics and ecological health for key aquatic communities such as lake sturgeon and benthic invertebrates. As a result, agencies will work through the Great Lakes Binational Toxics Strategy to develop solutions and remedial responses.

Invasive Species: Progress toward restoring the Great Lakes has been significantly undermined by the effects of non-native invasive species. Over 180 non-native species now exist in the Great Lakes. The most invasive of these propagate and spread, ultimately degrading habitat, out-competing native species, and short-circuiting food webs. New invasive species can be introduced into the Great Lakes region through various pathways, including: commercial shipping, canals and waterways, trade of live organisms, and activities of recreational and resource users. Once invasive species establish a foothold in the Great Lakes, they are virtually impossible to eradicate; however, invasive species still need to be controlled to maintain the health of the Great Lakes ecosystem. Principal actions proposed to prevent new introductions of non-native invasive species in the Great Lakes basin and stop the further spread of invasives in the Great Lakes basin include:

- **Prevention:** EPA, the U.S. Coast Guard, FWS, and the Department of Transportation's Maritime Administration (DOT-MARAD) will fund the further development of up to six ballast water sampling and treatment systems for use in fresh water ecosystems by supporting the use of laboratory, land-based, and ship-board testing and coordination with the maritime industry. USFWS will increase oversight of live organisms in trade and conduct risk assessments for up to 50 nonnative species not established, but being traded, within the Great Lakes Basin. ACE and USGS will identify canals and waterways that may spread invasive species between the Great Lakes and the Mississippi River watershed so that early actions may be adopted to reduce this risk.
- **Early Detection and Control:** EPA, NOAA, USFWS, DOT-MARAD, and USGS will develop and begin implementation of coordinated monitoring surveys to detect new invaders in Great Lakes locations that have a high probability of invasion. USFWS, USGS, and ACE will begin development of invasive species control methods, and USFWS and EPA will establish competitive grant programs for the development of up to 5 new control technologies. USFWS will support on-the-ground implementation of Aquatic Nuisance Species Management Plans for each Great Lake state, supporting projects in over 60 Great Lakes communities. USFS will lead in the establishment of new weed control areas in the Great Lakes states in coordination with federal and state agencies and Great Lakes communities. The Great Lakes Fishery Commission (GLFC) proposes to improve sea lamprey control through the use of pheromones, ensuring that such implementation would not reduce existing sea lamprey control efforts. ACE will enhance the use of barriers to further reduce Sea Lamprey populations.
- **Working with User Groups:** USFWS, USFS, and NPS will enhance education and outreach to prevent the introduction and spread of invasive species through recreational uses such as hunting, fishing and recreational boating, reaching 250,000 Great Lakes users. The Animal and Plant Health Inspection Service (APHIS) will conduct an emergency response exercise to simulate the introduction of a foreign aquatic animal and expand the "Focus on Fish Health" educational campaign to heighten awareness regarding aquatic animal pathogens. NOAA and USGS will enhance the public on-line database, GLANSIS, by adding or enhancing information on ecosystem impacts of over 180 listed invaders, range-expanding invaders, and potential high-risk future invaders identified through risk-assessment and niche-matching algorithms. NPS will also demonstrate innovative techniques preventing the spread of VHS pathogen and other organisms to National Park resources.

Nearshore Health and Nonpoint Source Pollution: Great Lakes nearshore water quality has become degraded, as evidenced by eutrophication resulting from excessive nutrients; hazardous algal blooms; cladophora washing ashore to make unsightly, odiferous rotting mats on beaches; avian botulism; and beach closings. The environmental stressors causing these problems include excessive nutrient loadings from both point and nonpoint sources; bacteria and other pathogens responsible for beach closures and outbreaks of botulism; development and shoreline hardening which disrupt habitat and alter nutrient and contaminant runoff; and agricultural practices which increase nutrient and sediment loadings. Nonpoint sources are now the primary contributors of many pollutants, but control strategies to date have failed to deliver the degree of stream and lake restoration necessary for the protection and maintenance of the Great Lakes. Principal actions proposed to improve the health of Great Lakes nearshore areas and reduce nonpoint source pollution to levels that do not impair nearshore Great Lakes waters include:

- **Identify sources and reduce loadings of nutrients and soil erosion:** To foster reductions in the number and severity of nuisance conditions in the nearshore areas, EPA, NPS, USGS, and USDA/NRCS will collaborate to: identify the extent of pathogens, nutrients, sediment contamination, and potential sources of pollution in impaired watersheds; support implementation of approved watershed plans, including TMDLs; support research and modeling to link watershed conditions with nearshore nuisance events; document severe ecological changes to nearshore habitats of Lake Michigan; assist local governments, nonprofit organizations and agricultural producers to control erosion and sedimentation and to limit the input of associated nutrients and contaminants to the Great Lakes; and model and evaluate the impact of land use practices and changes on species, habitats, and the delivery of sediments and nonpoint pollution to the Great Lakes.
- **Improve Public Health Protection at Beaches:** To assist local health officials in better protecting beach-goers, NOAA, USGS, EPA will collaborate with state, local and tribal governments to conduct sanitary surveys at over 100 beaches that were under advisory or closed 5 or more days in 2007 to identify sources of contamination, remediate identified sources of bacteria, and create predictive models that may estimate water quality one to two days in advance. Surveys are expected to increase the percentage of known contamination sources from 24% to 79% by 2011.
- **Place-Based Watershed Implementation:** NRCS, ACE, USGS and EPA will collaborate with states and other partners to conduct on-the-ground projects to control nonpoint source runoff, erosion and sedimentation or to otherwise improve conditions on a watershed scale and by working directly with agricultural producers. Agencies will identify candidate watersheds, perform scientific analyses to target where on-the-ground actions can be most effective, and provide supplemental funding to implement those actions.
- **Generate Critical Information for Protecting Nearshore Health:** EPA, NPS, USFS, USGS and NOAA will collaborate to assess the status and trends of nearshore water conditions, tributaries and ground water; to develop nearshore environmental indicators that reflect watershed stressors; and to supplement the 2010 National Coastal Assessment project in the Great Lakes; and to develop education and outreach programs to increase awareness and understanding of various Great Lakes issues.

Habitat and Wildlife: A multitude of threats affect the health of Great Lakes habitats and wildlife. Habitat destruction and degradation due to development; competition from invasive species; the alteration of natural lake level fluctuations and flow regimes from dams and other control structures; toxic compounds from urban development, poor land management practices and non-point sources; and, habitat fragmentation have impacted habitat and wildlife. This has led to an altered food web, a loss of biodiversity, and poorly functioning ecosystems. The principal actions proposed to protect and restore Great Lakes habitat and wildlife include:

- **Protecting and Restoring Native Species and Habitats**: Agencies will share data and management priorities as well as implement protection and restoration actions to enhance native species and habitats. Federal agencies (FWS, ACE, NPS, NOAA, USFS, EPA, FHWA, NRCS) will begin implementation of projects directly and through grants and other agreements to reduce sedimentation and nutrient inputs, restore natural hydrological regimes, improve water quality, and protect and restore habitats including Great Lakes wetlands, islands, beaches, sand dunes, and other coastal and upland habitats. Long term results will include restoration and protection of up to 9,000 acres of upland, 1,000 acres of wetland habitats, 300 acres of globally rare island habitats, and 2,500 acres of coastal habitats; improved coastal processes and functions; and, enhanced critical migratory bird habitat.
- **Improving Aquatic Ecosystem Resiliency:** USFS, FWS, NOAA, USGS, ACE, and EPA will begin implementation of projects directly and through grants and other agreements to replace large woody debris in floodplains and streams, replace barrier culverts to restore fish passage and stream/river connectivity, and restore forested edges in riparian areas. Long term results will include benefits to populations of keystone species such as lake sturgeon, brook trout and migratory birds; removal of 40 fish passage barriers; protection and restoration of 9,000 acres of riparian and wetland habitats; and, restoration of 1,000 stream miles for fish passage and stabilization of stream banks. EPA will issue grants and contracts for projects to restore aquatic habitats leading to the delisting of two beneficial use impairments (Degraded Fish and Wildlife Populations and Loss of Fish and Wildlife Habitat) in several AOCs.
- **Managing Rare, Threatened and Endangered Species:** FWS, USFS, and USGS will begin implementation of projects directly and through grants and other agreements to benefit recovering or depleted native species endemic to the Great Lakes, thereby precluding the need for listing under the Endangered Species Act and addressing actions identified in species recovery and management plans. Long term results are expected to include progress toward restoration of populations of targeted species; quantification of landscape habitat needs for certain depleted migratory bird species; propagation of up to 1.4 million lake trout and lake sturgeon fingerlings; and completion of up to 25 fisheries population assessments for lake trout and lake sturgeon. BIA and ACE will issue grants and partnership agreements to tribal organizations for projects to protect and restore tribal wetlands and culturally significant species such as wild rice, resulting in the restoration of more than 1,500 acres of wetlands.
- **Tracking Progress on Coastal Wetlands Restoration:** EPA, FWS, and USGS will collect data for birds, amphibians, fish, invertebrates, plants, wetland extent and type, and water chemistry in 400 US coastal wetlands and provide summary information to decision makers. A combination of direct implementation and grants and other

agreements with states, tribal agencies and universities will result in the first comprehensive baseline of the health of US Great Lakes coastal wetlands. New strategies for restoring coastal wetland functions will be developed and restoration success and compliance evaluated to strengthen current and future wetland restoration projects.

Accountability, Monitoring, Evaluation, Communication, and Partnerships: The Great Lakes Restoration effort requires strong oversight and coordination to succeed. Existing mechanisms do not provide sufficient structure, accountability, and transparency. There are gaps in baselines and in efforts to measure and monitor key indicators of ecosystem function and to evaluate restoration progress. All of these elements are needed for informed decisions and wise investments for results. Principal efforts in order to enhance information for decision making include:

- **Accountability.** EPA will develop and implement a transparency and accountability system for the Great Lakes Restoration Initiative, including easy access via the internet to information about the Initiative such as funding, grant offerings, projects, and linkages to planning, budgeting, and results. EPA proposes to maximize the use of existing mechanisms, such as the Lakewide Management Plans, for accountability and the transfer and dissemination of information to the public.
- **Monitor and Evaluate:** Through direct program implementation, grants and other agreements, federal agencies will enhance existing monitoring and evaluation programs to the degree necessary to support informed decisions to protect and restore the physical, biological, and chemical integrity of the Great Lakes. Participation in the Global Earth Observing System of Systems by NOAA, EPA, USGS, USFWS, and other partners will enhance Great Lakes decision-making. EPA will begin to address basin wide needs such as infrastructure for uniform data quality management and real time information access. EPA will advance development and implementation of science-based indicators to better assess Great Lakes ecosystem health. EPA will continue to implement the Cooperative Science and Monitoring Initiative with Environment Canada to address Lake-specific science and monitoring needs and to include critical studies in Lake Michigan in 2010, followed by Lakes Superior, Huron, Ontario, and Erie in consecutive years. USFS will support analysis of Great Lakes forest resources and establishment of critical wildlife goals and objectives for LaMPs. Ecosystem goals and objectives will be implemented through watershed studies by ACE; fish rehabilitation and restoration plans, fish habitat partnership actions, watershed outreach/education, and fish mapping and assessment surveys by FWS; and sustainability and climate change programs by NPS. USGS proposes to develop and implement watershed models and biological indicators for ecosystem management of Great Lakes tributaries and to map groundwater in critical geographic locations (i.e., near mining and severe drawdown areas). NOAA, USEPA, USGS, USFWS, and the NPS will convene an interagency effort to develop a strategy identifying scientific priorities for assessing climate change impacts on the Great Lakes ecosystem and to better manage those impacts.
- **Communication and Partnerships:** EPA proposes to lead and support enhanced communication, coordination, and collaboration to advance both the Initiative and the US- Canada Great Lakes Water Quality Agreement. The Department of State proposes support for the Great Lakes Water Quality Agreement through binational studies or reference(s) on issues that will enhance cooperation with Canadian partners on issues of

binational importance for the Great Lakes. Partnerships will be advanced and resources and capabilities leveraged through existing collaborative efforts such as the Great Lakes Interagency Task Force and its Regional Working Group, the US-Canada Binational Executive Committee, the State of the Lakes Ecosystem Conference, the US-Canada Great Lakes Binational Toxics Strategy, Lakewide Management Plans, the Coordinated Science Monitoring Initiative and Great Lakes Fisheries management.

The following potential allocation has been developed by the Interagency Task Force, subject to factors such as funding availability, statutory authority, and development of appropriate accountability mechanisms:

	Summary of FY2010 Notional Allocations by Focus Areas (thousands of dollars)						
Agency	Toxic Substances and Areas of Concern	Invasive Species	Nearshore Health and Nonpoint Source Pollution	Habitat and Wildlife Protection and Restoration	Accountability, Monitoring, Evaluation, Communication, and Partnerships	Totals	% Share
DHS-USCG	$2,850	$4,000				$6,850	1.4%
DOC-NOAA	$2,450	$1,000	$2,720	$15,000	$11,000	$32,170	6.8%
DOD-USACE	$9,996	$3,250	$14,550	$17,600	$500	$45,896	9.7%
DOI-BIA				$3,000		$3,000	0.6%
DOI-NPS	$2,800	$2,738	$1,550	$2,862	$500	$10,450	2.2%
DOI-USFWS	$5,400	$19,859		$32,242		$57,501	12.1%
DOI-USGS	$2,070	$2,338	$2,562	$3,920	$4,090	$14,980	3.2%
DOS-GLFC		$7,000				$7,000	1.5%
DOS-IJC					$300	$300	0.1%
DOT-FHWA				$2,500		$2,500	0.5%
DOT-MARAD		$3,000				$3,000	0.6%
EPA	$113,880	$8,280	$44,807	$18,880	$48,306	$234,153	49.3%
HHS-ATSDR	$5,500					$5,500	1.2%
USDA-APHIS		$3,000				$3,000	0.6%
USDA-NRCS		$1,000	$30,642	$2,000		$33,642	7.1%
USDA-USFS	$2,000	$4,800	$500	$7,258	$500	$15,058	3.2%
Totals	$146,946	$60,265	$97,331	$105,262	$65,196	$475,000	100.0%
% Share	31%	13%	20%	22%	14%	100%	

Performance Targets:

Although existing Great Lakes performance measures reflect the results of multiple EPA base programs and the activities of other organizations, some changes are expected to the measures as the Initiative is further developed. The following information pertains to EPA's existing Great Lakes measures and targets.

Since ecosystem improvement on a scale as large as the Great Lakes is likely to be reflected in time periods greater than a year, the overall Great Lakes ecosystem condition, as measured by a Great Lakes Index, will next be reported in 2011, at which time the score for overall ecosystem health of the Great Lakes is expected to improve 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 at a rate of 5 percent annually, on average, at monitored sites, reflecting 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 at a rate of 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. Through the Great Lakes Restoration Initiative, there will be a renewed efforts to de-list (clean up) the U.S. AOCs. In 2009 and 2010 States are developing targets for restoration of beneficial use impairments and long term targets for de-listing of AOCs. Concurrently, projects such as Legacy Act sediment remediation projects and WRDA projects, are being identified, and strategically implemented to help achieve those targets.

Total sediment remediation in the U.S. portion of the Great Lakes varies from year to year based on factors such as available funding and match, the number and size of projects, and the possibility of enforcement actions in various EPA programs. The Great Lakes Legacy Act allows EPA to make steadier progress toward addressing the remaining contaminated sediments in Great Lakes AOCs.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$414,433.0 / +25 FTE) This reflects new funding for the GLRI which will use outcome oriented performance goals and measures to target the most significant problems in the region, such as aquatic invasive species, nonpoint source pollution, and toxics and contaminated sediment.

- (+$9,362.0 / +63.1 FTE) This reflects payroll and cost of living for existing FTE transferred from the Geographic Program: Great Lakes program project/Great Lakes National Program Office (GLNPO).

- (+$14,205.0) This reflects the incoming transfer of extramural dollars from GLNPO.

- (+$37,000.0) This reflects the incoming transfer of extramural dollars from the Great Lakes Legacy Act.

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. In addition, EPA has proposed new statutory language as administrative provisions for the FY 2010 Department of the Interior, Environment, and Related Agencies Appropriations Act. Among other things, the language would give EPA independent statutory interagency agreement authority and implementing grant authority in support of the Initiative and the Great Lakes Water Quality Agreement, and additional sediment remediation authority. This new authority is important to the success of the Initiative. Agencies are expected to use numerous other statutory authorities, intrinsic to their programs, in support of the Initiative.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$6,611.6***	***$6,899.0***	***$7,030.0***	***$131.0***
Total Budget Authority / Obligations	$6,611.6	$6,899.0	$7,030.0	$131.0
Total Workyears	14.3	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. This program also enables video contact between localities, headquarters, Regional offices, and laboratories in emergency situations.

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 integrate with 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 2010 Activities and Performance Plan:

EPA will continue to 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 2010 resources will continue to support the Agency's rapid response infrastructure by delivering increased network capacity, 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 support EPA's homeland security responsibilities.

In FY 2010, EPA will:

- Continue deployment of wireless infrastructure to all agency personnel to respond rapidly in emergency situations by enabling IT asset mobility throughout EPA facilities;
- Continue maintenance activities; and
- Perform upgrades (i.e., rewiring, infrastructure cabling, and switch replacements) in several EPA Regional offices and laboratories.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$123.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$8.0) This increase supports additional EPA building security efforts.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$4,814.4***	***$6,837.0***	***$7,014.0***	***$177.0***
Science & Technology	$32,656.7	$19,460.0	$28,329.0	$8,869.0
Hazardous Substance Superfund	$1,766.3	$1,736.0	$1,824.0	$88.0
Total Budget Authority / Obligations	$39,237.4	$28,033.0	$37,167.0	$9,134.0
Total Workyears	47.3	49.0	49.0	0.0

Program Project Description:

This program includes a number of 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 2010 Activities and Performance Plan:

Information Sharing Networks & Water Security

In FY 2010, 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 water sector by providing access to information sharing tools and mechanisms that 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 continues to partner with available information sharing networks to promote drinking water and wastewater utilities' access to up-to-date security information. In FY 2010, EPA will increase the water sector's participation in these critical networks by providing access for up to 4,000 drinking water and wastewater utilities which do not currently participate in such networks. This effort will ensure that these utilities have access to a comprehensive range of important materials, including tools, training, and protocols, some of which may be sensitive and therefore not generally available through other means. This work also will enable water utilities of all sizes to gain access to a rapid notification system. Participating utilities will then receive alerts about changes in the homeland security advisory level or to Regional and national trends in certain types of water-related incidents. Access to such information sharing networks allows the water sector not only to improve their understanding of the latest water security and resiliency protocols and threats, but also to reduce their risk by enhancing their ability to prepare for an emergency. The FY 2010 request level for the information sharing networks is $2.6 million.

EPA also supports the Regions' emergency response activities by providing specific skills trainings (e.g., ICS Group Supervisor, damage assessment, health and safety, reimbursement protocols, etc.), exercises, and personal protective equipment relevant to preparing for a water infrastructure disaster.

Counterterrorism

In FY 2010, EPA will continue to train its criminal investigators within the Criminal Enforcement, Forensics and Training Program 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 the agents to collect evidence and process a crime scene safely and effectively in a contaminated environment (hot zone). 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).

The Agency will provide advanced crime scene processing and forensic training to 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 Framework (NRF) during a national emergency. Additionally, 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$82.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$95.0) This increase supports efforts to improve monitoring and information sharing networks.

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.

Homeland Security: Preparedness, Response, and Recovery
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$4,105.3***	***$3,378.0***	***$3,443.0***	***$65.0***
Science & Technology	$40,807.3	$43,671.0	$42,409.0	($1,262.0)
Hazardous Substance Superfund	$45,283.2	$53,641.0	$53,543.0	($98.0)
Total Budget Authority / Obligations	$90,195.8	$100,690.0	$99,395.0	($1,295.0)
Total Workyears	176.5	174.2	174.2	0.0

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 Agencywide 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 chemical agents is different from the response to biological agents, 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 chemical agents, EPA is developing new information to assist emergency planners and first responders in assessing immediate hazards. In the case of biological agents, EPA is developing and validating test methods and surrogates used to evaluate the efficacy of antimicrobial pesticides used to decontaminate environmental surfaces contaminated with specific biological threat agents. In addition, EPA is working with USDA to test the efficacy of readily available chemical pesticide products for effectiveness against Foreign Animal Disease agents and their use in decontamination of food and agricultural facilities. Finally, EPA is participating in EPA-wide efforts to build environmental laboratory capacity and capability.

FY 2010 Activities and Performance Plan:

Emergency planners and first responders use Acute Exposure Guideline Levels (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. In FY 2009, the program shifted emphasis from producing Proposed values to creating Interim and ultimately Final status via peer review by the National Academies of Science. Accordingly, in FY 2010, the program plans to develop Proposed AEGL values for up to 18 additional chemicals and will remain on target to meet its long-term goal of developing Proposed AEGL values for approximately 260 chemicals by 2011. In addition, Final values will be completed for at least fourteen additional chemicals in FY 2010. By September 2009, the

AEGL Program will have addressed all of the chemicals on the current list with the possible exception of 1-5 chemicals. An additional 30 chemicals are being considered for addition to the list, but the decision about whether to add them has not yet been made. In FY 2010, the emphasis will be on finalizing already developed AEGL values. For more information, please visit http://www.epa.gov/oppt/aegl.

Also, in FY 2010, EPA will make decisions on pesticide registrations or emergency exemptions, if requested by industry or government agencies, to protect human health and agriculture from bio-agents. EPA also will assist DHS and other agencies in completing guidance on procedures, plans, and technologies to: 1) restore airports following a biological attack, 2) develop a risk management framework for decision-makers for restoration and recovery from a biological incident, and 3) respond to and recover from Bacillus anthracis contamination of a large urban area.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of chemicals with proposed values for Acute Exposure Guidelines Levels (AEGL)	28	24	18	18	Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of chemicals with final values for Acute Exposure Guidelines Levels (AEGL)	37	Baseline	6	14	Chemicals

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. Cumulative results demonstrate a total of 246 proposed AEGLs completed and demonstrate significant progress towards completing 287 chemicals by 2011. In FY 2010, the program continues to shift its emphasis to interim and final status AEGLs, which explains the continuation of a reduced target of 18 in developing proposed AEGLs in FY 2010. This is offset by a commitment to complete 14 final AEGL values in FY 2010.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$15.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$50.0) This reflects an increase in support of AEGLs development.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$5,462.5***	***$6,292.0***	***$6,414.0***	***$122.0***
Science & Technology	$1,428.1	$587.0	$594.0	$7.0
Building and Facilities	$8,225.9	$8,070.0	$8,070.0	$0.0
Hazardous Substance Superfund	$585.0	$1,194.0	$1,194.0	$0.0
Total Budget Authority / Obligations	$15,701.5	$16,143.0	$16,272.0	$129.0
Total Workyears	2.9	3.0	3.0	0.0

Program Project Description:

This Homeland Security program is composed 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 2010 Activities and Performance Plan:

In FY 2010, the Agency will focus on issuing secure and reliable identification (smart cards) to all employees and select non-federal workers. Federal Information Processing Standard (FIPS) 201-1, issued by the National Institute of Standards and Technology, establishes the technical specifications for the smart cards. 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 2010 activities will include classifying, declassifying, and safeguarding classified information; identifying and marking of classified information; education, training, and outreach; and audits and self inspections. In addition,

certification and accreditation of Secure Access Facilities (SAFs) and Sensitive Compartmented Information Facilities (SCIFs) will continue.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$21.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$101.0) This provides additional resources for classifying and safeguarding classified information as part of the Agency's efforts to achieve accreditation for SAFs and SCIFs.

Statutory Authority:

The National Security Strategy; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$5,269.5***	***$5,383.0***	***$5,576.0***	***$193.0***
Science & Technology	$437.8	$403.0	$422.0	$19.0
Total Budget Authority / Obligations	$5,707.3	$5,786.0	$5,998.0	$212.0
Total Workyears	38.8	39.4	39.4	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 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 2010 Activities and Performance Plan:

In FY 2010, 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 2010, 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. As part of this outreach, EPA communicates risk estimates from the National Academy of Sciences that demonstrate the substantial risks associated with radon exposure.

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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of additional homes (new and existing) with radon reducing features	Avail. 2010	225,000	265,000	280,000	Homes

In FY 2010, EPA's goal is to add approximately 280,000 homes with radon reducing features, bringing the cumulative number of U.S. homes with radon reducing features to over two million. EPA estimates that this cumulative number will prevent over 900 future premature cancer deaths (each year these radon reducing features are in place). EPA will track progress against the measure, in the table above, triennially with the next report date in FY 2010.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$177.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$16.0) This increase provides additional resources to assist in radon mitigation and risk reduction efforts.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$24,009.8***	***$20,512.0***	***$21,073.0***	***$561.0***
Science & Technology	$702.9	$717.0	$735.0	$18.0
Total Budget Authority / Obligations	$24,712.7	$21,229.0	$21,808.0	$579.0
Total Workyears	63.9	63.8	63.8	0.0

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 states, local governments and public health organizations.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will continue to promote community adoption of comprehensive asthma-care programs that emphasize management of environmental asthma triggers, such as tobacco smoke, dust mites, mold, pet dander, cockroaches and other pests, and nitrogen dioxide. Working principally with Federal and non-profit partners, EPA will focus its efforts on reaching 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. In addition, 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)[37], 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 eight million people, adopt clean and efficient cooking technologies.

Asthma

EPA will continue to work under its long term 2014 goal to educate 7.2 million people with asthma in how to take the essential actions to reduce their exposure to environmental triggers. EPA's goal has been to motivate an additional 400,000 people with asthma to take these actions in 2010, bringing the total number to approximately 5.7 million people with asthma who have been exposed to EPA's outreach and education programs. EPA will work to reduce existing disparities between disproportionately impacted populations and the overall population.

EPA also will 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 will continue to focus on making efficiency improvements in response to recommendations from OMB. EPA will track progress against the efficiency measures included in the tables above triennially with the next planned report date in FY 2009.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Estimated annual number of schools establishing indoor air quality programs based	Avail. 2009	1100	1000	1000	Number

[37] www.epa.gov/iaq/schooldesign.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	on EPA's Tools for Schools guidance.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	Avail. 2009	2000	2000	2000	Number

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percentage of public that is aware of the asthma program's media campaign.	Avail. 2009	>20	>20	>30	Percentage

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$372.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$189.0) This reflects additional resources for the adoption of community-based comprehensive asthma-care programs that emphasize management of environmental asthma triggers.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$7,226.7***	***$6,071.0***	***$6,515.0***	***$444.0***
Total Budget Authority / Obligations	$7,226.7	$6,071.0	$6,515.0	$444.0
Total Workyears	13.7	11.9	11.9	0.0

Program Project Description:

The Children and other Sensitive Populations: Agency Coordination 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.[38]

FY 2010 Activities and Performance Plan:

The Children and other Sensitive Populations: Agency Coordination 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. In FY 2010, 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. (In FY 2010, the Children and other Sensitive Populations: Agency Coordination program will be funded at $6.52 million and 11.9 FTE.)

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 part of EPA's rule making activities and evaluating the application of such guidance throughout EPA.

[38] Please refer to: http://yosemite.epa.gov/ochp/ochpweb.nsf/content/homepage.htm.

- 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$140.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$250.0) This reflects additional grants and contract resources for assessing the risks of lead to children's health and finalizing a regulation to address lead-safe work practices for renovation, repair, and painting activities.

- (+$54.0) This reflects an increase to grants, contracts, and expenses for the oversight and management of rule making and research on the effects of children's asthma.

Statutory Authority:

Executive Order 13045.

Environmental Education
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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$9,050.3***	***$8,979.0***	***$9,038.0***	***$59.0***
Total Budget Authority / Obligations	$9,050.3	$8,979.0	$9,038.0	$59.0
Total Workyears	14.4	19.6	19.6	0.0

Program Project Description:

This program ensures that environmental education (EE), based on sound science and effective education practices, is used as a tool to promote the protection of human health and the environment, and to encourage student academic achievement. EPA implements the National Environmental Education Act by providing leadership and support, and working in partnership with K-12 schools, colleges and universities, Federal and state agencies, and community organizations to assess needs, establish priorities, and leverage resources. The Environmental Education program's strategic plan, developed and revised in collaboration with the program's multiple internal and external partners, establishes five goals that guide the program:

1. Promote the use of EE in schools and communities to improve academic achievement and environmental stewardship;
2. Increase the capacity of states to develop and deliver comprehensive statewide EE programs;
3. Promote research and evaluation that assesses the effectiveness of EE in improving environmental quality and student academic achievement;
4. Improve the quality, access, and coordination of EE information, resources, and programs;
5. Promote and encourage environmental careers.

Please see the program website for additional information (www.epa.gov/enviroed).

FY 2010 Activities and Performance Plan:

(In FY 2010, a resource level of $5.7 million and 9.7 FTE support the Environmental Education program within the EPA's Office of Children's Health Protection and Environmental Education.)

The National Environmental Act (NEEA) provides the foundation for the activities the Agency conducts with appropriated funds. Major programs and activities continue to include:

- National Environmental Education Grant Program;
- National Educator Training Program;

- National Network for Environmental Management Studies Fellowship Program;
- President's Environmental Youth Awards;
- Enhancing monitoring, evaluation, and research efforts to better demonstrate program impact and results;
- Inter- and intra- agency coordination: providing technical assistance, funding, and coordination to improve EE across EPA and the Federal government;
- Managing the National Environmental Education Advisory Council and the Federal Task Force on Environmental Education;
- Providing funding to the National Environmental Education Foundation.

All activities directly support the program's strategic plan which includes measureable objectives, and clearly identified outputs, outcomes and performance measures for each of the corresponding goals. The strategic plan ensures the program is linked to the Agency's strategic plan and serves as the foundation for program planning, budgeting, and performance and accountability processes.

Performance Targets:

EPA worked with its partners to improve the program's performance by developing measures to improve academic achievement and environmental stewardship.

MEASURE TYPE	MEASURE	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target
Output	Cumulative number of correlations showing how national environmental education curricula can be used to meet state education standards.			160	230
Output	Percent of National Network for Environmental Management Studies (NNEMS) fellows who pursue environmental careers.			50	+25% of previous year

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$38.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$21.0) This reflects an increase in regional grants for school systems to better integrate Environmental Education into the science curriculum.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$48,777.5***	***$48,456.0***	***$50,980.0***	***$2,524.0***
Hazardous Substance Superfund	$145.9	$0.0	$0.0	$0.0
Total Budget Authority / Obligations	$48,923.4	$48,456.0	$50,980.0	$2,524.0
Total Workyears	360.2	359.8	367.1	7.3

Program/Project Description:

The Congressional, Intergovernmental and External Relations program supplies the resources for several Headquarters and Regional offices to provide the vision, leadership, and support needed to enable EPA to meet its commitments to protect human health and the environment. The activities funded include Headquarters and Regional Congressional and Legislative Support associated with responding to Congressional requests for information and providing written and oral testimony, briefings, and briefing materials, the management of the Agency's Federal Advisory Committee Act (FACA) process, support for the Immediate Office of the Administrator, public affairs, administrative services, and correspondence control.

FY 2010 Activities and Performance Plan:

The Immediate Offices of the Administrator, Deputy Administrator, and Regional Administrators support 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. (In FY 2010, the Headquarters Office of the Administrator and Deputy Administrator will be funded at a level of $5.82 million and 35.8 FTE.)

The Headquarters and Regional Congressional and Intergovernmental offices lead EPA's interactions with Congress, Governors and other state and local officials. In FY 2010, these offices will prepare EPA officials for hearings and meetings with Members of Congress, oversee responses to written inquiries from Members of Congress, manage Senate confirmation hearings for political appointees, and coordinate with the White House's Office of Legislative and Intergovernmental Affairs and Council for Environmental Quality. These offices also support state and local relations for EPA by managing the Administrator's Local Government Advisory

Committee (LGAC) and the Small Community Advisory Committee (SMAC) to ensure that Agency policies and regulations consider specific impacts on state and local governments and to more fully integrate the National Environmental Performance Partnerships System (NEPPS) framework and principles into the Agency's core business practices. (In FY 2010, the Headquarters Office of Congressional and Intergovernmental Relations will be funded at $8.23 million and 61.8 FTE.)

The program manages five Federal Advisory Committee Act (FACA) committees. It is also responsible for committee management oversight to ensure that EPA's 49 federal advisory committees are in compliance with the FACA requirements and the GSA Committee Management Secretariat's administrative guidelines. In FY 2010, the Cooperative Environmental Management program will develop a framework for measuring the effectiveness of EPA's federal advisory committees, and ensure that all new or renewed committee charters include expected outputs/outcomes as a way of developing future performance measures for the committees. (In FY 2010, the Agency's Cooperative Environmental Management program (OCEM) will be funded at a level of $2.06 million and 11.1 FTE.)

The OCEM program's key activities include establishing the Farm, Ranch, and Rural Communities Federal Advisory Committee (FRRCC) under EPA's National Strategy for Agriculture. FRRCC provides advice and recommendations to the Administrator on critical environmental policy issues impacting farms, ranches, and rural communities. The charge includes exploring impacts of climate change and renewable energy, developing tools and a comprehensive environmental strategy that considers regulatory and voluntary approaches for managing waste from livestock operations, and developing a constructive approach to address areas of common interest between sustainable agriculture and environmental protection.

In FY 2010, EPA Headquarters and Regional Public Affairs offices will utilize media and Web applications to provide easily accessible, high quality, timely, coherent, and comprehensive information concerning the Agency's activities and policies to protect human health and the environment to international and domestic populations and local, state and Tribal governments. These offices strive to increase public awareness and to enhance the public's perception of environmental issues, as well as their social, technological, and scientific solutions. Public affairs will utilize the Web to reach multiethnic and multilingual populations. (In FY 2010, the Headquarters Public Affairs Office will be funded at a level of $5.91 million and 41.1 FTE).

In FY 2010, 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 to internal and external constituencies. As the central administrative management component of the Office of the Administrator, OES provides advice, tools, and practices for the effective management, human resources, budget and financial management, and information technology. (In FY 2010, the Executive Services (OES) will be funded at $3.43 million and 24.0 FTE.)

The Executive Secretariat manages the Administrator's and Deputy Administrator's correspondence and records, including identification and maintenance of vital records. (The Executive Secretariat will be funded at $1.84 million and 13.6 FTE in FY 2010.)

Performance Targets Narrative:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,608.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$84.0) This change reflects a net decrease in contract and grant expenses to provide more travel resources.
- (+7.3 FTE) This change reflects an increase in FTE to support efforts in assuring greater transparency and understanding of Headquarters policies and Regional offices' efforts in implementing these policies.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$14,133.2***	***$16,860.0***	***$18,213.0***	***$1,353.0***
Hazardous Substance Superfund	$1,429.8	$1,433.0	$1,433.0	$0.0
Total Budget Authority / Obligations	$15,563.0	$18,293.0	$19,646.0	$1,353.0
Total Workyears	22.5	24.0	24.0	0.0

Program Project Description:

The Exchange Network[39] (Network) is a standards-based network that uses the Internet to make it possible for states, tribes, territories, EPA and other partners to share environmental data faster, and at greater cost savings. With the Network, federal and state environmental decision-makers have better access to the right data when they need it. Access to the data will allow the sharing of information, which will improve environmental protection and results across jurisdictions. The Water Quality Exchange (WQX) project, for example, enables states to query ambient water conditions in other states and portray the quality of an entire watershed, for example along the Columbia or Missouri Rivers, or make decisions based on the totality of data available, rather than just the data they have about their own particular stream reach.

The state-led Homeland Emergency Response Exchange (HERE) uses the Network to assist environmental decision-makers. With HERE and the Exchange Network, emergency personnel can get the latest information about the location and contents of EPA and state regulated facilities containing hazardous or toxic wastes or other points of interest that may lie in the vicinity of a local emergency, such as a fire. In California firefighters have used HERE to download this GIS-displayed information onto their laptops while in their fire truck, on the way to a fire.

The Central Data Exchange[40] (CDX) is the largest activity within the Exchange Network program project; it is the electronic gateway through which environmental data enters the Agency. CDX enables fast, efficient and more accurate environmental data submissions from state and local governments, industry and tribes to EPA. The CDX budget supports development, test and production infrastructure, sophisticated hardware and software, data exchange and Web form programs, standards setting projects with states for e-reporting, as well

[39] For more information on the Exchange Network, please visit: http://www.epa.gov/Networkg/
40 For more information on the Central Data Exchange, please visit: http://www.epa.gov/cdx/

as significant security and quality assurance activities. By reducing administrative burden on EPA programs, CDX helps environmental programs focus more manpower and resources on enforcement and programmatic work; less on data collection and manipulation.

Other tools and services in the Central Data Exchange and Exchange Network program project include:

- The Facility Registry System[41] (FRS), a widely used source of environmental data about facilities that allows multimedia display and integration of environmental information which offers obvious benefits for enforcement targeting, homeland security, data integration, as well as other benefits such as those described above with the HERE project which uses FRS as key data source.
- The National Geospatial Program, which supports environmental protection, planning, risk assessment, enforcement, permitting and outreach to the public as well as emergency response efforts by EPA, other Federal agencies, states and communities.
- The System of Registries (SOR) which adds meaning to EPA's data and promotes access, sharing and understanding of it. The SOR helps environmental professionals and the public find systems where data is stored, and ensures that those sources are identified and authentic, and that names, definitions and concepts are available and understandable.

This program also is supported by the 2009 American Recovery and Reinvestment Act (ARRA) funds. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

FY 2010 Activities and Performance Plan:

In FY 2010, the major focus of the Exchange Network and CDX will be to increase the amount of critical environmental data flowing on the Network, expand the program's role in sharing data among partners, provide increased business value through reduced burden and better quality data, and improve data access and transparency through the use of new, innovative technologies. These activities build on prior efforts and represent the latest work of EPA and its Network partners to provide better data quality, timeliness and accessibility.

In FY 2010, EPA, states and more tribes and territories will continue developing common data standards and data formats, called schemas, so information that was previously not available, or not easily available, can be accessed via the Exchange Network. In addition, EPA is adding new features to the Network such as RSS (real simple syndication) feeds, which are news channels that Network partners can request that will promote greater data availability and encourage broader use of the Network. These efforts will be closely coordinated with the Agency's program offices as well as with EPA's partners on the Network. As data flows are added, the broader use of data standards, quality tools that check data before data is submitted, reusable schemas and other components will increase the accuracy and timeliness of the data, improve analytical capabilities and create savings through economies of scale.

41 For more information on the Facility Registry System, please visit: http://www.epa.gov/enviro/html/facility.html

EPA continues to improve Network data security by implementing electronic reporting standards that support the authentication and electronic signatures of report submitters and the Agency has recently stepped up its assistance to states, tribes and territories in implementing these standards.

Because the Central Data Exchange is already in production and is designed to support cost effective data sharing, it can be used to support data exchanges with other Agencies as well. By participating in the Automated Commercial Environment/Integrated Trade Data System (ACE/ITDS), EPA will be able to share vital reference data from six environmental programs (Vehicles and Engines, Ozone Depleting Substances, Fuels, Pesticides, Toxic Substances, and Hazardous Waste) with Customs and Border Protection officers who make on-the-ground admissibility decisions about cargo entering the United States at over 300 ports nationwide. These new links will help ensure that products entering the United States meet safety and environmental standards. EPA, in FY 2010, will continue to facilitate combined programmatic technology, policy, and regulatory changes and communications/outreach on ACE/ITDS integration with our environmental mission. These efforts will facilitate meeting the OMB-directed deadline for full utilization of our ACE solution by FY 2011.

EPA will use existing CDX and Exchange Network platforms and linkages to achieve ACE/ITDS integration in a timely and cost effective way. EPA is slated, in FY 2010, to provide interoperability between environmental data systems and the new ACE M2.3 release for Cargo Control and Release. The Agency's approach and proven success with CDX has generated cross-government interest in using this robust, secure, innovative tool to provide a low-cost, technical solution to the challenges posed by securing American imports.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	48	45	50	60	Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.	120,000	100,000	130,000	140,000	Users

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$256.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$1,000.0) This increase for ACE/ITDS will enable more EPA environmental systems to be linked to ACE and allow for the complete implementation of this system as planned by FY 2011.
- (+$97.0) This is an increase in IT and telecommunication support costs.

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; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$3,778.4***	***$2,981.0***	***$3,065.0***	***$84.0***
Total Budget Authority / Obligations	$3,778.4	$2,981.0	$3,065.0	$84.0
Total Workyears	9.7	10.0	10.0	0.0

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.[42]

The core SBO functions include participating in the regulatory development process, operating and supporting the program's hotline and homepage, participating in EPA program and Regional offices' small business related meetings, and supporting internal and external small business activities. The SBO helps small businesses learn about new EPA actions and developments, and help EPA learn about the concerns and needs of small businesses. The SBO 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.

Resources also support EPA's Sector Strategies Program and assess the effect of regulatory options on small businesses. This effort 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 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.

[42] Please refer to: http://www.epa.gov/sbo/.

FY 2010 Activities and Performance Plan:

In FY 2010 the Small Business Ombudsman program will continue to:

- Support and promote EPA's Small Business Strategy by encouraging small businesses, states, and trade associations to comment on EPA's proposed regulatory actions, 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.

Under this program, resources of $1.76 million and 5.0 FTE, support the Office of Small Business Programs. The remaining $1.3 million and 5.0 FTE in this program support the Office of Policy Economics and Innovation's activities related to the Small Business Regulatory Enforcement Fairness Act.

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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$62.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$22.0) This reflects an increase in expense costs.

Statutory Authority:

CAA, section 507.

Small Minority Business Assistance
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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$2,995.6***	***$2,296.0***	***$2,364.0***	***$68.0***
Total Budget Authority / Obligations	$2,995.6	$2,296.0	$2,364.0	$68.0
Total Workyears	8.6	9.8	9.8	0.0

Program Project Description:

This program is part of the Agency's Small Business Program, which combines the resources of this program and a portion of the resources within the Small Business Ombudsman program. The Small Business Program provides technical assistance to small businesses and 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. The 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.

FY 2010 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 2010. 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 two years. (In FY 2010, the funding for the Small Minority Business Assistance Program is $2.36 million and 9.8 FTE.)

In FY 2010, EPA's contract reviews for an increasing number of Agency contracts will eliminate unnecessary contract bundling, and mitigate the effects on America's small business community. Contract bundling requires certain conditions to obtain contracts that small businesses cannot provide because of their size. 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 ten 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 eight 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 create more jobs at the same time. 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$53.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$15.0) This reflects an increase in contract funding to carry out program activities.

Statutory Authority:

Small Business Act, sections 8 and 15, as amended; Executive Orders 12073, 12432, and 12138; P.L. 106-50; CAA.

State and Local Prevention and Preparedness
Program Area: Information Exchange / Outreach
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$12,518.5***	***$13,008.0***	***$13,555.0***	***$547.0***
Total Budget Authority / Obligations	$12,518.5	$13,008.0	$13,555.0	$547.0
Total Workyears	51.6	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 also must 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 changes are made at the facility.

The Agency works with state, local and tribal 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.

EPA also assists the Department of Homeland Security (DHS) as well as other federal agencies, state, and local partners 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. 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[43].

[43] http://www.epa.gov/emergencies/content/rmp/index.htm.

FY 2010 Activities and Performance Plan:

In FY 2010, 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 2010, 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 RMP inspections at high-risk facilities, such as petroleum refineries and larger chemical manufacturing sites.

- EPA will continue to provide training for Federal, state and local, and tribal implementing agency inspectors under its RMP and EPCRA Inspector Training curriculum, and provide additional opportunities for qualified inspectors to obtain training in advanced inspection topics.

- Using the results of the FY 2008 survey of the Nation's Local Emergency Planning Committees (LEPCs), EPA will continue to 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 support to CAMEO software which assists first responders by housing critical information about toxicity, behavior and movement of chemicals.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$461.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$86.0) This change realigns extramural spending with proposed FY 2010 plans.

Statutory Authority:

EPCRA; SARA of 1986; Section 112(r), Accidental Release Provisions of the CAA of 1990; Chemical Safety Information, Site Security, and Fuels Regulatory Relief Act.

TRI / Right to Know
Program Area: Information Exchange / Outreach
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$15,213.2***	***$15,719.0***	***$15,656.0***	***($63.0)***
Total Budget Authority / Obligations	$15,213.2	$15,719.0	$15,656.0	($63.0)
Total Workyears	42.5	43.0	43.0	0.0

Program Project Description:

The Toxics Release Inventory[44] (TRI) program provides the public with information on releases, and other waste management activities, of toxic chemicals from a broad segment of industrial facilities. TRI is the Agency's only multi-media, integrated provider of such information to the public. The program collects data on over 600 chemicals, provides quality assurance and stores that data, and then makes it available to the public annually. Due to the scope and timeliness of the data, TRI is the premier source of information for community right-to-know groups and it fulfills the Agency's statutory responsibilities under Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and the Pollution Prevention Act of 1990 (PPA). The data is also used by the financial community to monitor corporate environmental stewardship and by other EPA programs to support data quality and enforcement activities.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will strengthen the regulatory foundation for the TRI program to ensure that communities have access to timely and meaningful information on toxic chemical releases in their neighborhoods. The TRI program will take steps to address concerns about the 2006 TRI Burden Reduction Final Rule (71 *Federal Register* 76932-45) and to clarify the TRI reporting requirements for specific industries, as needed (e.g., metal mining facilities). In addition, the program will consider whether to regulate additional toxic chemicals and/or industry sectors and explore the feasibility of requiring reporting by individual facilities of concern.

TRI will work closely with the Enforcement and Compliance Assurance program to evaluate potential data quality issues concerning facility submissions and to support compliance assistance and enforcement efforts, as appropriate. Strong coordination between the programs and enforcement, tracking and reporting will be an increasingly important part of TRI's work at the regional level.

TRI will continue promoting the use of electronic reporting among the reporting facilities, because it helps improve the quality of the TRI data submitted to EPA and makes it possible for TRI to process, analyze and release the data to the public more quickly. Over the past several

[44] For more information on the Toxics Release Inventory, please visit: http://www.epa.gov/tri/

years, TRI program developed TRI-MEweb, an Internet-based version of its TRI Made Easy (TRI-ME) software. TRI-MEweb includes enhanced data quality checks and time-saving capabilities (e.g., pre-population of certain data using data reported by the facility in the previous year). Because TRI-MEweb is now readily available, TRI plans to discontinue the TRI-ME compact disc version in FY 2010.

The TRI Program continues to work with the Environmental Information Exchange Network to promote the efficient collection and exchange of TRI data using EPA's Central Data Exchange (CDX). In addition, TRI encourages states to participate in the TRI State Data Exchange, and encourages facilities located in participating states to utilize the TRI State Data Exchange. Where it is available, the State Data Exchange allows facilities to submit their federal and state TRI reports simultaneously, rather than separately.

In FY 2010, the TRI Program will continue to provide timely, up-to-date training materials through online training modules on TRI regulations/requirements and TRI-MEweb; however, it will no longer provide multiple in-person workshops for facility reporters at the regional level. If there is sufficient interest, the TRI Program may offer a limited number of "train-the trainer" workshops for organizations that are interested in offering their own training sessions. In addition to the online training modules, the TRI Program will continue assistance to reporting facilities through toll-free hotline services, an online Frequently-Asked-Questions service and online access to a variety of regulatory and interpretive guidance documents.

Annually, reporting facilities are required to complete their reports for the previous calendar year, by July 1st. In FY 2010, the TRI Program will continue providing public access to that data as quickly as possible, through downloadable data files and/or data publishing services. TRI will work to enhance the analytical capabilities available to data users through TRI Explorer, Envirofacts and other online tools and to provide more hazard-based information (e.g., by providing Toxic Equivalents data for dioxin and dioxin-like compounds), all of which are intended to help TRI users understand the nature of the hazards posed by the various materials reported.

The TRI Program will continue to work with outside organizations, such as the Environmental Council of the States, to foster stakeholder discussions and collaboration on the analysis, use, and application of TRI data (e.g., through the CommunityRight2Know.org Web site and the TRI National Training Conference). At the same time, TRI will work with others to promote corporate accountability and environmental stewardship. Initial efforts are focused on providing access to TRI data at the parent company level and on highlighting TRI data on pollution prevention and best management practices.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$375.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$438.0) This change reflects a decrease in funding for TRI. EPA will offer comprehensive training online in lieu of in-person training, and will eliminate distribution of CDs for reporting in favor of internet-based reporting by facilities.

Statutory Authority:

FACA; GISRA; CERCLA; SARA; EPCRA; CAA; CWA; SDWA; TSCA; FIFRA; FQPA; FFDCA; ERD; GPRA; GMRA; CCA; PRA; FOIA; CSA; PR; EFOIA; Pollution Prevention Act and DAA

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$12,152.4***	***$11,973.0***	***$12,439.0***	***$466.0***
Total Budget Authority / Obligations	$12,152.4	$11,973.0	$12,439.0	$466.0
Total Workyears	75.3	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 Agencywide 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; and

- Provide the opportunity for implementation of Tribal environmental programs by tribes, or directly by EPA, as necessary.

FY 2010 Activities and Performance Plan:

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 FY 2010, the continued integration and merger of TPEA with the EPA Enterprise Architecture will lead to a more efficient information technology infrastructure.

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, and Agencywide 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 FY 2010. See http://www.epa.gov/Tribalportal/ for more information.

TPEA, part of the Agency's Envirofacts system, is a multi-agency, multi-media 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. EPA continues 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. EPA continues 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 2010. 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. EPA has developed and implemented the GAP Online database as part of TPEA. GAP Online is a web-based tool for workplan development and reporting. In addition, EPA will continue developing a framework to assist recipients in clearly identifying key procedures and milestones leading to building capacity for specific programs.

Performance Targets:

Work under this program supports EPA's efforts to Improve Human Health and the Environment in Indian Country. Currently, there are no performance measures for this specific program.

In FY 2010, 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 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.

These data systems will enable EPA 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 measures (ambient quality and emissions) are important in the development of outcome-based performance measures for EPA Tribal programs.

Efforts to link TPEA directly to the Sanitation Deficiency System Database (SDS) of the Indian Health Service (IHS) continue. Information in the IHS SDS system is reported in the Agency's Strategic Plan. Work under this program supports multiple strategic objectives.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+ $432.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+ $50.0) This reflects an increase in travel for support a more substantial partnership between EPA and the tribes in support of EPA's Indian Policy.
- (- $16.0) This reflects a decrease in program dollars for general office expenses.

Statutory Authority:

Indian General Assistance Program Act, 42 U.S.C. § 4368b (1992), as amended.

Program Area: International Programs

US Mexico Border
Program Area: International Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$6,110.1***	***$5,561.0***	***$5,047.0***	***($514.0)***
Total Budget Authority / Obligations	$6,110.1	$5,561.0	$5,047.0	($514.0)
Total Workyears	20.8	21.2	21.2	0.0

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 three of the ten poorest counties in the U.S., with an unemployment rate 250-300 percent higher than the rest of the United States. 432,000 of the 14 million people in the region live in 1,200 colonias[45], which are unincorporated communities characterized by substandard housing and unsafe drinking water.

The U.S.-Mexico Border 2012 Program continues to be a successful joint effort between the U.S. and Mexican governments. The two governments work with the 10 Border States and with local communities to improve the region's environmental health. The Border 2012 framework agreement is intended to protect the environment and public health along the U.S.-Mexico Border region, consistent with the principles of sustainable development. The results achieved to date include: (1) constructed adequate water and wastewater infrastructure for over 7 million border residents; (2) completed greenhouse gas emissions (GHGs) inventories for California, Baja California, Arizona, Sonora, and New Mexico following the International Panel on Climate Change protocol; (3) cleaned 62 tons of waste associated with undocumented immigration in Tohono O'odham Nation; (4) cleaned INNOR site in Mexicali (420,000 tires removed), CENTINELA site (1,200,000 tires) and Juarez site (one million tires); (5) remediated and cleaned (removal of hazardous waste and contaminated soil) at the Metales y Derivados site, amongst the first to be completed under Mexico's new cleanup law; and (6) completed 15 Sister City plans that establish cooperative measures and exercises in response to oil and hazardous substance incidents along the border.

Note that Border water and wastewater infrastructure programs are described in the State and Tribal Assistance Grants appropriation, Infrastructure Assistance: Mexico Border Program Narrative.

[45] http://www.borderhealth.org/border_region.php

FY 2010 Activities and Performance Plan:

The key areas of focus for the Border 2012 Program continue to include: (1) increasing access to drinking water and wastewater infrastructure; (2) building greenhouse gas (GHG) information capacity and expanding voluntary programs for reduction of GHG emissions; (3) developing institutional capacity to manage electronic waste and used oil; (4) piloting projects that reduce exposure to obsolete agricultural pesticides; (5) conducting binational emergency preparedness training and exercises at sister cities; and (6) utilizing the Toxics Release Inventory and Pollutant Release and Transfer Register tools to collect and report on industry pollutant releases, and to better assist border industry to go above and beyond compliance.

The Border 2012 Program continues to address water and sanitation needs along the border through the Border Environment Infrastructure Fund (BEIF), which has been instrumental in improving the quality of life of communities along the border. More than 4 million people benefit today from improved sanitation and access to drinking water and this number will increase to 7 million people when all on-going projects are completed. In addition, through the U.S. Tribal Border infrastructure program, over 8,100 homes have been provided with safe drinking water, or basic sanitation. For example, in 2008, a new sanitary facility was completed in the indigenous communities of San Jose de la Zorra and San Antonio Necua to improve access to clean water and environmentally friendly sanitary facilities.

Continued collaboration between EPA and the Mexican Environment Secretariat SEMARNAT has resulted in Mexico implementing the Transporte Limpio, modeled after EPA's SmartWay. This program was launched in November 2008 and will increase fuel efficiency and reduce pollutant and greenhouse gas emissions from diesel trucks operating along the border. In addition, California, Baja California, Arizona, Sonora, and New Mexico, completed greenhouse gas emissions (GHGs) inventories following the International Panel on Climate Change protocol. These inventories provide information on sources and volumes of emissions and enable identification of strategies for reducing emissions. Starting in FY 2010, the program will work towards building border greenhouse gas (GHG) information capacity using comparable methodologies and will expand voluntary cost-effective programs for reduction of GHG emissions in the border area.

Abandoned scrap tires continue to present environmental and public health hazards from potential fires and their resulting air pollution, and from disease-carrying pests. In addition, there are efforts of site clean-up at Matamoros, Reynosa, Piedras Negras, Palomas, Ascension, and San Luis Rio Colorado tire piles and the on-going cleanup at the Juarez site. Together, all cleanups to date have eliminated over 4 million scrap tires along the border. Previously, EPA and SEMARNAT developed the Scrap Tire Integrated Management Initiative to eliminate scrap tire piles and ensure that newly generated scrap tires are managed in an environmentally sound manner. In 2008, the Governors from the ten Border States signed a letter of understanding to formally join and support this initiative. In FY 2010, the program will continue the clean-up of the Ciudad Juarez tire pile.

The Border program successfully implemented Phase 1, the stabilization 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. The Metales y Derivados remediation project completed site its characterization, field sampling, and design phases. In Fall 2008, the Metales y Derivados (hazardous waste site) site cleanup was completed and is among the first to be completed under Mexico's new cleanup law. In FY 2010, EPA will continue applying the binational framework on clean-up/remediation and restoration of sites contaminated with hazardous waste at the border of California and Baja California.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cleanup waste sites in the United-States – Mexico border region (incremental).	1	1	1	1	Sites

FY 2010 Change from FY 2009 Enacted (Dollars in Thousands):

- (+$134.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$648.0) This change reduces congressionally-directed funding in the FY 2009 Omnibus for the US/Mexico Border—decreasing support for the implementation of Border 2012 Program, including addressing hazardous waste sites, removal of abandoned tire piles, and outreach to stakeholders such as the 10 Border States governments and with local communities along the 2,000 mile border.

Statutory Authority:

CWA; CAA; TSCA; RCRA; PPA; FIFRA; Annual Appropriation Acts.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$0.0***	***$7,830.0***	***$8,851.0***	***$1,021.0***
Total Budget Authority / Obligations	$0.0	$7,830.0	$8,851.0	$1,021.0
Total Workyears	0.0	41.4	44.4	3.0

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 Agency's environmental effort. To achieve our domestic environmental objectives, it is important to address foreign sources of pollution that impact the United States, including emissions, such as mercury and toxics, from other countries. As we better understand the interdependencies of global ecosystems and the transport of pollutants from its sources, it becomes clearer that the actions of other countries affect the U.S. environment. Addressing these challenges requires strong collaboration between EPA and its international partners.

An important way to improve collaboration and address foreign sources of pollution that impact the U.S. and the global environment is through international capacity building. 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, waste and toxic chemicals, improve their environmental governance and reduce the global use and emission of mercury. 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. EPA works in collaboration with developed countries on tackling key global issues such as climate change.

FY2010 Activities and Performance Plan:

Air Quality

Air quality in the United States 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. Solving complex environmental problems such as climate change requires strong, ongoing, and robust collaboration between EPA and its international partners. In FY 2010, EPA will coordinate its international and domestic climate change commitments in order to ensure that US international obligations are informed by domestic policy and expertise, that domestic programs

fulfill international obligations, and that actions by other countries needed to reach domestic goals are catalyzed and promoted. Specifically, EPA will augment efforts to integrate carbon control features into bilateral and multilateral relationships, particularly in countries with rapidly developing economies, develop, negotiate, coordinate, and implement US international environmental policy, technical assistance, and capacity building consistent with its domestic program, and ensure positions taken are consistent with and advance developing Agency mandates and/or statutes.

In FY 2010, EPA will continue to be an active partner in the Partnership for Clean Fuels and Vehicles (PCFV) program. The primary goal of this global partnership is to reduce vehicular air pollution in developing countries and transitioning countries by eliminating lead in gasoline and the phase down of sulphur in diesel and gasoline fuels.

Additionally, EPA will continue its efforts to reduce transboundary stationary-source pollution by focusing on practical measures to achieve reductions in PM, NOx and other emissions, particularly from power plants. 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.

Mercury

As part of its effort to reduce global sources of persistent bioaccumulative toxics, EPA continues to give priority to reducing the global use and emission of mercury. For example, at the February 2009 UNEP Governing Council Meeting in Nairobi, EPA joined the international community in supporting a major decision to further international action, consisting of the elaboration of a legally binding instrument on mercury which could include both binding and voluntary approaches, to reduce the health and environmental risks associated with mercury.[46]

In FY 2010, EPA also will continue addressing priority issues such as enhancing the capacity for mercury storage as well as reducing mercury use in products and processes and raising awareness of mercury-free alternatives. Additionally, EPA will work with China on their vinyl chloride monomer (VCM) emissions as a strategy to mitigate their anthropogenic mercury emissions, which in 2005 were estimated to be slightly over 800 metric tons. In FY 2010, EPA will release data on mercury use in five (5) VCM facilities and develop an audit report of BAT/BEP options for the industry. Working with the Chinese government, EPA will then identify the steps necessary to reduce the use and release of mercury through a Cleaner Production Program. A pilot demonstration project is also planned for FY 2010 at a VCM facility.

Also, in FY 2010, EPA will provide training and technical assistance to improve environmental governance in key countries and regions, including Africa, Russia and the Middle East. This

[46] Governing Council of the United Nations Environmental Programme 20 February 2009 25th session of the Governing Council/Global Ministerial Environment Forum Nairobi Kenya "Draft Decision approved by the Chemicals Contact Group on Chemical Management, including Mercury."

initiative will include training on environmental enforcement, inspections and investigations, and pilot demonstration projects.

Water Quality

For FY 2010, EPA will continue to support the implementation of the US legislation known as the "2005 Paul Simon Water for the Poor Act" which makes access to water and sanitation in developing countries a specific policy objective of the US foreign assistance programs. To this end, EPA will promote urban drinking water quality programs which focus on comprehensive and sustainable approaches to improving drinking water systems from the catchment to the consumer and back to the environment. This approach shares EPA's principles and expertise in providing clean and safe water to other countries suffering from the health effects of poor water quality. In alignment with partners that include, but are not limited to, USGs, NGOs, international organizations and key country institutions, EPA will develop programs that promote cost-effective and sustainable drinking water and wastewater approaches with key countries and share experiences and lessons learned globally.

Land Pollution

In FY 2010, 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. Under the Stockholm Convention[47], EPA works with many countries to reduce Persistent Organic Pollutants (POPs) such as polychlorinated biphenyls (PCBs), pesticides, dioxins, and furans. 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 (e.g., Russia, China, India, and Central America.) 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 addition, EPA continues to partner with the Arctic Contaminants Action Program of the Arctic Council to reduce and remove all sources of POPs. For example, EPA works closely with the indigenous peoples of Alaska and the Russian Arctic to remove local sources of POPS from villages and rural communities.

In FY 2010, EPA will address the growing e-waste issue – electronic waste that is discarded in developing world countries. The Agency will partner with other nations to provide "eWaste best practices" through education and demonstration projects in developing countries. These efforts will reduce risks from exposure to toxic substances contained in e-waste such as lead, mercury,

[1] For more information on the Stockholm Convention, see http://www.pops.int

cadmium, hexavalent chromium, and barium through awareness raising, capacity building on inspections in ports and detecting cases of noncompliance and enabling improved inter-ministerial and inter-governmental information sharing and collaboration to address e-waste issues.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of countries completing phase out of leaded gasoline. (incremental)	7	7	4	3	Countries

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of countries introducing low sulfur in fuels. (incremental)	5	2	3	9	Countries

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of countries completing phase out of leaded gasoline. (incremental)	7	7	4	3	Countries

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of countries introducing low sulfur in fuels. (incremental)	5	2	3	9	Countries

FY 2010 Change from FY 2009 Enacted (Dollars in Thousands):

- (+$848.0) This reflects an increase for payroll and cost of living for all FTE
- (+$250.0 / 3.0 FTE) This reflects an increase to support the Agency's Global Climate Change activities to integrate carbon control features into bilateral and multilateral relationships, particularly in countries with rapidly developing economies; and to, develop, negotiate, and coordinate, and implement US international environmental policy, technical assistance, and capacity building consistent with its domestic program.
- (-$98.0) This reduction reflects a decrease in international travel
- ($+21.0) This change provides for an increase to support the Agency's efforts to address foreign sources of pollution that impact the U.S and the global environment.

Statutory Authority:

PPA; FIFRA; CAA; TSCA; NEPA; CWA; SDWA; RCRA; CERCLA; NAFTA; OAPCA; MPRSA; CRCA; Annual Appropriation Acts.

Trade and Governance
Program Area: International Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$0.0***	***$6,273.0***	***$6,451.0***	***$178.0***
Total Budget Authority / Obligations	$0.0	$6,273.0	$6,451.0	$178.0
Total Workyears	0.0	16.3	16.3	0.0

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 meet their obligations under the trade agreement to 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-host 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. North American Free Trade Agreement (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).[48] Booming trade after NAFTA's entry into force has caused increasing traffic congestion and related environmental consequences, particularly in terms of air pollution.[49] 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 nitrogen oxide (NOx) and PM emissions.[50]

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 avoid potential conflicts between trade commitments and our statutory obligations to implement domestic environmental laws and policies.

FY 2010 Activities and Performance Plan:

During FY 2010, 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 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

[48] US Census Bureau, Foreign Trade Division, 2007.
[49] U.S. Transportation Research Board, The National Academies, "Critical Issues in Transportation," 2006.
[50] 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.

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, Peru and in the Central American, North American and the Caribbean regions. Should the newly concluded agreements with Colombia, Panama 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 also will 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$117.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$61.0) This change reflects an increase to support efforts to assist other countries in their environmental protection efforts.

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

Information Security
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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$6,157.6***	***$5,854.0***	***$6,015.0***	***$161.0***
Hazardous Substance Superfund	$474.6	$783.0	$799.0	$16.0
Total Budget Authority / Obligations	$6,632.2	$6,637.0	$6,814.0	$177.0
Total Workyears	10.8	15.8	15.8	0.0

Program Project Description:

The Agency Information Security Program is designed to protect the confidentiality, availability and integrity of EPA's information assets. The protection strategy includes, but is not limited to, enterprise policy, procedure and practice management; information security awareness, training and education; risk-based Certification & Accreditation (C&A); Plans of Action & Milestone (POA&M's) management to ensure remediation of weaknesses; defense-in-depth and breadth technology and operational security management; incident response and handling; and Federal Information Security Management Act (FISMA) reporting.

FY 2010 Activities and Performance Plan:

Effective information security is a constantly moving target. Every year, Agency security practitioners are challenged with responding to increasingly creative and sophisticated attempts to breach organizational protections. EPA's integrated efforts in FY 2010 will allow the Agency's Information Security Program to take a more proactive role in dealing with these threats.

EPA will continue to protect, defend and sustain its information assets by continuing to migrate its Information Security Program. The Agency will focus initially on asset definition and management, compliance, incident management, knowledge and information management, risk management, and technology management. Secondary activities in FY 2010 include, but are not limited to, access management, organizational training and awareness, measurement and analysis, and service continuity. These efforts will strengthen the Agency's ability to ensure operational resiliency. The final result will be an information security program that can rely on effective and efficient processes and documented plans when threatened by disruptive events.

Concurrently, EPA will continue its performance-based information security activities with a particular emphasis on risk management, incident management and information security architecture (defense-in-depth/breadth). These three areas are critical to the Agency's security position. They are also key components of various Federal mandates, such as the Office of Budget and Management (OMB) information security initiatives, which will be implemented throughout FY 2010, including Trusted Internet Connection (TIC), Domain Name Service Security (DNSSec) and the Federal Desktop Core Configuration (FDCC). These mandates are rapidly enhancing the Agency's security requirements for information policy, technology standards and practices.

EPA also is initiating efforts to transition from Internet Protocol version 4 (IPv4) to IPv6 in accordance with the June 30, 2008 OMB M-05-22, *Transition Planning for Internet Protocol Version 6 (IPv6)*. This effort is a Federal initiative designed to retain our nation's technical and market leadership in the Internet sector and to expand and improve services for Americans. As with many enterprise initiatives, there are significant security challenges that must be addressed in order to make this capability secure. EPA will analyze and plan our long-term strategy for implementing, monitoring and securing an IPv6 environment in FY 2010.

Additionally, EPA will begin its implementation of the Homeland Security Presidential Directive 12 (HSPD-12) requirements for logical access as identified in the Federal Information Processing Standards (FIPS) 201, *Personal Identity Verification (PIV) of Federal Employees and Contractors*. This Enterprise Identity and Access Management (IAM) project will be combined with the Enterprise Single Sign-On (SSO) to enable the required enhanced authentication mechanism without burdening EPA systems users.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	100	100	100	100	Percent

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$125.0) This reflects an increase for payroll and cost of living for existing FTEs.
- (+$36.0) This increase reflects an increase in travel and contracts.

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).

Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$91,928.2***	***$93,171.0***	***$103,305.0***	***$10,134.0***
Science & Technology	$3,762.6	$3,969.0	$4,073.0	$104.0
Leaking Underground Storage Tanks	$178.0	$162.0	$162.0	$0.0
Oil Spill Response	$15.0	$24.0	$24.0	$0.0
Hazardous Substance Superfund	$15,929.7	$16,896.0	$17,124.0	$228.0
Total Budget Authority / Obligations	$111,813.5	$114,222.0	$124,688.0	$10,466.0
Total Workyears	492.2	503.1	503.1	0.0

Program Project Description:

The Information Technology/Data Management (IT/DM) program 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. IT/DM provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access. IT/DM manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines. And IT/DM supports regional information technology infrastructure, administrative and environmental programs, and telecommunications.

The work performed under IT/DM encompasses more than 30 distinct activities. For descriptive purposes they can be categorized into the following major functional areas: information access; geospatial information and analysis; Envirofacts; IT/information management (IT/IM) policy and planning; electronic records and content management; internet operations and maintenance (IOME); information reliability and privacy; and IT/IM infrastructure.

FY 2010 Activities and Performance Plan:

In FY 2010, the following ITDM activities will continue to be provided:

- **Information Access** – FY 2010 activities in this area will continue making environmental information accessible to all users. This includes: maintaining EPA's libraries, access to Environmental Indicators; support for Toxics Release Inventory[51] (TRI) data; a major role in E-Gov activities such as to improve Freedom of Information Act (FOIA) activities using electronic workflow management, and eRule – a Web-based system to facilitate, and provide greater public access to, Federal rulemakings; and development of analytical tools to help users understand the meaning of environmental data. It includes facility data collected from numerous federal programs, and tools to help those who use information from a variety of sources to reconfigure that data so it can be easily compared and analyzed.

  Of particular emphasis in FY 2010, EPA's E-Gov participation and contributions continue with the coordination, development and implementation of the Business Gateway, Geospatial One-Stop, and e-Authentication[52]. Key activities ensure that access to critical data (e.g., geospatial information, federal regulations) is increased through the Geospatial One-Stop portal and the Business Gateway, and its Business Portal, providing opportunities for collaboration and intergovernmental partnerships, reducing duplication of data investments, and offering the public easy access to important Federal services for businesses. Another FY 2010, focus area, the Integrated Portal, will continue with implementing identity and access management solutions, integrating geospatial tools, and linking to the Central Data Exchange[53] (CDX). The Integrated Portal is a business gateway for people to access, exchange and integrate environmental and public health data at the local, Regional and national level. In this manner, the Integrated Portal gives users the ability to perform complex analyses on environmental data which is stored at many locations. The Integrated Portal is also EPA's link to data sets and systems that are not part of the Exchange Network. (In FY 2010, the Information Access activities will be funded at $4.82 million)

- **Geospatial Information and Analysis[54] –** In FY 2010 EPA will continue to provide place-based analysis of environmental conditions and trends across the country. A broad range of data pertinent to specific places (facilities, roads, waste sites, etc.) and natural features (wetlands, soil types, hydrographic features, etc.) has been cataloged and can be accessed digitally, or viewed as overlays on maps. Geospatial information and analysis play a critical role in the Agency's ability to rapidly and effectively respond in times of emergency. Additionally, geographic location is becoming a key way to access EPA digital data and documents, and the Agency is in the process of building tools that will allow Web-users to retrieve relevant documents by specifying a location that they are interested in. Implemented as a holistic, enterprise solution, these projects also save money, assure compatibility, and reduce the need for multiple subscriptions to software, data and analytical services. (In FY 2010, the Geospatial Information and Analysis activities will be funded at $9.77 million)

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[51] For more information on Toxics Release Inventory data, please visit: http://www.epa.gov/tri/
[52] For more information on eAuthentification, please visit: http://www.epa.gov/Networkg/eauth/
53 For more information on the Central Data Exchange, please visit: http://www.epa.gov/cdx/
54 For more information on the Geospatial program, please visit: http://www.epa.gov/geospatial/

- **Envirofacts**[55] – This area supports a single point of access to EPA databases containing information about environmental activities that may affect air, water, and land anywhere in the United States; houses data that has been collected from regulated entities and the states; and makes that data accessible to environmental professionals, the regulated community, citizens groups, and to state and EPA employees through an easy-to-use, one-stop access point. Its components include databases and applications that make integrated environmental information available to all EPA stakeholders. Envirofacts directly supports the Agency's strategic goal of fulfilling Americans "Right-to-Know" about their environment which in turn supports EPA's mission to protect human health and the environment. It also supports integrated data access, a key component in the planned enterprise architecture that will support EPA's current and future business needs. Envirofacts is also being used to help plan and conduct multi-media inspections, and to support emergency response and planning. (In FY 2010, the Envirofacts activities will be funded at $2.67 million)

- **IT/Information Management (IT/IM) Policy and Planning** – FY 2010 activities will ensure that all due steps are taken to reduce redundancy among information systems and data bases, streamline and systematize the planning and budgeting for all IT/IM activities, and monitor the progress and performance of all IT/IM activities and systems. This category includes EPA's implementation of an Enterprise Architecture and the Capital Planning and Investment Control[56] process (CPIC), to assist the Agency in making better informed decisions on IT/IM investments and resource allocations. (In FY 2010, the IT/IM Policy and Planning activities will be funded at $13.75 million)

- **Electronic Records and Content Management** – FY 2010 activities in this area primarily create the systems, and establish and maintain the processes, to convert paper documents into electronic documents, convert paper-based processes into systems that rely less on paper documents, and manage the electronic documents. By doing so, these activities reduce costs, improve accessibility, and improve security for all of the documents entered into the system. Electronic documents do not take up storage space, and do not need a filing staff to locate documents for customers, and then re-file them after they are used. A single copy of an electronic document can be accessed simultaneously by numerous individuals, and from virtually any place on the planet. Using a collaborative process, in FY 2010 the Agency will continue implementing the ECMS project, an enterprise-wide, multi-media solution designed to manage and organize native and environmental data and documents for EPA, Regions, field offices and laboratories. Previously fragmented data storage approaches will be converted into a single standard platform which is accessible to everyone, reducing data and document search time, while improving security and information retention efforts. (In FY 2010, the Electronic Records and Content Management activities will be funded at $2.94 million)

- **Internet Operations and Maintenance (IOME**) – EPA will implement and maintain the EPA Home Page (www.EPA.gov) and over 200 top-level pages that facilitate access to

55 For more information on Envirofacts, please visit: http://www.epa.gov/enviro/
56 For more information on the Capital Planning and Investment Control Process, please visit: http://www.epa.gov/OEI/cpic/

the many information resources available on the EPA Web site, as well as support Web hosting for all of the Agency's Web sites and pages. The EPA Web site is the primary delivery mechanism for environmental information to EPA staff, partners, stakeholders and the public, and is becoming a resource for emergency planning and response. (In FY 2010, IOME activities will be funded at $9.11 million)

- **Information Reliability and Privacy** – FY 2010 EPA will continue to ensure that all of the data collected by the Agency comes from reliable sources, is stored in a manner that is consistent with its security needs, and is only made available to those who are authorized to have access. These efforts apply to environmental information, including data that is submitted by and shared among the states, tribes and territories, as well as other types of information, such as business information that is reported by various industry communities, and personal information for all EPA employees. (In FY 2010, the Information Reliability and Privacy activities will be funded at $0.69 million)

- **IT/IM Infrastructure –** This area support the information technology infrastructure, administrative and environmental programs, and telecommunications for all EPA employees and other on-site workers at over 100 locations, including EPA Headquarters, all ten regions, and the various labs and ancillary offices. More specifically, these activities provide what is known as "workforce support," which includes desktop equipment, network connectivity, e-mail, application hosting, remote access, telephone services and maintenance, web and network servers, IT related maintenance, IT security, and electronic records and data. In 2010, EPA will expand the use of innovative multi-year leasing that sustains and renews technical services (e.g., desktop hardware, software and maintenance) in a stable least-cost manner as technologies change. EPA will also upgrade EPA's Web presence to facilitate finding and using environmental information on the Internet. And EPA will expand and upgrade its Wide Area Network (WAN) to accommodate the continuously growing demands on bandwidth as system capabilities and public users grow. (In FY 2010, the IT/IM Infrastructure activities will be funded at $59.55 million)

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,199.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$3,000.0) This increase is to improve WAN infrastructure, including adding a second Internet connection, upgrading field circuits, addressing requirements imposed on agencies managing their own internet connections, and support of high-speed networking, voice and video. EPA's Wide Area Network capacity has not been significantly upgraded since 2004, and more than 30% of the existing network is operating at its maximum capacity.

- (+$2,000.0) This increase is for upgrading of Web tools and allows EPA to take a number of steps to enhance public access to environmental information via the Internet. This effort includes improving search capabilities, implementing the Web Content Management System and the underlying metadata, and streamlining the design of EPA's Web pages and Web-accessible information.

- (+$1,000.0) This increase reflects funding to maintaining the EPA library network.

- (+$2,000.0) This increase allows EPA to stay on schedule for several projects that will provide tools needed by EPA programs. These projects include: developing improved Environmental Indicators, deploying enterprise-wide IT infrastructure solutions such as the Agency's Integrated Portal and Enterprise Content Management System, expanding the capabilities of the National Geospatial Program, upgrading desktop services in the regions, and developing enhancements to EPA's Capital Planning and Investment Control systems, the Enterprise Architecture, Envirofacts, and Identity and Access Management.

- (-$589.0) This change reflects a decrease in EPA share of service fees for the following E-Gov initiatives: Business Gateway and E-Rulemaking.

- (+$524.0) This increase reflects an increase in contract costs for optimizing the IT infrastructure.

Statutory Authority:

FACA; GISRA; CERCLA; CAA and amendments; CWA and amendments; ERD; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$5,657.9***	***$5,128.0***	***$5,352.0***	***$224.0***
Total Budget Authority / Obligations	$5,657.9	$5,128.0	$5,352.0	$224.0
Total Workyears	35.0	33.7	33.7	0.0

Program Project Description:

This program provides support to EPA's Administrative Law Judges (ALJs) and Environmental Appeals Board (EAB or Board). The ALJs preside in hearings and issue initial decisions in cases initiated by EPA's enforcement program concerning those accused of environmental violations. The EAB issues final Agency decisions in environmental adjudications, primarily enforcement and permit-related, which are on appeal to the Board. In addition, the EAB serves as the final approving body for proposed settlements of enforcement actions initiated by the Agency. ALJs and the EAB issue decisions under the authority delegated by the Administrator. These decisions reflect findings of fact and conclusions of law on the issues presented.

FY 2010 Activities and Performance Plan:

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 2010. 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. In FY 2010, the EAB plans to advance the use of electronic filing of documents with the Board by implementing the recommendations of its FY 2009 analysis on allowing parties the option of filing original documents electronically. This should result in greater efficiencies for all concerned. The EAB

also will implement its pilot project on the use of alternative dispute resolution in cases on appeal, and will continue to support judicial environmental training consistent with Agency priorities. (In FY 2010, the ALJ office will be funded at $2.94 million with 18.3 FTE, and the EAB office will be funded at $2.41 million with 15.4 FTE.)

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$222.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$2.0) This reflects an increase to support contract costs.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$1,136.8***	***$1,374.0***	***$1,423.0***	***$49.0***
Hazardous Substance Superfund	$776.9	$874.0	$895.0	$21.0
Total Budget Authority / Obligations	$1,913.7	$2,248.0	$2,318.0	$70.0
Total Workyears	6.1	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. The intent is to offer a cost-effective process to resolve disputes.

FY 2010 Activities and Performance Plan:

In FY 2010, 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$43.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$6.0) This reflects an increase in support costs for the program.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$11,109.6***	***$11,488.0***	***$12,000.0***	***$512.0***
Total Budget Authority / Obligations	$11,109.6	$11,488.0	$12,000.0	$512.0
Total Workyears	68.4	68.5	69.5	1.0

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, review and complaint adjudication, 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, affirmative employment program planning and implementation, and diversity initiatives primarily related to issues on ageism and sexual orientation. Additional program functions include accountability for evaluation and compliance monitoring of the Civil Rights Act of 1964 (Titles VI, VII, IX), and legislative requirements and executive orders covering civil rights, disability, alternative dispute resolution, and compliance with Equal Employment Opportunity Commission (EEOC) regulations.

FY 2010 Activities and Performance Plan:

In FY 2010, The Office of Civil Rights will focus on its core mission to ensure 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. The Agency's Civil Rights External Compliance Program also expects to improve its processing of external complaints. (In FY 2010, the Headquarters Office of Civil Rights will be funded at $8.26 million with 40.5 FTE.)

In FY 2010 the Agency will:

- Continue the work begun in 2009 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.

- Aggressively work to reduce processing time for employment complaints and increase the number of complaints resolved through the alternative dispute resolution process.

- Ensure that certification training, refresher training, and guidance are provided to more than 100 EEO Counselors in Headquarters and 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.

- As a follow-up to the training of over 1300 supervisors and managers conducted in 2009, OCR will begin EEO training for all EPA employees on a voluntary basis.

- Re-establish an EEO presence in the EPA Las Vegas Laboratory.

- Examine ways to more effectively and efficiently reduce the number of pending Title VI complaints, increase the number of compliance reviews conducted, and improve organizations recipients' civil rights programs through guidance and/or training. The Agency will establish an on-line training module for recipients and potential recipients of Federal financial assistance.

- Monitor and evaluate the effectiveness of the Agency's Reasonable Accommodation process(s). Continue to provide technical assistance to managers, supervisors, employees and the designated Local Reasonable Accommodation Coordinators, in the form of expert training and consultation. Review and revise current policy and procedures to ensure full implementation of the American with Disabilities Act Amendments of 2009.

- 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.

- Working in coordination with the Agency's Small Business Programs, OCR will establish an environmental law curriculum for minority academic institutions.

- OCR will coordinate with EPA's Human Resources programs to conduct a comprehensive survey designed to verify Agency data on race and national origin and

disability status. This data collection effort will update and correct the existing database and provide a more accurate assessment of the workforce demographics.

- OCR will conduct a comparative analysis of EEOC's 462 reporting requirements covering fiscal years 2006-2008.

These activities are consistent with the objectives in the EEOC guidance MD-715 and will serve to move the Agency towards reaching 'model EEO program' status. Additionally, these activities serve to empower the overall workforce to operate in an environment free of discrimination and inequities.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$580.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$68.0) This change reflects a decrease in contracts to reflect management diversity training that will be completed in FY 2009, but will not be carried over to 2010.

- (+1.0 FTE) This change reflects a shift of 1.0 FTE for Workforce Solutions staff from Human Resource Management program.

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; Americans with Disabilities Act of 1990, The ADA Amendments Act of 2008, OWBPA as amended; ADEA as amended EEOC Management Directive 715; Executive Orders 13163, 13164, 13078, 13087, 13171, 11478, 13125, 13096, 13230, 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$39,021.3***	***$40,247.0***	***$41,922.0***	***$1,675.0***
Hazardous Substance Superfund	$802.4	$708.0	$746.0	$38.0
Total Budget Authority / Obligations	$39,823.7	$40,955.0	$42,668.0	$1,713.0
Total Workyears	244.3	248.2	247.2	-1.0

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. This excludes other support activities necessary for the operation of the Agency.

FY 2010 Activities and Performance Plan:

In FY 2010, 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.

This program also is supported by the 2009 American Recovery and Reinvestment Act (ARRA) funds. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,749.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$74.0) This reflects small changes in IT, telecommunications or other support costs.
- (-1.0 FTE) This change reflects the realignment of one FTE for labor relations under this program to the Legal Advice: Support Program.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$13,524.9***	***$14,676.0***	***$15,611.0***	***$935.0***
Total Budget Authority / Obligations	$13,524.9	$14,676.0	$15,611.0	$935.0
Total Workyears	81.7	85.3	86.3	1.0

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. This program focuses on administrative requirements determined by statutes, GAO decisions and Federal agency regulations.

FY 2010 Activities and Performance Plan:

In FY 2010, 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$924.0) This reflects an increase for payroll and cost of living for all FTE.

- (+$11.0) This reflects technical changes in IT, travel or other support costs across programs. Funds will support legal analyses and operations in FY 2010.

- (+1.0 FTE) This change reflects the realignment of one FTE for labor relations from the Legal Advice: Environmental Program.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$3,293.3***	***$3,219.0***	***$3,283.0***	***$64.0***
Total Budget Authority / Obligations	$3,293.3	$3,219.0	$3,283.0	$64.0
Total Workyears	2.0	2.0	2.0	0.0

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 equipment required for laboratory quality assurance and quality control. Regional laboratories provide essential expertise in ambient air monitoring, environmental biology, microbiology, and chemistry, and criminal investigation. 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 and capability to strengthen science based decision-making. Funding for necessary equipment is essential for continued progress and enhanced capabilities in order to respond to emergencies and to improve efficiencies.

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 resources support the development of critical and timely environmental data, rapid data review activities in emerging situations, and develop enhanced capabilities for proper environmental management of chemical warfare agents.

FY 2010 Activities and Performance Plan:

In FY 2010, 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, monitoring, special studies, and method development, quality assurance oversight and data management support, and environmental laboratory accreditation. Direct laboratory support also increases efficiencies in Regional program management and implementation by providing base level supplies and equipment.

The Agency will stay abreast of rapidly changing technologies (i.e., new software, instrumentation, and analytical capability such as Polymerase Chain Reaction Technology and Time of Flight Mass Spectrometry) 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. 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, partner with existing 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. For example, the National Environmental Laboratory Accreditation Program Institute and other accrediting authorities, ensure 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. Ninety percent of the Regional laboratories under RS&T are accredited. Regional labs are complying with the Agency's 2004 Laboratory Competency Policy by seeking and maintaining their lab accreditation. In FY 2010, 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 performance measures in each of the major Agency programs. For example, the Civil and Criminal Enforcement OMB performance assessment measures are supported through significant technical and analytical activities for civil and criminal 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.

Other examples of activities that support results measurement include operating laboratory equipment such as Standard Reference Photometers, which are used to ensure that the national network of ozone ambient monitors accurately measure ozone concentrations in support of Mobile Source and Air Toxics OMB performance assessment measures. Also, 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

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

- (+$55.0) This change reflects an increase for Regional laboratory equipment and supplies.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$23,392.1***	***$19,811.0***	***$20,606.0***	***$795.0***
Total Budget Authority / Obligations	$23,392.1	$19,811.0	$20,606.0	$795.0
Total Workyears	105.2	106.6	91.6	-15.0

Program Project Description:

Starting with passage of major environmental laws in the 1970s, America has seen steady gains in environmental and public health protection. However, today's environmental challenges are more complex than many we have faced in the past. Issues like climate change, reducing toxic exposure in urban settings, and controlling water pollution from numerous diffuse sources are not being addressed fully through current environmental regulatory requirements. These and other challenges require innovative solutions that strengthen the current regulatory system and lay the groundwork for a cleaner, healthier, more sustainable society.

As a regulatory agency, ensuring strong and effective regulation is a fundamental responsibility. We recognize the need to continually improve regulations so they deliver better environmental results without imposing unnecessary burdens that can inhibit economic competitiveness. Because we do not always have sufficient regulatory authority or practical approaches for enforcing regulatory requirements, we also need innovations that can fill the gaps in our regulatory system using cross-media and other approaches. Finally, we need innovations that can reveal the best approach to solving an environmental problem, whether it is through regulation or other environmental protection tools.

The regulatory innovation program is designed to address these needs. We will use a proven innovation methodology to guide our work – identifying problems in need of attention, testing potential solutions, and evaluating results to inform decisions about future action. We also will engage with public and private sector partners to advance environmental policy interests. These partnerships will enable us to share expertise, examine creative solutions, and leverage resources for maximum gain. Through all of these efforts, we will give added attention to opportunities to support the development of green jobs and technologies that will be vital to growing America's new green economy and to improving environmental results.

FY 2010 Activities and Performance Plan:

In FY 2010, Regulatory Innovation activities will include:

Supporting Regulatory Innovation in the States - State Innovation Grant Program: These competitive grants provide resources to assist states in implementing system-wide innovative environmental protection strategies that are transferable to other states. Examples include expanded adoption of the Environmental Results Program model (an integrated system of multi-media compliance assistance, self-certification, and statistically-based performance measurement designed to help small business sectors improve environmental performance while providing the means for more efficient oversight) to promote improved compliance and best environmental business practices in small business sectors, further testing of "Lean and the Environment" (Lean manufacturing is a business model that emphasizes eliminating waste while delivering quality products at the least cost to the manufacturer and customers) approaches that better connect environmental performance and energy conservation to manufacturing practices, testing broader application of the use of environmental management systems in permitting and community/municipal environmental management, and permit streamlining and integration. In FY 2010, EPA anticipates making up to eight awards. In the competitions from 2002-2008, EPA has supported 38 projects with grants awarded to 25 states through this program. In 2008, EPA released its first report on results from State Innovation Grant projects (http://www.epa.gov/innovation/stategrants/results.htm). (In FY 2010, the State Innovation Grants program will be funded at $3.7 million.)

Innovative Pilot Testing: While State Innovation Grants are the primary mechanism for the development, testing and evaluation of strategic innovations at the state level, pilot testing of promising new ideas is conducted through a variety of additional mechanisms. Examples include guiding the development and issuance of flexible air permits (in partnership with EPA's Air and Radiation program), providing direct technical assistance and information to states that are adopting, or considering the Environmental Results Program as a means of regulating small sources, providing tools, information, and training to businesses and facilities, providing training and support for testing the application of innovative approaches to regulatory and other administrative processes, 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. (In FY 2010, the Innovative Pilot Testing program will be funded at $2.26 million.)

Program Evaluation and Performance Analysis: Program Evaluation is one of the performance management tools EPA uses to assure the public that Agency programs are protecting human health and the environment effectively and efficiently. This is particularly important in an era of fiscal responsibility that calls for even greater federal accountability and public transparency of our programs. In FY 2010, 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 rigorous evaluations. Specific consideration is given to evaluations that assess program effectiveness and efficiency, provide insights on how the use of an innovative approach may help better achieve program goals and fulfill the Agency's mission; and address issues of strategic importance to the Agency, or address cross-cutting issues that

present challenges to multiple programs. The National Center for Environmental Innovation also leads the EPA performance management training regimen (online and classroom), which enables EPA staff and managers to use essential program evaluation and performance analysis tools such as logic modeling and performance measurement. EPA's investment in program evaluation will produce rigorous, evidence-based information aimed at making programs more effective and improving productivity, and strengthening Agency decision making. (In FY 2010, the Program Evaluation and Performance Management program will be funded at $2.46 million.)

Effective Use of 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. 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 Regional offices, and for incorporation into national program policies. Additionally, EPA will engage in activities within the Agency, and expand collaboration with other Departments such as Energy, Labor, and Commerce to promote sustainability goals including actions that advance the greening of the economy with direct environmental benefits (e.g., the promotion of green jobs and expanding use of renewable energy). Further, EPA will continue efforts to enhance collaboration with other government agencies at all levels, and to improve opportunities and best practices for public involvement in Agency decision-making. (In FY 2010, the Effective use of Environmental Stewardship program will be funded at $1.23 million.)

Improving Environmental Management: This set of projects aims to improve environmental performance by promoting effective use of environmental management systems (EMS) and encouraging transparency, disclosure, and use of environmental information. EPA will provide leadership and coordination with other agencies, states, industry, and governmental organizations on promoting the wider application of EMS to protect the environment including incorporation of sustainability management goals. EPA will focus EMS implementation on several key sectors, including ports, construction, agribusiness and communities. EPA will work with stakeholders to improve the transparency and disclosure of environmental information from business. In addition, EPA will work to ensure that available environmental data is accessible and useable to determine a corporation's environmental footprint. (In FY 2010, the Improving Environmental Management program will be funded at $1.4 million.)

Sector Strategies Program: This program supports EPA's mission by developing comprehensive performance improvement strategies with major manufacturing and service sectors of the U.S. economy, designed to promote improved environmental protection, energy efficiency, and resource management in high-impact industries and fuel production sectors. In FY 2010 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 850,000 facilities nationwide. Targeted sectors address GHG reductions (sectors represent 29% of total GHG emissions), toxic air emissions (34% of national releases), hazardous waste (80% of hazardous waste releases), and water impact issues. The Agency will develop sector-based climate and energy analyses; develop innovative sector stewardship approaches to improve ambient air quality and water conservation; leverage corporate influence on the supply chain to

address multi-media impacts from agribusiness and fuel production; and define multi-sector strategies to achieve better management of materials and risks. The voluntary removal of 2 million mercury switches from salvaged automobiles is one example of program success. EPA will also track progress in all environmental media through its *Sector Performance Reports,* which will add state-level data and electronic public access, thereby providing a more complete picture of priorities yet to be (In FY 2010, the Sector Strategies program will be funded at $2.7 million.)

Smart Growth: 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 2010, 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. (In FY 2010, the Smart Growth will be funded at $3.9 million under the Regulatory Innovation program, and $1.2 million under the Brownfields program.)

Green Building: The Agency's Green Building program works to accelerate mainstream adoption of green building practices including measures that will lead to dramatic, long-term energy savings and GHG reductions. Green Building projects are coordinated with related EPA media program projects and regional work. The Green Building program communicates and develops partnerships with outside stakeholders. In FY 2010, the Green Building program will be funded at $1.6 million and will pursue the following priorities:

- *EPA Green Building Program Coordination*: expand coordination to integrate Agency activities into a coherent Green Building Program, including building a governmental and NGO network, train EPA staff, and create an external awards program.
- *Green Home Retrofit Blitz*: Existing homes are among the worst performers in meeting energy, environmental, and health goals. During FY 2010, EPA will facilitate two to three local projects lead by local governments/NGOs to help marshal financial, technical, and educational resources for green retrofit of entire neighborhoods.
- *Green Facility Operations Partnerships:* Existing building operations and maintenance (O&M) upgrades provide the greatest energy and environmental benefits for the lowest cost--develop industry partnerships for O&M improvements.
- *Green Building Standards and Metrics:* Effective third-party standards tied to metrics are necessary to reduce energy and to address other green building attributes. This project will manage and coordinate Agency responses to these third-party standards and develop Agency positions, as appropriate.

National Environmental Performance Track: The Performance Track program is being discontinued, although it will be partially funded in FY 2010 in order to appropriately close out the program. It is EPA's intent to reflect on the program's achievement and refine its concepts and approaches. In addition, EPA will convene a multi-stakeholder subcommittee under the National Advisory Council for Environmental Policy and Technology (NACEPT). The subcommittee will conduct a dialog that focuses on the future of EPA's environmental leadership programs. The dialogue will assess the value of performance based leadership programs, and make recommendations on whether and how these programs can help the nation achieve its environmental objectives. (In FY 2010, the National Environmental Performance Track program will be funded at $1.25 million.)

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	75 percent of innovative projects completed under the SIG program will achieve, on average, 8 percent or greater improvement in environmental results for sectors and facilities involved, or 5 percent or greater improvement in cost-effectiveness and efficiency.	Data unavailable	75	75	75	percentage

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$764.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$1,500.0 / -15.0 FTE) This change reflects a redirection of resources, including payroll and FTE, from the Performance Track program to provide additional project officers in support of Brownfields and DERA projects funded under the 2009 American Recovery and Reinvestment Act.

- (+$1,531.0) This change reflects a net increase to grants funding of Agency programs, including but not limited to the State Innovation grant program, the Smart Growth program, and the Green Building program. Both the State Innovation Grant and Smart Growth programs are key ways in which the Agency supports state and local governments in their efforts to protect neighborhoods and communities throughout the country. The funding for State Innovation grants will support states in implementing system-wide innovative environmental protection strategies that are transferable to other states. The funding for Smart Growth will instruct and assist local government leaders in

meeting environmental standards through innovative community design and environmentally friendly development patterns. The funding for Green Building will be used to support building retrofit projects, and to promote operations & maintenance upgrades to existing buildings.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$17,379.6***	***$16,729.0***	***$22,403.0***	***$5,674.0***
Total Budget Authority / Obligations	$17,379.6	$16,729.0	$22,403.0	$5,674.0
Total Workyears	100.4	104.2	104.2	0.0

Program Project Description:

The Regulatory Economic, Management and Analysis program is designed to strengthen EPA's policy and program analysis, and ensure EPA's senior leaders and managers are provided with sound regulatory, policy, and program management information in a timely manner. The program works to fill gaps in EPA's ability to quantify the costs and benefits of environmental regulations and policies. The program seeks to improve operations and outcomes based on program and performance analysis. Resources are used to manage the EPA regulatory, policy, and guidance development process; develop, identify and analyze various regulatory and non-regulatory approaches and policy options; identify successful strategies and regulatory approaches; and address priority problem areas including small business and governmental entities.

Objectives of the program include:

- Ensuring that Agency decision-making processes are invested with high quality and timely information, including relevant science, policy, and economic factors, consideration of an appropriate range of alternatives to achieve the best overall environmental results, and efficient and effective internal procedures that facilitate timely action.

- 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.

- Confirming and maintaining the accuracy and consistency of EPA's economic analysis, while promoting the use of economic, science, regulatory, and program analysis to make informed 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), to address potential burdens on small entities.

- Improving program effectiveness and efficiency through analysis and information sharing.

- Promoting appropriate implementation of the Administrative Procedures Act, Congressional Review Act (CRA), and the Paperwork Reduction Act.

FY 2010 Activities and Performance Plan:

Program activities planned for FY 2010 include:

- Managing the Agency's internal *Action Development Process* and ensuring appropriate engagement across EPA offices and regions. Leading EPA's review of other agency and department actions. Informing the public about regulatory and policy actions under development. 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.[57]

- 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.

- Collaborating with state environmental agency representatives to reduce the state reporting burden associated with EPA activities.

- 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.

[57] Please refer to: http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/Guidelines.html;

- Supporting data collection and the dissemination of information on the economic benefits, costs and impact of environmental regulations. The Agency conducts analysis on the impacts of environmental regulation on businesses, funding the Pollution Abatement Costs and Expenditures (PACE) survey with the assistance of the Department of Commerce's Bureau of the Census, which measures pollution abatement expenditures by U.S. manufacturing industries.[58] The survey will be expanded to support Agency efforts to measure changes in expenditures resulting from newly implemented greenhouse gas reduction policies and regulations.

- Providing training on the Agency's Action Development process, Economic Analysis Guidelines, and related requirements (e.g., OMB Circular A-4) will allow the Agency to continue reviewing and updating its economic guidelines so it will remain current with advancements and reflect best practices in the profession.[59]

- Facilitating communication between the scientific community and Agency policy analysts by supporting workshops on priority economic and environmental policy issues (e.g., greenhouse gas reductions, environmental justice, benefits valuation, market mechanisms and incentives, and treatment of uncertainties in risk and economic analyses[60].) Support the utilization of high quality outside technical peer review of influential economic models and methods used in Agency regulations.

- Improving the effectiveness and efficiency of Agency programs and policies through improved analysis, more efficient operations, and improved information sharing.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$736.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$3,000.0) This change reflects additional funding that will support the development of science-based methods to assess disproportionate health impacts to form the Agency's Environmental Justice assessments and policy development; advances in the measurement of the beneficial effects of reducing pollutants, including supporting analyses and development of methods to improve the utility of cancer and non-cancer risk assessments consistent with recent recommendations from the National Academy of Sciences; and to support research to explore application of the comparative risk assessment framework and tools to disproportionate impact analysis.

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[58] Please refer to: http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/pace2005.html
[59] Please refer to: http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/Guidelines.html;
[60] For more information on these workshops, please refer to: http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/WorkshopSeries.html.

- (+$750.0) Additional resources will finance expansion of the present PACE survey of pollution abatement expenditures by industry to support the effective collection and measurement of costs to the U.S. economy of regulations and policies directed at reducing greenhouse gas emissions.

- (+$1,188.0) This change reflects increased resources for contracts and grants that will improve the scope and quality of economic research, deliver more empirical studies on environmental economics, and increase the capacity of society to evaluate the economic benefits, costs, and impacts of environmental 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.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$5,653.4***	***$5,451.0***	***$5,631.0***	***$180.0***
Total Budget Authority / Obligations	$5,653.4	$5,451.0	$5,631.0	$180.0
Total Workyears	26.6	22.3	22.3	0.0

Program Project Description:

Congress established the EPA Science Advisory Board (SAB) in 1978 and gave it a broad mandate to advise the Administrator on a wide range of scientific matters to ensure that EPA's technical products are of the highest quality. 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, draw on a balanced range of non-EPA scientists and technical specialists from academia, communities, states, independent research institutions, and industry. This program provides management and technical support to these Advisory committees charged with providing EPA's Administrator with independent advice and peer review on scientific and technical aspects of environmental problems, regulations, and research planning.[61]

FY 2010 Activities and Performance Plan:

The Agency brings its highly visible and important scientific products, as well as emerging and challenging research issues to the SAB. In FY 2010, the SAB will provide scientific and technical advice on topical areas related to: (1) the technical basis of EPA National Drinking Water Standards for drinking water contaminants and revised National Ambient Air Quality Standards for criteria air pollutants (e.g. Nitrogen Oxides and Sulfur Oxides); (2) health effects assessments of Integrated Risk Information System (IRIS) chemicals (e.g. Dioxin, MTBE) and risks assessments of major sources of environmental contaminants (e.g. refinery petroleum, cement kiln); (3) economic benefits analyses of EPA's environmental programs (e.g. regulations under the Clean Air Act); and (4) strengthening of EPA's research and science programs. The SAB plans to produce 20 advisory reports on these areas. (In FY 2010, the funding for the Science Advisory Board will be $5.63 million and 22.3 FTE.)

[61] Please refer to: http://www.epa.gov/sab/.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$166.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$14.0) This reflects an increase to support contract costs.

Statutory Authority:

Environmental Research, Development, and Demonstration Authorization Act (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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$296,235.0***	***$303,884.0***	***$320,612.0***	***$16,728.0***
Science & Technology	$69,239.2	$73,835.0	$72,882.0	($953.0)
Building and Facilities	$28,081.5	$26,931.0	$28,931.0	$2,000.0
Leaking Underground Storage Tanks	$890.3	$902.0	$903.0	$1.0
Oil Spill Response	$498.6	$596.0	$498.0	($98.0)
Hazardous Substance Superfund	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Total Budget Authority / Obligations	$467,188.5	$482,398.0	$502,423.0	$20,025.0
Total Workyears	400.4	410.6	411.1	0.5

Program Project Description:

Environmental Program Management resources in the Facilities Infrastructure and Operations Program Project are used to fund rent, utilities, security, and energy conservation/sustainable facilities programs. EPA resources are also 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 safety, 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.

FY 2010 Activities and Performance Plan:

The Agency will continue to manage its lease agreements with GSA 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 implementing 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. (For FY 2010, the Agency is requesting a total of $162.04 million for rent, $13.51 million utilities, $28 million for security, $11.37 million for transit subsidy, and $10.48 million for Regional moves in the EPM appropriation.)

In FY 2010, EPA will continue 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[62], *Strengthening Federal Environmental, Energy, and Transportation Management*. Additionally, the Agency will attain the Executive Order's building related environmental performance 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 2010, we plan to reduce energy utilization (or improve energy efficiency) by approximately 37 billion British Thermal Units or three percent. EPA should end FY 2010 using approximately 20% less energy than we did in FY 2003.

EPA will continue provide transit subsidy to eligible applicants as directed by EO 13150 *Federal Workforce Transportation.* EPA will continue its integration of Environmental Management Systems (EMS) across the Agency, consistent with requirements of Executive Order 13423. 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.

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 including scheduling, local support, travel arrangements, and managing special equipment needed to carry out its protective function.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage reduction in energy consumption.	13	9	12	15	Percent

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$3,082.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$2,942.0) This reflects an increase in transit subsidy.
- (+$1,674.0) This change reflects the projected contractual rent increase in FY 2010, as well as a rebalancing of cost allocation methodologies between the EPM, S&T, and SF, and OIL appropriations.
- (+$2,541.0) This change reflects an increase in utility costs.

[62] Information available at http://www.fedcenter.gov/programs/eo13423/

- (+$2,321.0) This increase in security costs reflects the rebalancing of cost allocation methodologies between the EPM and S&T appropriations.

- (+$4,045.0) This increase is for Regional office moves in San Francisco, Puerto Rico, and Seattle. Multiple leases are expiring, and the Agency is working with GSA to identify new locations for these facilities.

- (+$123.0) This reflects an increase in additional resources to cover basic facilities management services in Regional offices.

- (+0.5 FTE) This 0.5 FTE change reflects realignment in the Agency's Research Triangle Park office into Facilities, Infrastructure, and Operations.

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; Energy Policy Act 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$68,083.1***	***$73,432.0***	***$85,215.0***	***$11,783.0***
Leaking Underground Storage Tanks	$708.9	$987.0	$1,122.0	$135.0
Hazardous Substance Superfund	$20,861.5	$25,478.0	$26,746.0	$1,268.0
Total Budget Authority / Obligations	$89,653.5	$99,897.0	$113,083.0	$13,186.0
Total Workyears	529.1	547.4	547.7	0.3

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). This program also is supported by the 2009 American Recovery and Reinvestment Act (ARRA) funds. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

FY 2010 Activities and Performance Plan:

The Agency will continue to ensure sound financial and budgetary management through the use of routine and ad hoc analysis, statistical sampling and other evaluation tools. More structured and targeted use of performance measurements continue to lead to better understanding of program results and an increase in effectiveness.

EPA continues to develop and modernize the Agency's financial systems and business processes. The Agency will replace its legacy accounting system and related modules with a new system certified to meet the latest government accounting standards. This extensive modernization will allow the Agency to improve efficiency and automate quality control functions to simplify the practical use of the system as well as comply with Congressional direction and new the Federal financial systems requirements. This work will be framed by the Agency's Enterprise Architecture and will make maximum use of enabling technologies for e-Gov initiatives. Total

FY 2010 funding for the Financial System Modernization Project is $17 million under the Environmental Program and Management appropriation and $4.5 million under the Superfund appropriation.

In FY 2010, EPA will have made significant strides in 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. We will also continue to ensure more accessibility to 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$4426.0) This reflects an increase of payroll and cost of living for FTE.

- (+$7,275.0) This change reflects an increase for the Financial System Modernization Project (FSMP) to allow continuity in all activities related to the development of the Agency's new financial system and business processes.

- (+$100.0) This increase is to support the maintenance of the Agency's automated performance reporting tool, which provides Senior Managers with quarterly performance data for use in decision-making. The tool, which improves data access and transparency, includes summary data with drill-down capabilities as well as alerts to highlight potential problem areas.

- (+$56.0) This change is associated with an increase in the service fee for the Defense Finance and Accounting Service (DFAS) payroll system which EPA uses to process the Agency employees' payroll.

- (-$74.0) This change reflects a decrease in travel resources.

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.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$29,868.9***	***$31,872.0***	***$32,281.0***	***$409.0***
Leaking Underground Storage Tanks	$154.2	$165.0	$165.0	$0.0
Hazardous Substance Superfund	$20,705.1	$24,361.0	$23,229.0	($1,132.0)
Total Budget Authority / Obligations	$50,728.2	$56,398.0	$55,675.0	($723.0)
Total Workyears	329.9	362.9	362.9	0.0

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, Ohio, 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. This program also is supported by the 2009 American Recovery and Reinvestment Act (ARRA) funds. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will complete the deployment of its new acquisition system. 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. The system itself is obsolete, and therefore an upgrade is not feasible.

The new system will provide the Agency with a better and more comprehensive way to manage data on contracts that support mission oriented planning and evaluation. This will allow the Agency to meet E-Government (E-Gov) requirements and the needs of Agency personnel, resulting in more efficient process implementation. The benefits of the new system are that program offices will be able to track the progress of individual actions, extensive querying and reporting capabilities will allow the Agency to meet internal and external demands, and 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.

In FY 2010, EPA will reinforce its contract oversight responsibilities through A-123 Entity Level Assessments, a Federal Procurement Data System (FPDS) Verification and Validation exercise, increased targeted oversight training for acquisition management personnel, and Simplified Acquisition Contracting Officer (SACO) reviews. These measures will further strengthen EPA's acquisition management business processes through enhanced contract oversight. Additional funding devoted to contract oversight will also position EPA to respond aggressively to implement any new contracting guidelines issued pursuant to the President's March 4, 2009 Procurement Memo.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,141.0) This change reflects an increase for payroll and cost of living for existing FTE.

- (+$1,000.0) This change reflects an increase for the enhancement of contracts oversight.

- (-$1,716.0) This change reflects a shift of development costs for the Agency's new Acquisition Management System (EAS) to support the transition to a new human resource system. The EAS move to the implementation phase which will result in requiring lower funding levels.

- (-$117.0) This change reflects a decrease in EPA's share of the service fees for the E-Gov initiative, Integrated Acquisition Environment (IAE), and the shift of IAE – Loans and Grants initiative to the Financial Assistance Grants Management program.

- (+$101.0) This change reflects an increase in IT and telecommunications resources.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$24,174.4***	***$25,868.0***	***$26,681.0***	***$813.0***
Hazardous Substance Superfund	$3,044.7	$3,168.0	$3,283.0	$115.0
Total Budget Authority / Obligations	$27,219.1	$29,036.0	$29,964.0	$928.0
Total Workyears	180.0	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 (IA), 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 IAs meet 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. This program also is supported by the 2009 American Recovery and Reinvestment Act (ARRA) funds. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will achieve key objectives under its long-term Grants Management Plan. These objectives include strengthening accountability, competition, achieving positive and measurable environmental outcomes, and aggressively implementing new and revised policies on at-risk grantees.[63] 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 will also continue to

[63] US EPA, *EPA Grants Management Plan.* EPA-216-R-03-001, April 2003, http://www.epa.gov/ogd/EO/finalreport.pdf.

streamline Grants Management through the E-Government (E-gov) initiative Grants Management Line of Business (GM LoB). GM LoB offers government-wide solutions to grants management activities that promote citizen access, customer service, and agency financial and technical stewardship. EPA is in the process of consolidating the administration of interagency agreements (IA) at Headquarters and Regional offices into the IA Shared Service Centers (IA SSC) into two strategic locations, Washington D.C. and Seattle. The IA SSC will provide cradle to grave IA Administration, including all pre-award, award, management, post-award, and close out activities.

Performance Targets:

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

FY 2010 Change from the FY 2009 Enacted Budget (Dollars in Thousands):

- (+$677.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$90.0) This change reflects a realignment of EPA's contribution for the E-gov initiative, Integrated Acquisition Environment – Loans and Grants, from the Acquisition program to this program.
- (+$46.0) This reflects an increase in contracts.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$40,886.6***	***$44,141.0***	***$47,106.0***	***$2,965.0***
Leaking Underground Storage Tanks	$3.0	$3.0	$0.0	($3.0)
Hazardous Substance Superfund	$4,681.2	$5,386.0	$8,068.0	$2,682.0
Total Budget Authority / Obligations	$45,570.8	$49,530.0	$55,174.0	$5,644.0
Total Workyears	285.2	304.6	303.1	-1.5

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 2010 Activities and Performance Plan:

In FY 2010, the Agency will continue its efforts to strengthen its workforce by focusing on areas that further develop our existing talent, and strengthen our recruitment and hiring programs. EPA also remains committed to fully implementing *EPA's Strategy for Human Capital* [64], 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 2010, 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.
- Implementing innovative recruitment and hiring flexibilities that address personnel shortages in mission-critical occupations.

[64] US EPA, *Investing in Our People II, EPA's Strategy for Human Capital.* Available at http://www.epa.gov/oarm/strategy.pdf

As part of these activities, EPA will continue to improve the effectiveness and efficiency of Agency human resources operations through the newly established Shared Service Centers. These Shared Service Centers 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 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, and the Human Resources Line of Business (HR LoB) program. HR LoB offers government-wide, cost effective, and standardized HR solutions while providing core functionality to support the strategic management of human capital. In FY2010, EPA will continue to support the transition to a new or improved HR system which will establish modern, cost-effective, standardized, interoperable HR solutions that provide common core functionality and support the strategic management of human capital.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Average time to hire SES positions from date vacancy closes to date offer is extended, expressed in working days	66	73	68	68	Days

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Average time to hire non-SES positions from date vacancy closes to date offer is extended, expressed in working days	26.3	45	45	45	Days

Work under this program supports EPA's Strategic Plan under the cross goal strategy of results and accountability.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$565.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$438.0) This reflects an increase for workers compensation unemployment cost.

- (+$1,716.0) This increase reflects the shift of funding from the Enterprise Acquisition System (EAS) development cost to support the transition to a new improved HR system.

- (-$150.0) This reflects a decrease in resources in the Childcare Subsidy program based on current participation.

- (+$396.0) This reflects an increase of funds to support EPA's Sign Language program.

- (-1.5 FTE) This 1.0 FTE change reflects the shift of Workforce Solutions staff to the Office of Civil Rights under the Civil Rights program, and reflects a 0.5 FTE realignment in the Agency's Research Triangle Park office into Facilities, Infrastructure, and Operations.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$59,536.1***	***$60,103.0***	***$61,747.0***	***$1,644.0***
Science & Technology	$3,346.9	$3,215.0	$3,663.0	$448.0
Total Budget Authority / Obligations	$62,883.0	$63,318.0	$65,410.0	$2,092.0
Total Workyears	497.4	467.9	467.9	0.0

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 Protection 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 for 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.

EPA began promoting reduced risk pesticides in 1993 by giving registration priority to pesticides that have lower toxicity to humans and non-target organisms such as birds, fish, and plants; low potential for contaminating ground water; lower use rates; low pest resistance potential; and comportment with Integrated Pest Management (IPM) approaches.[65] 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 new reduced-risk pesticides and establish related tolerances (maximum residue limits). Through these efforts, EPA can help reduce risks to Americans from foods imported from other countries.

The Agency's regional offices provide frontline risk management that ensures the decisions made during EPA's registration and reevaluation processes are implemented in pesticide use. Millions of agricultural workers are exposed to pesticides in occupations such as lawn care,

[65] See U.S. Environmental Protection Agency, Pesticides: Health and Safety, Reducing Pesticide Risk internet site: http://www.epa.gov/pesticides/health/reducing.htm.

health care, food preparation, and landscape maintenance. Each year, the risk assessments that EPA conducts yield extensive risk-management requirements for hundreds of pesticides and uses. EPA works 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 2010 Activities and Performance Plan:

During FY 2010, EPA will 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 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 focus on the evaluation of pesticide products before they enter the market.[66] 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 FY 2010, EPA will review existing pesticides and complete final work plans for pesticides in the registration review pipeline, for which dockets were opened and final work plans were completed in earlier years. Through registration review, EPA will ensure that pesticides already on the market meet current scientific standards and address concerns identified after the original registration.[67] The goal of the registration review program is to review all pesticide registrations every 15 years to ensure that they meet the most current standards. Implementing the program will allow EPA to continue to maintain the Agency's goal of ensuring that pesticides in the marketplace meet the latest health and safety standards.

Reregistration Eligibility Decisions (REDs) reflect changes the registration review process may determine are needed for an individual pesticide. 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 measures from the REDs; publishing proposed and final product cancellations; promoting partnerships which 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 tolerance 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 available and safe when used in accordance with the label.

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[66] See U.S. Environmental Protection Agency, Pesticides: Topical & Chemical Fact Sheets, Pesticide Registration Program internet site: http://www.epa.gov/pesticides/factsheets/registration.htm.

[67] See U.S. Environmental Protection Agency, Pesticide Tolerance Reassessment and Reregistration internet site: www.epa.gov/pesticides/reregistration.

EPA staff will continue to provide locally-based technical assistance and guidance to states and tribes on implementation of pesticide decisions. The Agency will address issues including 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, potentially more hazardous pesticides, to the newer pesticides that have been registered using the latest available scientific information. The Agency will update the pesticide review and use policies to ensure compliance with the latest scientific methods. EPA will emphasize the registration of reduced risk pesticides, including biopesticides, in order to provide farmers and other pesticide users with new alternatives. In FY 2010, the Agency, in collaboration with the United States Department of Agriculture, will 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Improve or maintain a rate of incidents per 100,000 potential risk events in population occupationally exposed to pesticides.	<= 3.5/100,000	<= 3.5/100,000	<= 3.5/100,000	<= 3.5/100,000	Incid/100,000

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Percent reduction in review time for registration of conventional pesticides.	-37	10	10	10	Percent Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Reduced cost per pesticide occupational incident avoided.	2	2	6	8	Percent Cum. Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent reduction in concentrations of pesticides detected in general population.	N/A	No Target Established	30	No Target Established	Percent Cum. Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of agricultural acres treated with reduced-risk pesticides.	Data Avail 10/2009	18.5	20	21	Percent Acre-Treatments

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate.	43	20	30	40	Percent Cum. Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of Decisions completed on time (on or before PRIA or negotiated due date).				99	Percent

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,477.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$167.0) This reflects an increase for workforce support costs.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; ESA; and FQPA.

Pesticides: Protect the Environment from Pesticide Risk

Program Area: Pesticides Licensing
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$37,443.3***	***$41,236.0***	***$42,318.0***	***$1,082.0***
Science & Technology	$1,998.2	$2,011.0	$2,292.0	$281.0
Total Budget Authority / Obligations	$39,441.5	$43,247.0	$44,610.0	$1,363.0
Total Workyears	316.4	301.4	301.4	0.0

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, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide."

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 which are not the targets of the pesticide. In addition to these FIFRA responsibilities, the Agency has responsibilities under the Endangered Species Act (ESA).[68] 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.[69]

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 (FWS) or National Marine Fisheries Service (NMFS) 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 biological attributes, habitat requirements and geographic range, this presents a great challenge. EPA

[68] 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.

[69] 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.

works with FWS and NMFS to establish an efficient process for carrying out our ESA obligations.

EPA also has instituted processes to consider endangered species issues routinely in EPA reviews. 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 FWS and NMFS. EPA has made assessing potential risks to endangered species a priority and will continue to work with the Services to find efficiencies.

FY 2010 Activities and Performance Plan:

Reduced concentrations of pesticides in water sources are an indication of 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 (NWQA) Program for urban watersheds, EPA will monitor the impact of our regulatory decisions for four chemicals of concern—diazinon, chlorpyrifos, malathion, and cabaryl. In agricultural watersheds, the program will monitor the impact of our regulatory decisions on azinphos-methyl and chloropyrifos, and consider whether any additional action is necessary.[70] In FY 2010 the Agency will continue to work with USGS to develop sampling plans and refine program 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.

To measure program work, EPA 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 USGS NWQA Program. EPA will meet goals for reducing the number of watersheds with exceedences for these pesticides through a combination of programmatic activities. Registration review decisions and associated Reregistration Eligibility Decision (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. Attainment of the goal would be significantly hampered without the availability of alternative products to these pesticides for the consumer. 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 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.

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[70]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 2010 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 federally listed threatened or endangered species and will work 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 and efficient consideration of potential risks to listed species.

The Agency continues to provide technical support for compliance with the requirements of the ESA. In FY 2010, EPA will continue the integration of 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 assessment process during Registration Review by allowing risk assessors to more easily 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 ESA. 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 listed 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 2010, 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of urban watersheds that exceeds EPA aquatic life benchmarks for three key pesticides of concern.	40 % diazinon, 0% chlorpyrifos, 30% malathion	25 % diazinon, 25% chlorpyrifos, 30% malathion	20% diazinon, 20% chlorpyrifos, 25% malathion	20% diazinon, 20% chlorpyrifos, 25% malathion	Percent Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of agricultural watersheds that exceeds the aquatic life benchmarks for two key pesticides of concern.				5% azinphosmethyl, 10% chlorpyrifos,	Percent Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Product Reregistration	1,194	1,075	2,000	1,500	Actions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of Registration Review Pesticide case dockets opened.				70	Dockets

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of Final Work Plans for Reviewing Registered Pesticides.				70	Work Plans

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Average cost and time to produce or update an Endangered Species Bulletin.	N/A	19% ($3240 & 81 hours)	28% ($2916 & 73 hours)	35% ($2625 & 66 hours)	Cum. Reduction (Dollars & Hours)

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.

In FY 2010, EPA is continuing to implement the Registration Improvement Act (PRIA) and the Pesticide Registration Improvement Renewal Act (PRIA 2) as well as the Registration Review process. As part of EPA's efforts to improve accountability, the Agency will track these areas through three measures. These include (1) percent of decisions completed in accordance with the PRIA and PRIA 2 or mutually negotiated times; (2) number of Registration Review dockets opened for each pesticide entering the review process to seek comments on the information the

Agency has on the active ingredient; (3) number of final work plans completed for each active ingredient after comments are evaluated and required data are complete.

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 is currently sampling in its second cycle (cycle II) from 2002-2012, and is developing sampling plans for 2013-2022. The monitoring plan calls for bi-yearly sampling in 8 urban watersheds and sampling every four years in a second set of 9 urban watersheds; and yearly monitoring in 8 agricultural watersheds and bi-yearly sampling in 3 agricultural dominated watersheds. The sampling frequency for these sites will range from approximately 13 to 26 samples per year depending on the size of the watershed and the extent of the pesticide use period. Sampling frequency is seasonally weighted so more samples are collected when pesticide use is expected to be highest.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$938.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$144.0) This reflects an increase for workforce support costs.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$11,529.6***	***$12,984.0***	***$13,372.0***	***$388.0***
Science & Technology	$442.4	$445.0	$508.0	$63.0
Total Budget Authority / Obligations	$11,972.0	$13,429.0	$13,880.0	$451.0
Total Workyears	87.7	89.7	89.7	0.0

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, for example, a severe pest infestation, FIFRA Section 18 provides EPA the authority to temporarily exempt certain pesticide uses from registration requirements. Under Section 18, EPA must ensure that, under the very limiting provisions of the exemption, such emergency uses will not present an unreasonable risk to the environment. In such cases, EPA's goal is to complete the more detailed and comprehensive review for potential unreasonable risk conducted for pesticide registration within three years following the emergency.

FIFRA 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 $1.8 billion in termite damage is avoided each year through the availability of effective termiticides.[71] 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.

[71] 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).

The Pesticide Environmental Stewardship program's (PESP) efforts to increase adoption of Integrated Pest Management (IPM) in schools has led to a substantial reduction in pest control costs and a 90 percent reduction in both pesticide applications and pest problems in participating schools.[72] This model is based on a case study in Monroe County, Indiana which achieved a 92 percent reduction in pesticide use, enabling them to 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 Indiana 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.[73] This "Monroe Model" serves as an example of how to implement IPM in school districts across the country.

FY 2010 Activities and Performance Plan:

EPA's statutory and regulatory functions for pesticides include registration, product reregistration, registration review implementation, risk reduction implementation, rulemaking and program management. During FY 2010, EPA will 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 which, once registered and used by consumers, will increase benefits to society. Working together with the affected user communities through PESP and the Strategic Agricultural Initiative, the Agency plans 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 confront emergency situations that require the use of pesticides that are not registered for their crops. The economic benefit of the Section 18 program to growers is the avoidance of potential losses incurred in the absence of pesticides exempted under FIFRA's emergency exemption provisions. The economic benefit 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 to ensure that the products will work for their intended purposes. Through the

[72] Lame, M. L., 2008 "Assessment and Implementation of Integrated Pest Management Schools: Practical Implementation," Proceedings of the 2008 National Conference on Urban Entomology and Proceedings of the 2008 National Conference on Urban Entomology; Lame, April 5, 2008, "Measuring the Impacts of Implementing IPM programs in Schools," U.S. Environmental Protection Agency and U.S. Department of Agriculture's 5th National IPM Symposium Paper Presentation, St. Louis, MO. D. H. Gouge, M. L. Lame, and J. L. Snyder, 2006, "Use of an Implementation Model and Diffusion Process for Establishing Integrated Pest Management in Arizona Schools," American Entomologist 52:3, refereed.

[73] http://www.epa.gov/pesticides/ipm/

Antimicrobial Testing Program, the Agency also will conduct post-market surveillance to monitor the efficacy of hospital disinfectants.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations.	$1.5B	$1.5B	$1.5B	$1.5B	Loss avoided

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	$900M	$900M	$900M	$900M	Dollars/loss avoided

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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/acre)	2% ($2.57/acre)	4% ($2.52)	6% ($2.47)	Reduc. ($/acre)

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Maintain timeliness of S18 decisions.	34	45	45	45	Days

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$355.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$33.0) This reflects an increase for workforce support costs.

Statutory Authority:

PRIA 2; FIFRA; FFDCA; ESA; and FQPA.

Science Policy and Biotechnology
Program Area: Pesticides Licensing
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$2,105.9***	***$1,738.0***	***$1,750.0***	***$12.0***
Total Budget Authority / Obligations	$2,105.9	$1,738.0	$1,750.0	$12.0
Total Workyears	8.1	6.3	6.3	0.0

Program Project Description:

The Science Policy and Biotechnology program provides scientific and policy expertise, coordinates EPA interagency and international efforts, and facilitates 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. The Biotechnology Team assists 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. In addition, independent science review is provided by the FIFRA Scientific Advisory Panel (SAP), a scientific peer-review mechanism.

FY 2010 Activities and Performance Plan:

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 Web site. 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.[74]

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.

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

[74] http://usbiotechreg.nbii.gov/

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 ten to twelve reviews in FY 2010. The specific topics to be placed on the 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 2010, topics may include issues related to biotechnology, chemical-specific risk assessments, and endocrine disruptors, among others.

Performance Targets:

Currently there are no performance measures specific to this program. Work under this program supports the *Chemical and Pesticide Risks* objective. Supported programs include the registration of new pesticides and review of existing pesticides. The work in the Science Policy & Biotechnology program also supports efforts related to toxic substances, specifically, the Chemical Risk Review and Reduction program. In addition, science policy and biotechnology activities assist in meeting targets for measures under other programs such as *Endocrine Disruptors* through the conduct of the FIFRA Scientific Advisory Panel meetings and letter reviews.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$4.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$8.0) This funding supports increased operational costs for the FIFRA Scientific Advisory Panel.

Statutory Authority:

FIFRA; FFDCA; FQPA; TSCA.

Program Area: Resource Conservation and Recovery Act (RCRA)

RCRA: Waste Management

Program Area: Resource Conservation and Recovery Act (RCRA)
Goal: Land Preservation and Restoration
Objective(s): Preserve Land; Restore Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$66,432.8***	***$64,511.0***	***$67,550.0***	***$3,039.0***
Total Budget Authority / Obligations	$66,432.8	$64,511.0	$67,550.0	$3,039.0
Total Workyears	404.4	397.0	397.0	0.0

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; and to insure that wastes which cannot be safely reused or recycled are treated and disposed of in an environmentally sound manner. This program 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 a continued focus on safe disposal practices, and conservation of resources. The program is engaged in regulatory and other reform efforts to strengthen waste management and improve the efficiency of the program. EPA actively participates in waste management and resource conservation efforts internationally.

Through the Resource Conservation Challenge (RCC), the program works with industry, states, tribes 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. Thus, EPA and its partners maintain the critical health and environmental protections provided by the base "cradle to grave" waste management system envisioned by RCRA.[75]

FY 2010 Activities and Performance Plan:

In FY 2010, 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. The Agency also will focus on permitting the 44 remaining facilities that are operating under interim status. As will be proposed in EPA's 2009-2014 Strategic Plan, EPA will prevent releases at 500

[75] Refer to (http://www.epa.gov/rcc/).

hazardous waste management facilities with initial approved controls or updated controls; this results in the protection of an estimated three million people living within a mile of all facilities with controls. EPA also will meet its annual target of implementing initial approved controls or updated controls at 100 RCRA hazardous waste management facilities. In addition to meeting these goals, the program is also responsible for the continued maintenance of the regulatory controls at about 10,000 process units (like incinerators, landfills and tanks) at facilities in the permitting baseline.[76]

The Agency will continue its high priority work on coal combustion residue. EPA will propose regulations for coal combustion residue by the end of 2009 aimed at increasing protection for human health and the environment. EPA will continue to work with interested parties to apply the voluntary "Guide for Industrial Waste Management"[77] which provides facility managers, state and Tribal regulators and 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 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. These improvements are a result of the implementation of EPA's plans for the financial assurance program. "EPA's Plan for Addressing Concerns with the Existing Financial Assurance Regulations,"[78] details the steps EPA is taking to address concerns with current regulations.

The Agency will continue to work on developing a proposed rule that will address solvent-contaminated industrial wipes under Subtitle C of RCRA. In FY 2010, the Agency plans to respond to public comments on a revised risk analysis. Based on the risk analysis and public comments, the Agency will then develop a final rule. The Agency is committed to ensuring that the rulemaking is based on sound science and protective of human health and the environment.

The Agency will continue its efforts in FY 2010 to ensure safe combustion of both hazardous and solid waste, including tightening of current standards. The Agency also will continue its efforts to promote the recycling of hazardous secondary materials, where it can be done safely. Increased environmentally sound 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 extraction.

Another important area of reform in FY 2010 will be the continuation of efforts to make the hazardous waste program more cost-effective and easy-to-use for the more than 100,000 generators of hazardous waste. EPA will prepare and issue guidance materials on issues raised

[76] The permitting baseline universe currently has 2,446 facilities with approximately 10, 000 process unit groups.
[77] http://www.epa.gov/epawaste/nonhaz/industrial/guide/index.htm
[78] http://www.epa.gov/osw/hazard/tsd/td/ldu/financial/documents/plan.pdf

by the regulated community and, if determined necessary, propose regulatory changes to improve the program.

During FY 2010, 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, natural disasters, or other disease outbreaks.

In FY 2010, 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.

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 2010. While many of the 572 federally recognized tribes have waste management plans, 63 of those have met EPA's internal criteria under the strategic plan for having an integrated waste management plan. The 2014 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 118 open dumps. During FY 2010, EPA will increase the number of tribes covered by an integrated waste management plan by 23. In addition, EPA will increase the number of closed, cleaned up, or upgraded open dumps in Indian country or on other Tribal lands by 22. For FY 2010, 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.

As part of an evaluation of the RCRA Base, Permits and Grants Program, EPA revised the baseline efficiency measure to 3.6 facilities with new or updated controls per million dollars of program cost (a total of 2,484 facilities and $689.7 million in costs). Those 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 2009 target was 3.64 facilities with new or updated controls per million dollars of program cost and the 2010 target is 3.72 facilities per million dollars of program cost.[79]

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Number of facilities with new or updated controls per million dollars of program cost.	3.72	3.64	3.68	3.72	percent

[79] 2009 target established as one percent per year improvement over the previous year and two percent over the baseline year whereas the 2010 target is one percent per year improvement over 2009 and three percent improvement from the baseline.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of hazardous waste facilities with new controls or updated controls.			100	100	facilities

During FY 2010, EPA will coordinate efforts with the states to meet permitting program goals for initial and updated controls to prevent releases. The reporting cycles for permitting and renewals were consolidated in FY 2008. The FY 2010 target for the number of hazardous waste facilities with new or improved controls is 100. These program objectives will contribute toward achieving the goals of EPA's FY 2009-2014 Strategic Plan.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,953.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$86.0) This reflects an increase to IT and telecommunications resources partially offset by a reduction to grants and contracts.

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).

RCRA: Corrective Action
Program Area: Resource Conservation and Recovery Act (RCRA)
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$39,960.6***	***$38,909.0***	***$40,459.0***	***$1,550.0***
Total Budget Authority / Obligations	$39,960.6	$38,909.0	$40,459.0	$1,550.0
Total Workyears	248.4	246.9	246.9	0.0

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[80] are the primary implementers of the Corrective Action program, EPA Regional staff has 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.[81]

FY 2010 Activities and Performance Plan:

In FY 2010, 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 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 2010, EPA will continue to work toward the 2020 goal[82] of constructing final remedies at 95 percent of all facilities. As part of overall efforts toward that goal, first outlined in the EPA FY 2006 – FY 2011 Strategic Plan, EPA and states 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 baseline which EPA finalized in May 2007, which includes

[80] 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.
[81] For more information please refer to http://www.epa.gov/correctiveaction/.
[82] Office of Solid Waste and Management RCRA internal 'Vision Plan" strategy planning process started in 2004.

3,746 facilities requiring corrective action. In FY 2009, the annual targets for RCRA Corrective Action were revised to align with this newly assessed baseline.

In FY 2010, the Agency will be working with states 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. Specific activities include advising the regulated community on PCB remediation and reviewing and acting on disposal applications for PCB remediation waste.

To improve the RCRA Corrective Action program, 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. While the annual target has been, and continues to be 3 percent through FY 2010, the RCRA Corrective Action program achieved an efficiency increase of 6.2 percent in FY 2008.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage of RCRA facilities with final remedies constructed.				30	percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage of RCRA facilities with human exposures to toxins under control.				63	percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percentage of RCRA facilities with migration of contaminated groundwater under control.				55	percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Percent increase of final remedy components constructed at RCRA corrective action facilities per federal, state, and private sector dollars per year.	7.1	3	3	3	percent

For FY 2010 annual performance targets, EPA and states will complete construction at 30 percent of RCRA facilities in the 2020 Universe. EPA and states will continue to track the human exposures and groundwater control environmental indicators. In FY 2010, EPA and states will meet the goal of controlling human exposures to toxins at 63 percent of RCRA facilities on the 2020 Universe. EPA and states also will meet the FY 2010 goal of controlling the migration of contaminated groundwater at 55 percent of RCRA facilities on the 2020 Universe.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,452.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$98.0) This change reflects an increase to contracts, partially offset by a reduction to grants, IT, and telecommunications resources.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$14,731.9***	***$13,471.0***	***$14,122.0***	***$651.0***
Total Budget Authority / Obligations	$14,731.9	$13,471.0	$14,122.0	$651.0
Total Workyears	85.6	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. In support of this goal, EPA works through its Resource Conservation Challenge (RCC) programs to build partnerships with government agencies[83], businesses, and nonprofits to encourage recycling and waste prevention, and leverage resources to improve energy conservation.[84]

In materials management EPA considers the human health and environmental impacts associated with the full life cycle of materials inclusive of raw material extraction, transportation, processing, manufacturing, use, recycling, and disposal. By considering the impacts throughout the entire life cycle instead of just from the resulting waste with materials management, EPA provides a platform to consider the full system impacts of policy and program options. Recycled materials are a readily-available resource that can reduce the need for energy-intensive extraction, transportation and manufacturing processes using virgin materials.

Through the National Partnership for Environmental Priorities (NPEP)[85], which is also funded under this program, EPA promotes waste minimization activities that diminish chemicals of most concern to human health and the environment. This approach involves linking chemicals to waste streams and seeks to reduce not only the volume of wastes, but also the toxicity of wastes. A goal of reducing both the volume and toxicity of chemicals in wastes also will lead to safer chemical substitutions and processes upstream, and eliminate occupational exposures to the chemicals of concern.

[83] Federal, state, local, and tribal agencies.
[84] http://www.epa.gov/rcc/.
[85] http://www.epa.gov/osw/partnerships/npep/.

FY 2010 Activities and Performance Plan:

EPA has identified four national priorities or focus areas for the RCC: municipal solid waste, green initiatives-electronics/green buildings, industrial materials use/reuse, and priority and toxic chemicals reduction.

Municipal Solid Waste

EPA will increase its efforts in FY 2010 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 2009 - 2014 Strategic Plan, EPA will establish new strategic targets that quantify our environmental progress toward sustainable resource conservation and reductions in greenhouse gas emissions. In 2008 the United States recycled 85 million tons of municipal solid waste (MSW), roughly one third of the country's total. As a result, the U.S. avoided generation of 193 million metric tons of carbon dioxide equivalent, which is comparable to avoiding annual emissions from 35 million passenger cars.[86]

In FY 2010, EPA will lead 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 materials represent 60 to 70 percent of the current municipal solid waste stream and are key to increasing recycling. Focusing on these materials can achieve the reductions of GHG and increased energy savings that are attainable through waste reduction and recycling.

As part of the on-going WasteWise campaign, EPA will continue to provide enhanced tools to help communities reduce waste and increase recycling, and promote alliances between businesses and communities that can advance waste prevention and recycling. In FY 2010, WasteWise partners will be able to use the new WasteWise reporting system that will allow partners to track waste volumes and measure and report progress on their own internal waste reduction activities.

EPA will finalize and promote the Benefit Evaluation Tool (BET) for participating cities to use to evaluate the economic and environmental savings in their own communities realize by adopting the Pay as You Throw (PAYT) program. In communities with pay-as-you-throw programs, also known as unit pricing or variable-rate pricing, residents are charged for the collection of municipal solid waste based on the volume of disposal. This creates a direct economic incentive to recycle more and to dispose of less. PAYT led to greenhouse gas (GHG) reductions of 10.5 million metric tons of carbon equivalent (MMTCE) and 85 million British

[86] www.epa.gov/warm - WARM model estimates GHG emissions of baseline and alternative waste management practices – source reduction, recycling, combustion, composting, and landfilling. The model estimates emissions in metric tons of carbon equivalent (MTCE), metric tons of carbon dioxide equivalent (MTCO2E), and energy units (million BTU) across a wide range of material types commonly found in municipal solid waste (MSW). The WARM model is based on a life-cycle approach, which reflects emissions and avoided emissions upstream and downstream from the point of use. As such, the emission factors provided in these tools provide an account of the net benefit of these actions to the environment.

Thermal Units (BTUs) annually. EPA will provide technical assistance to at least 10 large U.S. cities as part of the American Big City (ABC) campaign.

Green Initiatives-Electronics/Green Buildings

In FY 2010, 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). According to 2008 Plug-In partners reporting, Plug-In-to-eCycling partners collected and recycled 68 million pounds of used consumer electronics in the United States. Building on current Plug-In to eCycling activities, EPA will work to highlight the importance of recycling electronics and to motivate consumers to utilize electronics collection opportunities.

A key component of the FEC program is improving the manner in which Federal agencies manage their used electronic equipment. By 2010, 100 percent of non-reusable electronic equipment disposed of annually by FEC Partner facilities will be recycled using environmentally sound management, as defined by the Responsible Recycling (R2) Practices.[87]

Industrial Materials Use/Reuse

Under the RCC, EPA will continue to pursue collaborative efforts to increase the safe use and recycling of industrial materials and byproducts, with resultant benefits of decreased disposal costs, energy savings, and reduced greenhouse gas emissions. For every ton of coal fly ash that is used in place of Portland cement nearly an estimated ton of CO_2 emissions are avoided.

By working with manufacturers, utilities, government agencies, and transportation and building construction companies, the RCC Industrial Materials Recycling effort is focusing primarily on three large industrial non-hazardous waste streams: (1) coal combustion products; (2) construction and demolition debris; and (3) foundry sand.

In FY 2010, the program will continue to expand its voluntary Coal Combustion Partnership Program (C2P2) to increase the beneficial use of fly ash, for example, in concrete. EPA will use C2P2 as a collaborative 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, EPA and its partners will work to explore the expanded use of FGD gypsum as a soil amendment. Ongoing and future research will assist in making beneficial use decisions regarding FGD gypsum.

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. EPA will work with States and the private sector, including the Associated General Contractors of America, to seek improvements in the recycling of C&D materials and the tracking of recycling activities.

[87] http://www.epa.gov/osw//conserve/materials/ecycling/r2practices.htm.

Priority and Toxic Chemicals Reduction

In FY 2010, the National Partnership for Environmental Priorities (NPEP) will continue to reduce priority chemicals which are persistent, bioaccumulative, and highly toxic. EPA has established a goal to reduce 4 million pounds of priority chemicals throughout the lifecycle of products by 2014 as measured by the NPEP program, Supplemental Environmental Projects, and contributions from other tools used by EPA to achieve chemical reductions. As of March 2009, the NPEP program has obtained industry commitments for over 7.6 million pounds of priority chemical reductions through FY 2009-2014, including 2.7 million already achieved in FY 2009.

EPA initiated the Mercury Challenge 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. As of March 2009, EPA achieved mercury reductions of 49,439 pounds due in part to NPEP partner commitments to the Mercury Challenge, source reduction, and recycling. The initial reduction commitment for mercury was 45,470 pounds from NPEP.

In FY 2010, EPA's School Chemicals Cleanout Campaign and Prevention Program (SC3) will continue its work ensuring that K-12 schools in the U.S. are free from chemical hazards associated with poor chemical management in schools. The Agency will do this by working with teachers' associations and pre-service teaching institutions to develop chemical management curricula. EPA will continue to promote innovation in chemical management in schools, 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Increase in percentage of coal combustion ash that is used instead of disposed.	Data Unavailable	1.8	1.8	1.8	percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of closed, cleaned up, or upgraded open dumps in Indian Country or on other tribal lands.	166	30	27	22	open dumps

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of tribes	35	26	16	23	tribes

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	covered by an integrated solid waste management plan.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Billions of pounds of municipal solid waste reduced, reused or recycled.	Data Unavailable		19.5	20.5	Billion lbs.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of pounds (in millions) of priority chemicals reduced, as measured by National Partnership for Environmental Priorities members.	5.7	1	1	0.75	Million lbs.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Number of pounds of priority chemicals reduced from the environment per federal government costs.	2.59	0.422	0.429	0.435	pounds/dollar

In EPA's FY 2009 – 2014 Strategic Plan, EPA will establish a new measure to increase coal combustion ash use to 56 percent by 2014, from 40 percent in 2007, with an annual target of increasing the percentage of coal ash used by 1.8 percent during FY 2010. The most recent data from the 2007 annual survey show coal combustion ash beneficial use rose to 42.7 percent. The Agency will implement its new relationship with USDA as a major sponsor of C2P2 in order to provide outreach, technical information, and assistance to increase the use of flue gas desulfurization material in agricultural applications.

In FY 2010, EPA will focus on resource conservation through efficient materials management from small businesses at the local level. In 2007, under the RCC programs (WasteWise, C2P2, and Carpets), EPA and its partners estimated GHG reductions of 35.6 million metric tons of

carbon equivalent (MMTCO2E), equal to the annual emissions from 6.5 million cars, and savings of 329 trillion British Thermal Units (BTUs) of energy. [88]

In 2010, EPA will improve the Waste Reduction Model (WARM), used to measure GHG reductions, by: (1) adding additional materials and updating the supporting scientific information; (2) providing training and outreach; and (3) disseminating the tool and encouraging its use in RCC programs. WARM estimates the GHG emissions reductions possible with various waste management strategies for different materials, including assorted papers, packaging and organic materials.

EPA has developed an efficiency measure that will show, over time, the total reduction of priority chemicals from products and wastes per federal dollar spent. Federal spending consists of program implementation costs including federal RCRA program extramural dollars and FTE. The efficiency measure targets are an annual increase of 1.5 percent, in pounds of priority chemicals reduced from the environment per federal dollar spent. The target in FY 2010 is 0.435 pounds per dollar.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$608.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$43.0) This change reflects a shift of resources from primarily contracts to grants.

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).

[88] Equivalent to the energy consumption of over 3 million households.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$7,102.4***	***$8,498.0***	***$8,659.0***	***$161.0***
Total Budget Authority / Obligations	$7,102.4	$8,498.0	$8,659.0	$161.0
Total Workyears	15.4	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. Implementation of the Endocrine Disruptor Screening Program (EDSP) is currently proceeding in three areas:

- Developing and validating the test assays;
- Prioritizing and selecting chemicals for testing; and
- Developing the policies and procedures for testing.

For more information, please visit http://www.epa.gov/scipoly/oscpendo/.

FY 2010 Activities and Performance Plan:

In FY 2010, the EDSP will further the goal of protecting communities from harm from substances in the environment which may adversely affect health through specific hormonal effects. Efforts include the validation of Tier 2 assays that will be used to confirm any chemical interactions with the endocrine system observed using Tier 1 screens, and provide information that can be used in risk assessment. The EDSP also will begin reviewing data received in response to the first set of test orders issued to pesticide manufacturers. Data that indicate the potential for interaction with the endocrine system in Tier 1 will undergo further testing in Tier 2.

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 represents the U.S. as either the lead or a participant in the OECD projects involving improvements to EDSP Tier 1 screening assays, and on the further development and

validation of Tier 2 assays. This includes a more efficient and effective Tier 2 assay to replace the routine use of the mammalian two-generation assay, and life-cycle or multi-generation tests in fish, birds, frogs, and invertebrates.

A 2006 OMB 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative number of assays that have been validated.	12/20	13/20	14/19	19/19	Assays

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program	3%	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 2009 actual will be below the target because the program experienced scientific and technical problems that could not have been predicted for the estrogen receptor binding assay. However, this assay is currently in peer review (the final stage of the validation process) and is expected to be completed and ready for use in time for the issuance of test orders in 2009.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$48.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$113.0) This reflects increased support for EDSP Tier 2 assay validation.

Statutory Authority:

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

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$48,399.3***	***$47,078.0***	***$55,005.0***	***$7,927.0***
Total Budget Authority / Obligations	$48,399.3	$47,078.0	$55,005.0	$7,927.0
Total Workyears	249.9	241.1	246.1	5.0

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:

- Accelerated implementation of EPA's efforts to assess the safety of and deploy the full range of Toxic Substances Control Act (TSCA) regulatory authorities to take risk management action where needed on more than 6,000 existing organic chemicals produced in amounts greater than 25,000 pounds per year.
- Continued work under the Voluntary Children's Chemical Evaluation program (VCCEP) as a key mechanism for acting in response to the results of safety assessments from Risk-Based Prioritizations (RBPs) and Hazard-Based Prioritizations (HBPs).
- Reviewing and reducing risks of other industrial/commercial chemicals of concern under TSCA, including reviewing and acting on 1,500 Pre-Manufacture Notices to ensure the safety of new chemicals before they are introduced into U.S. commerce, continued work to assess and address the potential risks of nanoscale materials, and continued 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 2010 Activities and Performance Plan:

High Production Volume (HPV) Chemicals Program

One of EPA's primary responsibilities under TSCA is to assess the safety of the thousands of chemicals already in commerce before EPA began assessing new chemicals through the Pre-Manufacture Notice (PMN) program in 1979. These un-reviewed chemicals are used by U.S. industries to produce items widely used throughout society, including consumer products such as cleansers, paints, plastics, and fuels as well as industrial solvents and additives, leading to substantial public and occupational exposure. While these chemicals play an important role in people's everyday lives, some may adversely affect human health and the environment and need to be regulated to address health and safety risks. It is therefore critical that EPA fulfill its

mission to determine the safety of existing chemicals and act rapidly and effectively to reduce risks when they are identified.

To advance this mission, EPA began the planned extension of the HPV program in FY 2007 by initiating the chemical assessment phase, drawing on the success of the HPV Challenge program in making available critical chemical hazard and fate data and EPA's expansion of the TSCA Inventory Update Rule (IUR) which provides valuable new use data for large volume chemicals starting with the 2005 reporting cycle. The Agency is combining these data in screening-level risk characterizations that form the basis for RBPs that guide subsequent risk management actions for HPV chemicals. EPA will have developed and publicly posted 330 RBPs for HPV chemicals by the end of FY 2009.

In addition to initiating the assessment phase of the HPV program, EPA also expanded in late FY 2008 the scope of its existing chemicals assessment and risk management program to develop HBPs for the approximately 4,000 Moderate Production Volume (MPV) chemicals produced annually in quantities exceeding 25,000 pounds. HBPs differ from RBPs by focusing exclusively on chemical hazard and fate information because the expanded IUR chemical use data are only reported for large volume chemicals.

Further, since the HPV Challenge program did not include MPV chemicals in its data collection efforts, EPA is drawing on existing data and sophisticated Structure/Activity Relationship (SAR) models that enable the Agency to relate MPV chemicals to similar HPV "analogue" chemicals – for which hazards are being characterized – to develop the HBPs. EPA will have developed and publicly posted 155 HBPs by the end of FY 2009. The RBPs and HBPs categorize chemicals into three priority levels (high, medium, low) for subsequent more detailed assessment or direct risk management action.

EPA is proposing $8 million to enhance the toxics program and initiate substantial risk management actions on high priority chemicals. Of the additional resources, $3.0 million and 1.5 FTE will enable EPA to significantly accelerate its pace in developing RBPs (230 vs. 180 in FY 2009) and HBPs (325 vs. 100 in FY 2009). EPA will use the majority of the proposed investment ($5.0 of the $8.0 million and 3.5 FTE) to deploy the full arsenal of TSCA regulatory tools to initiate risk management actions on chemicals identified as the highest priorities. Specific actions the Agency will undertake starting in FY 2010 include exercising Section 6 authorities to prohibit the manufacture, import, processing, or distribution of chemicals, and Section 5 authorities to issue significant new use rules restricting uses of existing chemicals without submission of pre-manufacture notices.

The Agency also will use other TSCA authorities under Section 4 and 8 where necessary to obtain additional information to support regulatory risk management actions. EPA will utilize stewardship strategies to reduce priority chemical risks while rules are in development and conduct lifecycle and efficacy analyses to foster development of safer and effective alternatives.

In FY 2010, EPA will continue to support HPV and MPV chemicals with improvements to infrastructure through further development of systems to support submission and access to chemical data. Also in FY 2010, EPA will complete work to obtain remaining data for organic

HPV chemicals through Section 4 test rules for chemicals which have not been sponsored, including three test rules covering 87 chemicals. In addition, EPA will continue to partner with OECD to produce hazard characterizations in the international arena and hence leverage similar work undertaken by other countries.

The Agency also will "reset" the TSCA Inventory in FY 2010. The TSCA Inventory reset will effectively remove chemicals from the inventory which are no longer in production and have not been produced for some time. Chemicals that are removed from the Inventory will need to go through review in the TSCA New Chemicals program (see Other TSCA Chemicals of Concern below) before they are reintroduced into commerce.

EPA will allocate $19.0 million to chemical assessment in FY 2010. For more information on EPA's efforts to assess and act on HPV and MPV chemicals, please visit http://www.epa.gov/hpv.

Voluntary Children's Chemical Evaluation Program (VCCEP)

In FY 2010, EPA expects to bring the VCCEP pilot to a conclusion by ensuring that data needs decisions for the 20 pilot chemicals are completed, with most having been completed before the end of FY 2008. EPA expects to identify future chemicals for which there are concerns as to risks to children's health through the development of RBPs and HBPs described above and follow up on those chemicals through EPA risk assessment and management approaches. EPA will devote $507 thousand to this work area in FY 2010. For more information, visit http://www.epa.gov/oppt/vccep/pubs/interim.htm.

Other TSCA Chemicals of Concern

Additional 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 2010, 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, in FY 2006, EPA adopted (with a FY 2004 baseline) a 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 three of four years that the measure has been tracked (FY 2004 to FY 2007), and has a 99.6 percent success rate overall. For more information, visit www.epa.gov/opptintr/newchems.

In FY 2010, EPA will continue to implement its Nanoscale Materials 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 begin action to address additional data needs and accelerate those actions in FY 2010. For more information, visit www.epa.gov/oppt/nmsp.

Another important focus is EPA's 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.

In FY 2010, EPA also will continue biodegradation testing including the testing of fluoropolymer and fluorotelomer products to determine whether they contain PFOA and are able to release PFOA as they degrade. 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 second progress reports from companies participating in the PFOA stewardship program in October, 2008. Continued significant progress towards these goals is expected in FY 2010. 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 has shifted emphasis from producing Proposed values to creating Interim and ultimately Final status via peer review by the National Academies of Science. Accordingly, in FY 2010 the program plans to develop Proposed AEGL values for up to 18 additional chemicals, as needed, compared with 28 in FY 2008 and 33 in FY 2007, and will remain on target to meet its long-term goal of developing Proposed AEGL values for approximately 260 chemicals by 2011. In addition, Final values will be completed for at least six additional chemicals in FY 2010. EPA will allocate $35.5 million to reviewing and reducing risks of these other TSCA chemicals of concern in FY 2010.

EPA is using the measures described below as well as implementing the previously mentioned toxics program enhancements to evaluate program performance. For more information, visit www.epa.gov/oppt/aegl.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of chemicals with proposed values for Acute Exposure Guidelines Levels (AEGL)	28	24	18	18	Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of chemicals with final values for Acute Exposure Guidelines Levels (AEGL)	37	Baseline	6	14	Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers or the environment.	Data Avail 10/2009	100	100	100	Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 10/2010	3.5	3.2	3.0	Percent RSEI rel risk

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of High Production Volume (HPV) chemicals with Risk Based Prioritizations Completed through the Chemical Assessment	150	150	180	230	HPV Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	and Management Program (ChAMP)					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of Moderate Production Volume (MPV) chemicals with Hazard Based Prioritizations Completed through the Chemical Assessment and Management Program (ChAMP)	14	55	100	325	MPV Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities.	Data Avail 10/2010	2.5	2.4	2.2	Percent Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Reduction in cost of managing PreManufacture Notice (PMN) submissions through the Focus meeting as a percentage of baseline year cost	$459,800	Baseline	No Target Established	61%	% Reductions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Percent reduction from baseline year in total EPA cost per chemical for which proposed AEGL value sets are developed.	17.4%	4%	10%	11%	% Cost Savings

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. These measures are based on the Risk Screening Environmental Indicator (RSEI) model, which calculates a risk index based on releases of approximately 600 chemicals reported through the Toxics Release Inventory (TRI). Data received through FY 2006 indicate a 39.5 percent reduction in the RSEI score, when compared to a 2001 baseline. 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 approximately 200 HPV chemicals that are reported through the TRI.

Data received through 2006 indicate a 35.3 percent reduction in the RSEI score when compared to a 1998 baseline. The RSEI index is expected to decrease less and less over time and annual targets decrease incrementally to address this trend. TRI data are subject to a two-year data lag, which means these measures have a corresponding two year reporting delay. FY 2007 performance results will be available for the FY 2009 Performance and Accountability Report.

Two supporting measures track progress in completing prioritization assessments for more than 6,000 High and Moderate Production Volume Chemicals. These chemicals are taken from chemicals reported under the 2006 IUR plus chemicals that were previously sponsored under the HPV Challenge program. Risk Based Prioritizations are completed where hazard, use, and exposure data are available and Hazard Based Prioritizations are completed where only hazard information is available. Prioritization targets will increase significantly with additional resources received in FY 2010. The majority of new resources were utilized for assessment work, increasing RBP target from 180 in FY 2009 to 230 in FY 2010, and increasing HBP target from 100 in FY 2009 to 325 in FY 2010.

The cumulative and annual measures tracking the 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 cumulative results are 246 proposed AEGLs completed which demonstrate significant progress towards completing 287 chemicals by 2011. In FY 2010, the program continues to shift its emphasis to interim and final status AEGLs, which explains the continuation of a reduced target of 18 in developing proposed AEGLs in FY 2010. This is offset by a commitment to complete 14 final AEGL values in FY 2010. The AEGL program shares resources with the "Homeland Security: Preparedness, Prevention and Response" and "Toxic Substances: Chemical Risk Review and Reduction" programs.

The cumulative and annual measures tracking the percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risk to human health or the environment, illustrate the effectiveness of EPA's new chemicals program as a gatekeeper. This measure analyzes previously reviewed new chemicals with incoming TSCA 8(e) notices of substantial risk. TSCA requires that chemical manufacturers, importers, processors and distributors notify EPA within thirty days of new information on chemicals that may lead to a conclusion of unreasonable risk to human health or the environment. Information from

approximately thirty 8(e) notices each year is used to check the accuracy of New Chemicals analytical tools and to make process improvements for future review of new chemicals.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$977.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$8,000.0/+5.0 FTE) This investment will support significant enhancements to EPA's toxics program for high and moderate volume production chemicals including accelerating development of Risk-Based Prioritizations (RBPs) from 180 in FY 2009 to 230 in FY 2010 and Hazard-Based Prioritizations (HBPs) from 100 to 350. The increase includes five FTE with associated payroll. The Agency also will initiate risk management actions on the highest priority chemicals to prohibit the manufacture, import, processing, or distribution of chemicals; issue significant new use rules restricting uses of existing chemicals without submission of premanufacture notices; and obtain additional information to support regulatory risk management actions.

- (-$1,050.0) This reflects a redirection from Other TSCA Chemicals of Concern to support enhancements to EPA's toxics program for high and moderate volume production chemicals.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$15,538.0***	***$18,334.0***	***$18,874.0***	***$540.0***
Total Budget Authority / Obligations	$15,538.0	$18,334.0	$18,874.0	$540.0
Total Workyears	73.9	86.6	86.6	0.0

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/.

The P2 program will be completing revisions to its FY 2014 strategic plan in FY 2009. The plan will describe the P2 program's strategies for achieving three goals:

- Working with other EPA programs to establish EPA's leadership role in the sustainability arena, and broadly communicating the importance of preventing pollution at the source;

- Increasing coordination among individual components of the EPA P2 program and ensuring a strong infrastructure within the EPA P2 program and external P2 networks to support the program's mission; and

- Meeting or exceeding the environmental outcome targets established for the P2 program in the EPA Strategic Plan. The new P2 plan focuses the program on three critical outcomes:
    - Reducing production and use of hazardous materials;
    - Reducing generation of greenhouse gases; and
    - Conserving natural resources, specifically water.

The program accomplishes its mission through eight centers of results, including those described below under individual headings, as well as Regional offices and the Pollution Prevention Resource Exchange (P2Rx) program which are described together as P2 technical assistance.

FY 2010 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 2010, 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 2010 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 by minimizing the use of paper and utilizing hotels and facilities that have adopted water and energy conservation measures and other pollution prevention practices.

EPA will allocate $4.4 million to this work area in FY 2010. 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 2010 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. In FY 2010, the Green Suppliers Network also will 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 2010. 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 2010, 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 2010. 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 2010, 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 is quickly growing and, as a result, is reducing more pounds of chemicals of concern each year. DfE is now working with the consumer cleaning products sector which uses large volumes of chemicals with the potential for substantial population and environmental exposures that can be reduced through reformulation.

In FY 2010, 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 2010, 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.

EPA will allocate $3.0 million to this work area in FY 2009. For more information, visit http://www.epa.gov/dfe/

Green Engineering

In FY 2010, 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 $0.2 million to this work area in FY 2009. For more information, visit, http://www.epa.gov/opptintr/greenengineering/

Partnership for Sustainable Healthcare (PSH)

This voluntary program, formerly known as Hospitals for a Healthy Environment (H2E), with more than 1,250 hospital partners, became an independent non-profit organization in calendar year 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 rulemaking 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 $.16 million to this work area in FY 2010. 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 Pollution Prevention Resource Exchange programs described under the companion Categorical Grants: Pollution Prevention program, resources are made available to a wide variety of applicants through Source Reduction Assistance (SRA) grants issued annually on a competitive basis through EPA's

Regional Offices. Thirty-four SRA grants were awarded in FY 2007 as were fifteen in FY 2008. In FY 2009, EPA expects to award 20 to 30 grants, awards for which range between $10,000 and $100,000.

SRA grants support P2 solutions resulting in energy and water conservation, reduction of greenhouse gases, and a wide variety of reductions 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 Environmental Programs and Management resources to this work area in FY 2010, augmented by $4.9 million of P2 Categorical Grant resources.

EPA evaluates and implements Science Advisory Board Report recommendations for improving performance to better demonstrate Pollution Prevention results and work to reduce barriers confronted by industry and others in implementing source reduction.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Business, institutional and government costs reduced by P2 program participants.	Data available 6/2009	45.9M	130M	300M	Dollars Saved

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Pounds of hazardous materials reduced by P2 program participants.	Data available 10/2009	429M	494M	522M	Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	BTUs of energy reduced, conserved or offset by P2 program participants.	Data available 6/2009	1,217.4B	8,000B	9,000B	BTUs

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Gallons of water reduced by P2 program participants.	21.602B	1.64B	1.791B	1.795 B	Gallons

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Metric Tons of Carbon Dioxide Equivalent (MTCO2e) reduced, conserved or offset by Pollution Prevention (P2) program participants.	Data available 10/2009		2M	5M	MTCO2e

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Annual reductions of Design for the Environment (DfE) chemicals of concern per federal dollar invested in the DfE program.	116	90	100	110	lbs/$

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Energy savings per dollar invested in the Federal Electronics Challenge (FEC) program	Data available 6/2009	1M	1.31M	1.89M	BTUs/$

The P2 program has made significant progress towards meeting long-term goals for 2011 outlined within 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 2.2 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 $458 million since 2002.

- The P2 program has made progress in meeting the long term target to reduce 39 million metric tons of Co2 equivalent by reducing 3.4 million metric tons of Co2 equivalent since 2006.

- The P2 program also has exceeded its long term target to reduce 19 billion gallons of water use by reducing 33 billion gallons of water since 2000.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$450.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$90.0) This reflects an increase for Design for the Environment efforts.

Statutory Authority:

PPA and TSCA.

Toxic Substances: Chemical Risk Management
Program Area: Toxics Risk Review and Prevention
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$6,518.9***	***$5,422.0***	***$5,923.0***	***$501.0***
Total Budget Authority / Obligations	$6,518.9	$5,422.0	$5,923.0	$501.0
Total Workyears	38.4	33.4	33.4	0.0

Program Project Description:

The Chemical Risk Management (CRM) program supports national programs to achieve reductions in use and to ensure safe removal, disposal and containment of certain prevalent, high-risk chemicals, known generally as legacy chemicals. Some of these chemicals were introduced into the environment before their risks were known. The CRM program currently focuses on providing assistance to Federal agencies and others with responsibility for ensuring proper use of PCBs, reducing or eliminating the use of products containing mercury, and implementing statutory requirements to address asbestos risks in schools.

FY 2010 Activities and Performance Plan:

Polychlorinated Biphenyls (PCBs)

In FY 2010, 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 the review of 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.

Mercury

In FY 2010, 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). The program will implement 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 2010, EPA will continue to implement a range of partnerships to address the use of mercury in developing countries under the United Nations Environment Programme (UNEP) mercury partnerships, with particular emphasis on reductions of mercury use in health care settings. 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. In February 2009, the UNEP Governing Council adopted a mandate for the initiation of negotiations on a legally binding agreement on mercury. The U.S. delegation agreed to this mandate and reversed our prior position. The agreement is not yet in place and negotiations are ongoing. In the interim, EPA will continue to support voluntary reductions in the use of mercury through existing partnerships. For more information, visit http://www.epa.gov/mercury/.

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 other organizations. EPA also will continue to provide oversight and regulatory interpretation to delegated state and local asbestos 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:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of chemicals with proposed values for Acute Exposure Guidelines Levels (AEGL)	28	24	18	18	Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of chemicals with final values for Acute Exposure Guidelines Levels (AEGL)	37	Baseline	6	14	Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers or the environment.	Data Avail 10/2009	100	100	100	Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 10/2010	3.5	3.2	3.0	Percent RSEI rel risk

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of High Production Volume (HPV) chemicals with Risk Based Prioritizations Completed through the Chemical Assessment and Management Program (ChAMP)	150	150	180	230	HPV Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Annual number of Moderate Production Volume (MPV) chemicals with Hazard Based Prioritizations Completed through the Chemical Assessment and Management Program (ChAMP)	14	55	100	325	MPV Chemicals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities.	Data Avail 10/2010	2.5	2.4	2.2	Percent Reduction

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Reduction in cost of managing PreManufacture Notice (PMN) submissions through the Focus meeting as a percentage of baseline year cost	$459,800	Baseline	No Target Established	61%	% Reductions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Percent reduction from baseline year in total EPA cost per chemical for which proposed AEGL value sets are developed.	17.4%	4%	10%	11%	% Cost Savings

Work under this program supports EPA's objective to manage risks from well known nationally recognized legacy chemicals. In the past EPA has targeted safe disposal of PCB electrical equipment. Starting in FY 2011, EPA will begin tracking reductions in mercury from international hospital projects, and will continue exploration of other measurement opportunities for legacy chemicals.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$213.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$288.0) This reflects an expansion of efforts to reduce the use of mercury in products, both domestically and through international partnerships, building on the success of efforts initiated in recent years.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$12,083.7***	***$13,927.0***	***$14,442.0***	***$515.0***
Total Budget Authority / Obligations	$12,083.7	$13,927.0	$14,442.0	$515.0
Total Workyears	77.6	87.0	87.0	0.0

Program Project Description:

Recent data from the Centers for Disease Control document tremendous progress on the government's goal of eliminating childhood lead poisoning as a public health concern. EPA's Lead Risk Reduction program contributes to the goal of alleviating the threat to human health, particularly to young children, from environmental lead exposure in the following ways:

- Establishes standards governing lead abatement practices and maintains a national pool of lead abatement professionals trained and certified to implement those standards;
- Provides information to housing occupants so they can make informed decisions and take actions about lead hazards in their homes;
- Establishes lead-safe work practice standards governing renovation, repair and painting of target housing and child-occupied facilities; and
- Works to establish a national pool of renovation contractors trained and certified to implement those standards.

See http://www.epa.gov/opptintr/lead/index.html for more information.

FY 2010 Activities and Performance Plan:

In FY 2010, the target year for achievement of the federal government's goal to eliminate childhood lead poisoning as a public health concern, 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.

On June 23, 2008, states and tribes could begin to apply for program authorization. On April 22, 2009, the agency will begin to implement the regulation in all non-authorized states, territories and on Tribal lands. On this date, providers of renovator and/or dust sampling technician training may begin to apply for accreditation. On October 22, 2009 renovation firms may begin

applying for certification, and on April 22, 2010 the rule will be fully implemented. By that time, training providers must be accredited, and all firms conducting RRP must be certified and must comply with the lead-safe work practices prescribed in the rule.

Additionally, a significant and comprehensive outreach effort will be implemented to support the RRP regulation and more generally increase public awareness about preventing lead poisoning from lead-based paint, including a national public service advertising initiative with the Ad Council. In addition to these public service announcements, this comprehensive effort includes the following:

- Education efforts aimed at all regulated parties including training providers, contractors and landlords;
- Outreach to states, tribes, and territories to encourage delegation of authorized programs;
- Public awareness efforts targeted at homeowners, parents, educators and others to encourage use of lead-safe work practices when renovating; and
- Providing technical assistance to ensure compliance 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 eliminating childhood lead poisoning as a public health concern by FY 2010. In addition, EPA will continue to provide support to the National Lead Information Center (NLIC) to disseminate information to the public through a telephone hotline and in electronic form.

EPA uses the following measures: 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 annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process in order to evaluate program performance. EPA also has 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process.	91	91	92	92	Percent Certif/Refund

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of cases of children (aged 1-5 years) with elevated blood lead levels (>10ug/dl).	Data Avail 10/2010	90,000	No Target Established	0	Children

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	Data Avail 11/2011	29	No Target Established	28	Percent

The program's long-standing annual performance measure tracks the number of children aged 1 to 5 years with elevated blood lead levels (EBBL > 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 calendar years 1999-2002 data which estimated 310,000 cases of children (1.6 percent) with EBLL. The Fourth National Report on Human Exposure to Environmental Chemicals is expected in calendar year 2009. However, a recent Pediatrics Journal Article has shown a continued decrease in the number of children with EEBL down to 1.4 percent from calendar years 1999 to 2004. In FY 2006 EPA's goal was to lower the amount to 216,000 cases and 90,000 cases in FY 2008, while eliminating childhood lead poisoning as a public health concern by FY 2010. CDC historical data are showing a slower rate of progress over time, reflecting increased challenges associated with reaching remaining vulnerable populations. After FY 2010, EPA will vigilantly seek to maintain the elimination of childhood lead poisoning as a public health concern. The opportunity for exposure through hazards posed by lead- based paint still exists in approximately 40 million homes built before 1978.

The lead program also tracks the disparities of geometric mean blood lead levels between low-income children and 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 FY 2006-2011 Strategic Plan, is to close the gap between the geometric means of blood lead levels among low income children versus non-low-income children, from a baseline percentage difference of 37 percent (1991-1994), to a difference of 28 percent by the FY 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 calendar year 2006 is expected in calendar year 2009, at which time it will be clearer if EPA reached its goal of lowering the disparity to 29 percent.

The lead program is introducing a supporting output measure in FY 2010 that will begin to track the number of individuals certified in Renovation Repair and Painting. These data will not be subject to the data lags of the biomonitoring measures mentioned above, and will show the total programmatic impact as the number of certified workers increases from zero in FY 2009 to several hundred thousand individuals anticipated by FY 2014.

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 2010 targets sustain this high level of achievement.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$486.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$29.0) This reflects an expanded outreach effort to increase awareness of requirements promulgated in FY 2008 pertaining to new lead-safe renovation, repair and painting practices, which take effect in April 2010.

Statutory Authority:

TSCA.

Program Area: Underground Storage Tanks (LUST / UST)

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$11,157.9***	***$11,946.0***	***$12,451.0***	***$505.0***
Leaking Underground Storage Tanks	$15,251.5	$11,105.0	$11,855.0	$750.0
Total Budget Authority / Obligations	$26,409.4	$23,051.0	$24,306.0	$1,255.0
Total Workyears	119.7	132.0	132.0	0.0

Program Project Description:

EPA works with states, tribes and Intertribal Consortia to prevent, detect, and clean up leaks from Federally-regulated underground storage tanks (USTs) containing petroleum and hazardous substances. Potential adverse effects from the use of contaminants of concern such as benzene, methyl-tertiary-butyl-ether (MTBE), alcohols or lead scavengers in gasoline underscores the emphasis the Agency and its state partners place on promoting compliance with all UST requirements, including the requirements described in the Energy Policy Act (EPAct)[89] of 2005. In support of this goal, 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.[90]

FY 2010 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.[91] In FY 2010, 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. These activities include assisting states in conducting inspections and assisting other Federal agencies to improve their compliance at UST facilities.

In FY 2010, 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

[89] 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.
[90] Refer to http://www.epa.gov/OUST/20comply.htm and http://www.epa.gov/OUST/20tnkprf.htm.
[91] For more information on these and other activities please refer to http://www.epa.gov/OUST/fedlaws/final_fr.htm.

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.

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 continue implementing the FY 2006 UST Tribal strategy[92], 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. For example, the emergence of alternative fuels containing ethanol poses several challenges for the UST program, requiring information, education, and innovative policy solutions.

Additionally, there are an unknown number of petroleum brownfield sites (estimated to be at least two hundred thousand) that are predominately old gas stations that blight the environmental and economic health of surrounding neighborhoods. The EPA petroleum brownfields program is jointly managed by the Office of Underground Storage Tanks and the Office of Brownfields and Land Revitalization. While both are co-leads, Brownfields tends to concentrate more on the low-risk sites (a limitation of their statutory authority) while OUST tends to concentrate more on high priority/high-risk sites. In FY 2008, EPA developed a new plan of action to promote reusing petroleum brownfields.[93] The plan demonstrates EPA's commitment to cleaning up petroleum-contaminated sites and fostering their reuse. In FY 2009, EPA will bolster communication and outreach to petroleum brownfields stakeholders; provide targeted technical assistance to state, tribal, and local governments; evaluate policies to facilitate increased petroleum brownfields site revitalization; and begin to forge partnerships to promote investment in and the sustainable reuse of petroleum brownfields. In FY 2010, EPA will analyze tools that promote assessment, cleanup and reuse of petroleum brownfields; develop a petroleum brownfields catalog that showcases successful reuse, such as successful redevelopment on former petroleum-affected brownfields, including sustainable or "green" cleanup and reuse strategies; support the reuse of petroleum brownfields by small business owners; and continue cross-media and geographic multi-site petroleum brownfield projects.

To improve the LUST (prevention) program, 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Increase the percentage of UST facilities	66	68	65	65.5	percent

[92] 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.
[93] Petroleum Brownfields Action Plan, www.epa.gov/oust/rags/petrobfactionplan.pdf.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	that are in significant operational compliance (SOC) with both release detection and release prevention requirements by 0.5% over the previous year's target.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Minimize the number of confirmed releases at UST facilities to 9,000 or fewer each year.	7,364	<10,000	<9,000	<9,000	UST releases

At the end of FY 2008, EPA achieved 66 percent significant operational compliance and confirmed 7,364 new releases. The UST funds will assist the Agency in meeting its FY 2010 performance targets ensuring that 65.5 percent of UST facilities are in significant operational compliance with both the release detection and release prevention requirements and to minimize the number of confirmed releases at UST facilities to 9,000 or fewer.

One of EPA's challenges has been to maintain the UST compliance rates. Prior to the Energy Policy Act of 2005, many UST facilities were inspected infrequently and, as a result, there were low compliance rates. EPA and states are now inspecting those infrequently-inspected facilities, and finding that many are out of compliance, thus explaining the lower compliance rates. However, EPA believes that by doing more frequent inspections in the future we will ensure better compliance and fewer releases.

This program also supports the 2009 American Recovery and Reinvestment Act (ARRA) as detailed in "Tab 13" of this document. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

FY 2010 Change from FY 2009 Enacted (Dollars in Thousands):

- (+$455.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+ $50.0) This change reflects a realignment of extramural resources with spending plans by increasing contract resources and reducing IT and telecommunications resources.

Statutory Authority:

SWDA of 1976, as amended by the Superfund Amendments and Reauthorization Act 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$27,416.2***	***$37,000.0***	***$0.0***	***($37,000.0)***
Total Budget Authority / Obligations	$27,416.2	$37,000.0	$0.0	($37,000.0)
Total Workyears	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.[94] 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 2010 Activities and Performance Plan:

Resources for this program are transferred to the new Great Lakes Restoration Initiative (GLRI) program. The GLRI will target the most significant problems in the region, such as aquatic invasive species, nonpoint source pollution, and toxics and contaminated sediment.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cubic yards of contaminated sediment remediated (cumulative) in the Great Lakes.	5.5	5.0	5.9	6.5	Million cubic yards

[94] 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.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Cost per cubic yard of contaminated sediments remediated.			200	200	$/cubic yard

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cubic yards of contaminated sediment remediated (cumulative) in the Great Lakes.	5.5	5.0	5.9	6.5	Million cubic yards

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Cost per cubic yard of contaminated sediments remediated.			200	200	$/cubic yard

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$37,000.0) This reflects transferring GLLA resources to the new Great Lakes Restoration Initiative in FY 2010.

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.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$26,046.7***	***$26,557.0***	***$26,967.0***	***$410.0***
Total Budget Authority / Obligations	$26,046.7	$26,557.0	$26,967.0	$410.0
Total Workyears	52.2	48.1	48.1	0.0

Program Project Description:

The goal of this program is to restore the physical, chemical, and biological integrity of national estuaries and coastal watersheds by protecting and enhancing water quality and living resources. Major project efforts include:

- Supporting the 28 National Estuary Programs (NEP) by (1) continued implementation of Comprehensive Conservation and Management Plans (CCMPs) and (2) implementation of Clean Water Act (CWA) core programs in their estuarine ecosystems;
- Monitoring and coastal assessment resulting in the continued issuance of National Coastal Condition Reports; and
- Addressing non-NEP threats to estuary/coastal watersheds including: 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 2010 Activities and Performance Plan:

The resources in FY 2010 will support EPA's goal of protecting 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 2010, EPA will continue support of the National Estuary Program, including $16.8 million in CWA Section 320 grants for the 28 NEPs ($600 thousand 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 FY 2012.

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, are a growing concern in U.S. coastal watersheds. EPA will continue working with our NEP and non-NEP partners to identify, develop, and promote programs that could provide mitigation or adaptation strategies to emerging climate change impacts (e.g. promotion of "climate-ready estuaries" in coastal communities).

As a result of a 2005 assessment, 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 for number of acres protected and restored. In addition, the Agency has 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 assessments.

Coastal Monitoring and Assessment

In FY 2010, the program will lead the effort to monitor and assess the nation's coastal waters. Along with Federal, state, and local partners, EPA will continue to track coastal waters health and progress on 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 and covers both national and regional scales and includes indices covering coastal water quality, sediment quality, benthic condition, coastal habitat, and fish tissue contamination.

Information on coastal ecological conditions 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

1 The means and strategies outlined under the Improve Ocean and Coastal Waters sub-objective must be viewed in tandem with the means and strategies outlined for achieving the Increase Wetlands sub-objective. The Improve Ocean and Coastal Waters sub-objective contains strategic measures for ocean and coastal programs, which are integral to the Agency's efforts to facilitate the ecosystem scale protection and restoration of natural areas.

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 2010, 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 2010 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, coordinating Mississippi River-Atchafalaya River Basin monitoring activities, and enhancing research and modeling to identify the highest opportunity watersheds for nutrient reductions.

- *Large Aquatic Ecosystems:* EPA's Council of Large Aquatic Ecosystems (LAEs) is working to foster collaboration among the Agency's geographically-based efforts, such as the Chesapeake Bay and the Great Lakes, and national water programs. A goal is to improve the health of the nation's large aquatic ecosystems and strengthen links to the national water programs. LAEs share a number of priority issues, and the Council has formed workgroups to address topics including nutrient management, stormwater control, management plan implementation tracking tools, and toxics reduction. It has made progress in strengthening Core Water Program implementation, and has developed and applied leading-edge communication tools to share lessons learned among Council members, and to inform a larger audience of its progress.

- *Financing Coastal Protection and Restoration:* Development of long-term finance plans and effective partnerships, and promoting community support are key to successful funding of coastal watershed protection and restoration efforts. EPA will provide coastal resource managers with 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 coastal land-use decision-makers by providing information necessary to promote innovative green infrastructure practices and restoration, plan for growth, and minimize the adverse impacts of development to

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:* EPA is building the capacity of NEPs and other coastal watershed entities to lead coastal communities' adaptation to the impacts of climate change. EPA has modified the successful National Park Service model, "Climate-Friendly Parks," by working with the NEPs to develop and implement "Climate-Ready Estuaries" models that assess climate change vulnerabilities, develop and implement adaptation strategies, engage and educate stakeholders, and share lessons learned with the other coastal managers. The primary focus will continue to be the adaptation of coasts to climate change, as well as actions to help mitigate 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Program dollars per acre of habitat protected or restored.	909	500	500	500	Dollars

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Acres protected or restored in NEP study areas.	83,490	50,000	100,000	100,000	Acres

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$265.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$145.0) This increase will assist in coastal monitoring and assessment.

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; NAWCA; WRDA; 1909 The Boundary Waters Treaty; 1978 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$21,868.0***	***$22,539.0***	***$23,336.0***	***$797.0***
Total Budget Authority / Obligations	$21,868.0	$22,539.0	$23,336.0	$797.0
Total Workyears	148.7	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.

EPA's Wetlands Program operates under the national goal of no-net-loss of wetlands under the Clean Water Act Section 404 regulatory program. Major activities of the Wetlands Protection Program include administration of EPA's role in the 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 the Corps of Engineers 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 other waters 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 2010 Activities and Performance Plan:

In FY 2010, EPA will work with its state and Tribal partners to strengthen state/tribal wetland programs in the areas of monitoring and assessment, voluntary restoration and protection, regulatory programs, and wetland water quality standards. The Agency will assist states/tribes 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 conditions, as well as geo-locating wetlands on the landscape. In support of state and Tribal wetland programs, EPA will continue to administer Wetland Program Development

Grants, with a strengthened focus in FY 2010 on achieving program development outcomes and providing targeted technical assistance to states/tribes as resources allow.

The Agency, working with the Army Corps of Engineers and other partners, will implement the joint Corps-EPA Compensatory Mitigation Rule finalized in FY 2008. 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. Greater emphasis will be placed on monitoring and achieving ecological performance standards at mitigation sites. EPA will continue to focus on wetland and stream corridor restoration to regain lost aquatic resources, and strengthen state and Tribal wetland programs to protect vulnerable wetland resources.

Another key activity in FY 2010 will be implementing the 2006 decision of the Supreme Court in the *Rapanos* and *Carabell* cases. 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 have increased the amount of training needed for EPA and Corps field staff and the frequency of interagency analysis and coordination, including site visits.

Working with our Federal agency partners to accelerate the completion of the digital Wetlands Data Layer in the National Spatial Data Inventory (NSDI) is another critical activity for wetlands management. This baseline data 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 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 FY 2010, 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. 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.

Although wetland acreage is increasing nationally, wetlands in coastal watersheds are declining. A recent report by the FWS and the National Oceanic Atmospheric Administration's National Marine Fisheries Service found that coastal wetlands in the Eastern U.S. are decreasing by 59,000 acres per year (*Status and Trends of Wetlands in the Coastal Watersheds of the Eastern United States 1998 to 2004* available at: http://www.fws.gov/wetlands). EPA will collaborate with other Federal agencies including FWS, National Marine Fisheries Service, U.S. Army Corps of Engineers, Federal Highways Administration, and the Natural Resources Conservation

Service to better understand the factors contributing to wetland losses and identify actions that could reduce or reverse trends in coastal wetland loss.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of acres restored and improved, under the 5-Star, NEP, 319, and great waterbody programs (cumulative)	82,875	75,000	88,000	96,000	Acres/year

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 Avail 12/2009	No Net Loss	No Net Loss	No Net Loss	Acres

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$742.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$55.0) This reflects an increase to support Section 404 regulatory program implementation.

Statutory Authority:

1990 Great Lakes Critical Programs Act; Great Lakes and Lake Champlain Act; CWA; 2002 CWPPR; Estuaries and Clean Waters Act of 2000; NAWCA; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$2,307.5***	***$2,806.0***	***$2,870.0***	***$64.0***
Total Budget Authority / Obligations	$2,307.5	$2,806.0	$2,870.0	$64.0
Total Workyears	7.6	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 and Shellfish Programs

The Fish Advisory 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 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 2010 Activities and Performance Plan:

In FY 2010, EPA will pursue the following:

Beaches Program:

- In our ongoing effort to improve the effectiveness of our program areas, we will continue working with states, territories, tribes and locales to implement beach monitoring and notification programs in an expeditious manner, including: (1) submission of grant applications; (2) awarding of grants; (3) expenditures of grant dollars; and (4) submission of annual data on advisories and closings for production of annual report.

- Work with states, territories, and tribes to obtain input on implementation issues associated with new recreational water quality criteria that are under development to ensure smooth transition in the use of the new criteria in the implementation of the Beach Monitoring and Notification Program.

Fish and 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percentage of women of childbearing age having mercury levels in blood above the level of concern.	Data Available 2009	5.5	5.2	5.1	Percent of Women

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	0	2	2	2	Number of Outbreaks

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	92.6	93	95	Percent Days/Season

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+ $38.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+ $26.0) This reflects an increase for beach advisory activities.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$107,454.8***	***$98,779.0***	***$102,856.0***	***$4,077.0***
Science & Technology	$3,292.5	$3,555.0	$3,720.0	$165.0
Total Budget Authority / Obligations	$110,747.3	$102,334.0	$106,576.0	$4,242.0
Total Workyears	561.7	583.4	589.4	6.0

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 2010 Activities and Performance Plan:

Safe drinking water and clean surface waters are critical to protecting human health. More than 290 million Americans rely on the safety of tap water provided by public water systems that are subject to national drinking water standards.[95] In FY 2010, 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 2010, the Agency will continue implementing requirements for newer risk based rules that require a higher degree of involvement by the state to ensure that systems do not install more treatment that is necessary to comply. These include provisions for *Cryptosporidium* (Long Term 2 Enhanced Surface Water Treatment Rule or "LT2"), Disinfection (Stage 2 Disinfectants

[95] U.S. Environmental Protection Agency Safe Drinking Water Information System (SDWIS/FED), http://www.epa.gov/safewater/data/getdata.html.

and Disinfection Byproducts Rule or "Stage 2"), and source water quality (Ground Water Rule). 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 2010, 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 newer 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. Monitoring under the Ground Water Rule begins in FY 2010. EPA will promote operation and maintenance best practices to small systems in support of long term compliance success with existing regulations;

- Support states in 2010 to complete: classification of drinking water systems based on source water *cryptosporidium* concentrations per the requirements of the LT2 rule; and technical reviews of public water system submissions required for the Stage 2 rule. EPA will coordinate with states to assist the approximately 30,000 small water systems as they complete their required monitoring under the Stage 2 rule, and with the small number of systems who are required to conduct additional *cryptosporidium* sampling. EPA will also provide training and technical assistance to states and to water systems that need to increase their treatment. Over 59,000 water systems will need to comply with the rules during 2010;

- 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 radionuclide 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), Underground Injection Control (UIC), as well as the Drinking Water State Revolving Fund (DWSRF);

- EPA will begin direct implementation of the Aircraft Drinking Water Rule, which will affect 63 airlines and over 7000 aircraft. EPA will also complete the development of a new data system in response to the promulgation of the Rule. During 2010, EPA will deploy the data system, which will include developing the user guides, piloting the system, and providing training to the air carrier industry to ensure compliance with the new requirements; and

- EPA also will work with State and local governments to explore how small water system customers can afford the costs of complying with future drinking water standards. As the Agency reviews its policy, alternatives to small system variances, such as targeted use of federal funding programs towards disadvantaged water systems, are important tools that must be considered.

Drinking Water Standards

The Agency will publish the third Contaminant Candidate List (CCL3) in FY 2009. Potential contaminants include pesticides, industrial compounds, microbes, pharmaceuticals, and personal care products. In FY 2010, the Agency will compile and evaluate the available information on health effects and occurrence in drinking water to determine which CCL 3 contaminants have sufficient information on which to base a decision whether or not to regulate a contaminant under the Safe Drinking Water Act. The Agency will also work to prioritize research and data collection to fill the data gaps for the other CCL 3 contaminants for which there is insufficient information to make a decision. EPA will work to compile this information to make regulatory determinations for at least 5 CCL 3 contaminants by 2012. The Agency will also continue to evaluate and address drinking water risks though activities to implement the Safe Drinking Water Act (SDWA) including:

- 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;

- Developing a proposal for revisions to the Total Coliform Rule based on recommendations from the Total Coliform Rule/Distribution Systems Federal Advisory

Committee to maintain or provide for greater public health protection. The proposed rule will be published in 2010;

- Releasing and taking public comment on the Agency's preliminary six-year review of existing national primary drinking water regulations (NPDWRs) and identifying what, if any, regulatory revisions are appropriate. The Agency plans to publish its final review results after considering public comments and evaluating any new, relevant information submitted by commenters;

- Identifying the highest priority research and information collection activities to better understand water quality issues in distribution systems. 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; and

- Implementing the appropriate actions (i.e. regulatory revisions or revised guidance) 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 and Effective Utility Management

With the aging of the nation's infrastructure and a growing need for investment, the drinking water and wastewater sectors face a significant challenge to sustain and advance the achievements attained in protecting public health and the environment. EPA's sustainable infrastructure efforts are designed to promote more effective management of water utilities in order to continuously improve their performance and achieve long-term sustainability in their infrastructure, operations and other facets of their business. A number of activities will be undertaken by EPA in 2010 to assist drinking water utilities to be sustainable, by providing funding and technical assistance.

EPA's DWSRF provides states with funds for low-interest loans to assist utilities with financing drinking water infrastructure needs. In FY 2010, 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 2009, the Agency released the fourth Drinking Water Needs Survey, 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 52,000 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 will

use the results of the 2007 survey to allocate DWSRF funds to the states and tribes beginning in FY 2010.

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. EPA will partner with utilities and with other agencies to address operator workforce issues, promote water and energy efficiency, and identify options for utilities in response to climate change impacts and water resource limitations.

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 effort 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 2010, 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;

- Continue working with states and other stakeholders to characterize current and future pressures on water availability, variability and sustainability (WAVS) in the face of climate change;

- 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 2010, U.S. energy production is expected to grow by almost 9% from FY 2006 levels, according to DOE's Energy Information Administration);

- 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, other Federal Agencies, and State co-regulators as necessary to ensure that wells injecting carbon dioxide do not endanger underground sources of drinking water; and

- Carry out responsibilities in permitting current and future geologic sequestration (GS) of carbon dioxide projects. FY 2010 funding for carbon sequestration work is $2.6 million. Activities planned for FY 2010 include:

    - Continue development of a rule and supporting documents 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 1) demonstrate and commercialize geologic sequestration of carbon dioxide technology and 2) to inform the regulatory development process;
    - Engage states and stakeholders through meetings, workshops, public outreach, and other avenues, as appropriate;
    - Provide technical assistance to states in permitting GS projects;
    - Work with the Office of Research and Development to understand key issues, identify knowledge gaps, and answer complex technical questions 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; and
    - Review and revise the UIC Grant Allocation Funding Model to account for well class definitions, national Class V inventories, and primacy issues (e.g., recent approval of Primacy application from the Fort Peck Assinibone Tribe and the Navajo Nation).

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	89.5	90	90	Percent Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of population served by community water systems that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.	92	90	90	90	Percent Population

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance.)	87	95	95	95	Percent CWS

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards.	97	95	95	95	Percent CWS

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	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	83	87	87	87	Percent Population

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+ 810.0 / +6.0 FTE) This change provides for 6 FTE to support the increased workload associated with administering the larger Drinking Water State Revolving Fund grant program.

- (+$2,858.0) This reflects an increase for payroll and cost of living for all FTE.

- (+409.0) This reflects an increase to support evaluation for engineering and scientific data (including treatment technology information).

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$13,430.4***	***$13,045.0***	***$13,399.0***	***$354.0***
Total Budget Authority / Obligations	$13,430.4	$13,045.0	$13,399.0	$354.0
Total Workyears	42.8	44.1	44.1	0.0

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 marine issues, 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, and coral reefs).

- Supporting international marine protection programs with other Federal agencies through negotiations of international standards that address aquatic invasive species, harmful antifoulants, bilge water, dumping of wastes at sea, and marine debris.

- Working with a wide variety of stakeholders to develop 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 promotion of dredged material management in a watershed context.

See http://www.epa.gov/owow/oceans/regulatory/index.html for more information.

FY 2010 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, as well as progress toward meeting the strategic targets, will be tracked through periodic issuance of National Coastal Condition reports, which are a cooperative project with other Federal agencies. Key FY 2010 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 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.

- Continue coordinating a consistent national approach for the designation of no discharge zones for vessel sewage.

- Continue evaluating the environmental impacts of sewage and graywater discharges from cruise ships.

Managing the Marine Protection, Research, and Sanctuaries Act (MPRSA) / Ocean Dumping Management 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, EPA will continue working with the Army Corps of Engineers and EPA Regional Offices to create a tracking system for beneficial use of dredged materials (as an alternative to dumping in ocean or coastal waters).

- Continue working with other interested agencies and the international community on the issue of carbon sequestration by ocean fertilization and addressing any requests for

carbon sequestration in the sub-seabed or by ocean fertilization, 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 1996 London 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 FY 2010, the *OSV Bold* is expected to continue supporting the following types of activities: collection of environmental data from several offshore areas for use in the 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, 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 2008 IMDCC Report to Congress, which was submitted in August 2008.

- As co-chair of the IMDCC, by the end of FY 2010, develop a new report to Congress on progress implementing the action plan.

- Lead an EPA workgroup tasked with developing a comprehensive approach to address the types, sources, movement, and impacts of marine debris.

Interagency Collaborations for Ocean and Coastal Protection

- 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.

- Continue participation on the U.S. Coral Reef Task Force to address new issues and problems arising with coral reefs and to expand efforts to reduce stresses on reefs from rising water temperatures, vessel discharges, and ocean acidification.

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. Corrective actions will be taken by the appropriate parties should a site not achieve acceptable conditions.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	99	95	98	95	Percent Sites

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$242.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$112.0) This reflects increased support for development of policy, guidance and technical materials associated with controlling vessel discharges of pollutants.

Statutory Authority:

Certain Alaskan Cruise Ship Operations Act (PL 106-554); Clean Boating Act; CWA; CZARA of 1990; FIFRA; MDRPRA of 2006; 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; SPA; TSCA; WRDA; Wet Weather Water Quality Act of 2000.

Surface Water Protection
Program Area: Water Quality Protection
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	***$197,780.0***	***$197,772.0***	***$210,437.0***	***$12,665.0***
Total Budget Authority / Obligations	$197,780.0	$197,772.0	$210,437.0	$12,665.0
Total Workyears	1,069.4	1,092.4	1,098.4	6.0

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 our nation's rivers, lakes, and streams. EPA works with states and tribes to make continued progress toward the clean water goals identified in EPA's Strategic Plan by implementing core clean water programs, including accelerating innovations that apply programs on a watershed basis. EPA works in cooperation with partners to achieve long-term sustainability of the nation's water infrastructure.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will focus its work with states, interstate agencies, tribes and others in key areas of the National Water Program. The main components and requested funding levels are: water quality standards and technology ($52 million), National Pollutant Discharge Elimination System (NPDES) ($42 million), water monitoring ($23 million, including $5.1 million for the Monitoring Initiative), Total Maximum Daily Loads (TMDLs) ($29 million), watershed and nonpoint source management ($26 million), sustainable infrastructure management ($19 million), water infrastructure grants management ($13 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. These criteria 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 2010, 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 85 percent of state submissions will be approvable in FY 2010.

Excessive nutrients continue to be one of the leading causes for impaired waters. Although some progress has been made, much remains to be done. One of the keys to making progress is the development of numerical nutrient water quality standards. However, many states lack the technical and financial resources to develop them. This request includes a $5 million increase for EPA technical and financial assistance to the states to accelerate adoption of numerical nutrient standards and to support any Federal determinations or promulgations.

In FY 2010, EPA will continue the Monitoring Initiative, begun in 2005, which includes enhancements to state and interstate monitoring programs consistent with their monitoring strategies, and collaboration on statistically-valid surveys of the nation's waters. In FY 2010, states and tribes, working with EPA, will issue a report on the statistically-valid baseline conditions of lakes nationwide. States, tribes, EPA, and other partners will analyze samples for a statistically-valid survey of rivers and streams. The results of this survey will be issued in FY 2012, with a report on the baseline condition of rivers and changes in stream condition since 2006. During FY 2010, field sampling for a fifth statistically-valid survey of coastal waters will occur. Planning for a survey of baseline conditions of wetlands will also occur and the results of this survey will be released in 2013. FY 2010 CWA Section 106 Monitoring Initiative funds will be used for sampling and analysis for a wetlands condition survey.

In FY 2010, EPA will work closely with states as they continue to enhance their monitoring programs. EPA stresses the importance of using statistical surveys to generate statewide assessments, targeted monitoring to develop and evaluate local controls and the transmission of water quality data to the national STORET (short for STOrage and RETrieval) warehouse using the new Water Quality Exchange (WQX) protocol. The Water Quality Exchange (WQX) is a new framework that makes it easier for states, tribes, and others to submit and share water quality monitoring data over the Internet. States, tribes and other organizations can now submit data directly to the publicly-accessible STORET Data Warehouse using the WQX framework. EPA will assist tribes in developing monitoring strategies appropriate to their water quality programs and encourage tribes to provide data in a format accessible for storage in EPA data systems.

EPA's goal is to achieve greater integration of Federal, regional, state, and local monitoring efforts to connect monitoring and assessment activities across geographic scales, in a cost-efficient and effective manner, so that scientifically defensible monitoring data is available to address issues and problems at each of these scales. In addition, EPA will work with states and other partners to address research and technical gaps related to sampling methods, analytical approaches, and data management.

Development and implementation of TMDLs for 303(d) listed waterbodies is a critical tool for meeting water quality restoration goals. TMDLs focus on clearly defined environmental goals and establish a pollutant budget, which is then implemented via permit requirements and through local, state, and Federal watershed plans/programs. In FY 2010, EPA will encourage states to organize schedules for TMDLs to address all pollutants on an impaired segment when possible. Where multiple impaired segments are clustered within a watershed, EPA encourages states to organize restoration activities across the watershed (i.e., apply a watershed approach). To assist in the development of watershed TMDLs, EPA recently developed two tools: *Draft Handbook*

*for Developing Watershed TMDLs (*www.epa.gov/owow/tmdl/pdf/draft_handbook.pdf) and a 'checklist' for developing mercury TMDLs where the source is primarily atmospheric deposition: www.epa.gov/owow/tmdl/pdf/document_mercury_tmdl_elements.pdf. For waters impaired by problems for which TMDLs are not appropriate, EPA will work with partners to develop and implement activities and watershed plans to restore these waters. States and EPA have made significant progress in the development and approval of TMDLs. Cumulatively, EPA and states completed more than 35,000 total TMDLs through FY 2008 and expect to complete approximately 3,000 TMDLs in FY 2010.

Nonpoint source management is the key to addressing most of the remaining water quality problems and threats in the United States. Protection and restoration of water quality on a watershed basis requires a careful assessment of the nature and sources of pollution, the location and setting within the watershed, the relative influence on water quality, and the amenability to preventive or control methods. In FY 2010, 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) while also continuing to protect those waters that are healthy. The $5 million increase for EPA technical and financial assistance to the states to accelerate adoption of numerical nutrient standards is also a tool to address some of these water quality problems.

In FY 2010, EPA will provide program leadership and technical support by:

- Creating, supporting, and promoting technical tools that states and tribes need to accurately assess water quality problems and analyze and implement solutions.

- Implementing a new web-based tool to support watershed planning.

- Continuing to enhance accountability for results through the use of EPA's nonpoint source program grants 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. EPA will also continue to track the remediation of waterbodies that had been primarily impaired by nonpoint sources and that were subsequently restored so that they may be removed from the Section 303(d) list of impaired waters.

- 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.

- Implementing a Healthy Watersheds strategy, in cooperation with states, academia, and non-governmental organizations, that focuses on protection of the watersheds of healthy

waters (as well as healthy components of other watersheds). This strategy will include the development of a guide to protect aquatic ecosystems, the development of a detailed Healthy Watersheds agenda with both short-term and long-term components, and initiation of a Healthy Watersheds Website replete with tools for assessment of healthy watersheds and implementation of approaches to maintain their health, as well as information on successful state and local approaches that are already underway.

- 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, Bureau of Land Management, and other Federal agencies with land management responsibilities to address water quality impairments by maintaining and restoring National Forest System watersheds.

In FY 2010, 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. EPA is working with states to structure the permit program to better support comprehensive protection of water quality on a watershed basis and recent increases in the scope of the program arising from court orders and environmental issues. 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 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.

- Collaborate with partner organizations to implement the Green Infrastructure Action Strategy released in January 2008 to help incorporate green infrastructure solutions at the local level to protect water quality from stormwater and Combined Sewer Overflows.

- Implement strategies to improve management of pretreatment programs. Strategies include implementation of pretreatment program results-based measures based on a pilot study evaluating nine draft results-based measures, a draft Measures Implementation Handbook and widescale testing in 2009, to determine the viability of the measures and refine their description, source, and reporting factors; implementation of the strategy, "Oversight of Significant Industrial Uses Discharging to Publicly Owned Treatment Works 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.

- Issue effluent regulations for discharges from construction and development activities. Respond to public comment and continue development of regulations for discharges from airport deicing facilities, and also for aquatic protection at cooling water intakes.

The Clean Water Act regulations for Concentrated Animal Feeding Operations (CAFO) were revised in 2003 and further revised in 2008 in response to a 2nd Circuit Court ruling. EPA will work with states and tribes to implement the CAFO rule to assure that all CAFOs that discharge waste seek and obtain NPDES permit coverage. EPA also will work with permitting authorities to identify which CAFOs need to seek permit coverage and provide 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 continue to implement a Sustainable Infrastructure Strategy and work with its partners to facilitate the voluntary adoption of effective management practices by water sector utilities that focus on maximizing the value of their infrastructure and ensuring protection of water quality and public health on a watershed basis. A key element of this strategy will be the promotion of utility management strategies centered on a series of Attributes of Effectively Managed Utilities and Keys to Management Success, agreed to by EPA and six major water and wastewater associations in May 2007. These Attributes define the outcomes that EPA and our partners believe all water utilities should strive to achieve in order to ensure that long-term sustainability of their operations and infrastructure. In addition, the Agency will work with other key partners such as local officials and academia to help increase public understanding and support for sustaining the nation's water infrastructure.

One of the key components of the Agency's broader efforts to ensure long-term sustainable water infrastructure is its water-efficiency labeling effort called WaterSense. WaterSense 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 (HETs) and bathroom faucets). Product specifications include water efficiency as well as performance criteria to ensure that products not only save water but also work as well as standard products in the marketplace. After testing by an independent laboratory to meet WaterSense specifications, products may bear the WaterSense label.

In less than three 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 250 different models of high-efficiency toilets have earned the label, and more than 750 faucet models have earned the WaterSense label. In addition to working with manufacturers and retailers to deliver labeled products to consumers, EPA continues to partner with utilities, irrigation professionals, and community organizations to

educate consumers on the benefits of switching to water-efficient products. By March 2009, the program had more than 1,200 partners, including utilities from across the country that is adopting WaterSense as a key component of their water-efficiency efforts.

The Agency will continue to work with utilities to incorporate WaterSense promotion as part of their broader conservation efforts, which include behavioral changes as well. EPA 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. EPA will employ articles, promotional material templates, and other cost-effective marketing tactics to educate consumers and building managers 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 and facility managers.

In FY 2010, the Agency will release its first voluntary specification for a commercial-type product--water-efficient urinals. This will be the first of several specifications for water-using products in the commercial sector. Additional specifications will be developed based on research done and input gathered in FY 2009. Additional future product and service categories include 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 that provides benchmark criteria for water-efficient new homes and spurs water-efficiency in construction of new homes. With program growth, WaterSense anticipates launching its New Homes program and recruiting builders into the partnership program.

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 to sustain communities, encourage and support green infrastructure, and preserve and create jobs;

- Linking projects to environmental results through the use of water quality and public health data;

- Maintaining the excellent fiduciary condition of the funds;

- Continuing to support states' efforts in developing integrated priority lists to address nonpoint source pollution, estuary protection, and wastewater projects; and

- Working with state and local partners to develop a sustainability policy including management and pricing to encourage conservation and to provide adequate long-term funding for future capital needs.

The OMB-reviewed Clean Watersheds Needs Survey (CWNS) Report to Congress documents needs and provides technical information for publicly-owned wastewater collection and

treatment facilities, combined sewer overflows (CSOs), control facilities, stormwater management facilities, and other water pollution control. The information used to produce the CWNS Report to Congress will support funding prioritization and outreach activities as well as support permitting and other watershed-based management activities.

The Agency also will provide oversight and support for 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of high priority EPA and state NPDES permits that are reissued on schedule.	119	95	95	95	Percent Permits

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Loading (pounds) of pollutants removed per program dollar expended.	332	332	368	371	Pounds of Pollutants

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of waters assessed using statistically valid surveys.	65	65	65	82	Percent Waters

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of TMDLs that are established or approved by EPA [Total TMDLs] on a schedule consistent with national policy (cumulative). A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms “approved”	35,979	33,801	38,978	41,992	Number of TMDLs

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	and "established" refer to the completion and approval of the TMDL itself.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of submissions of new or revised water quality standards from States and Territories that are approved by EPA.	92.5	87	85	85	Percent State/Terr Submissions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	2,165	1,550	2,270	2,525	Number of Segments

Note: A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion of the TMDL itself and not necessarily its implementation.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$5,000.0) This reflects an increase to provide additional technical and financial assistance to states to accelerate the pace of state adoption of numerical nutrient water quality standards, and also enable EPA to address the additional legal work they will require.

- (+$810.0/ +6.0 FTE) This reflects an increase for the increased workload associated with administering the larger Clean Water State Revolving Fund grant program which includes payroll for 6.0 additional FTE.

- (+$353.0) This reflects an increase in travel for additional responsibilities in program administration.

- (+$40.0) This reflects an increase in administrative needs associated with the increase to the Clean Water State Revolving Fund.

- (-$60.0) This reflects a reduction of funding for FY 2009 E-Gov needs.

- (+$912.0) This reflects an increase to support increased workload, particularly in the NPDES permits area due to new regulations for CAFO, stormwater, pesticides, and vessel discharge.

- (+$5,610.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

CWA.

Table of Contents - Inspector General

Resource Summary Table **501**
Program Projects in IG **501**
Program Area: Audits, Evaluations And Investigations **502**
Audits, Evaluations, and Investigations 503

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

APPROPRIATION: Inspector General
Resource Summary Table
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Inspector General				
Budget Authority	$41,896.5	$44,791.0	$44,791.0	$0.0
Total Workyears	224.6	271.4	296.0	24.6

Bill Language: Office of Inspector General

For necessary expenses of the Office of Inspector General in carrying out the provisions of the Inspector General Act of 1978, as amended, $44,791,000, to remain available until September 30, [2010] 2011.

Program Projects in IG
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Audits, Evaluations, and Investigations				
Audits, Evaluations, and Investigations	$41,896.5	$44,791.0	$44,791.0	$0.0
Subtotal, Audits, Evaluations, and Investigations	$41,896.5	$44,791.0	$44,791.0	$0.0
TOTAL, EPA	$41,896.5	$44,791.0	$44,791.0	$0.0

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Inspector General	***$41,896.5***	***$44,791.0***	***$44,791.0***	***$0.0***
Hazardous Substance Superfund	$12,037.8	$9,975.0	$9,975.0	$0.0
Total Budget Authority / Obligations	$53,934.3	$54,766.0	$54,766.0	$0.0
Total Workyears	287.1	331.8	361.8	30.0

Program/Project Description:

EPA's Office of Inspector General (OIG) provides audit, evaluation, and investigative 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 management identify and resolve risks and challenges, opportunities for savings, and implement actions 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, contract 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 2010 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 2010, the OIG will continue focusing on areas associated with risk, fraud, and waste, and will make recommendations to improve operating efficiency leading to the cost effective attainment of EPA's strategic goals and positive environmental impacts. The OIG plans to examine issues related to research, follow-up on OIG recommendations, grants and contracts, homeland security, internal controls/risk assessment, manpower assessment, enforcement/regulation review, program management/measurement data verification, project management, effective resource management/accountability, and more effective and efficient program mission delivery.

Audits

Audits will be focused in five areas: (1) assistance agreements and contracts; (2) financial statement audits and audits of Agency financial systems; (3) risk assessment, internal controls, and program performance; (4) forensic audits of EPA grantees and contractors, and (5) efficiencies in Agency operations. Planned work will emphasize:

- direct testing for fraud in grants, contracts and operational activities;
- cost savings resulting from audits of grantee and contractor claims;
- evaluating the quality of data in EPA systems used for administrative management and environmental decision-making;
- EPA's use of recognized information technology project management practices to identify opportunities for ensuring investments in technology to achieve desired outcomes;
- continued improvements in assistance agreement and contract administration;
- EPA's preparation of timely, informative financial statements;
- EPA's use of financial and program performance information, including efficiency measures, to identify cost savings, reduce risks, and maximize results achieved from its environmental programs; and
- review of EPA's risk assessment processes, and allocation/application of human resources.

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 are conducted through five product lines: (1) air and research; (2) land and Superfund; (3) water and enforcement; (4) cross-media, and (5) special reviews. Specific areas of evaluation will include a determination of:

Research**:** Whether EPA is effectively and efficiently planning, managing, conducting, and overseeing research and its by-products to address the Agency's current and future needs and to safeguard the public from hazardous risks.

Air Toxics**:** Whether EPA is obtaining sufficient data that are both valid and reliable to measure performance and guide decision-making, as well as assessing and managing risks to provide reasonable assurance of progress towards goals and provide adequate protection to the public.

Protecting Water Quality**:** How well EPA is protecting water quality through core water Programs.

Health of Aquatic Systems**:** How EPA can effectively protect and restore sustainable healthy

aquatic communities and ensure waters that are protective of human health.
Enforcement**:** How well EPA is carrying out its enforcement program in terms of effectiveness and consistency.

Management and Performance: How efficient and effective the management of EPA Programs is, and whether EPA has sufficient and effective internal controls in place to ensure the integrity of its systems and processes.

Toxic Substances: How effectively EPA's internal controls and enforcement efforts of the new chemicals program meet the intentions of the Toxic Substances Control Act (TSCA).

Homeland Security: How effectively EPA can perform its mission during a pandemic.

Investigations

The majority of investigative work is reactive in nature. In prioritizing our work, we evaluate allegations to determine which investigations may have the greatest impact on Agency funds, the integrity of EPA programs and operations, and produce the greatest deterrent effect. Investigations assist EPA in meeting its strategic goals by helping to protect the Agency's scarce resources from fraudulent or criminal activities, so that they can be used to protect the environment and human health.

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 financial activities in the award, performance, and payment of funds under EPA contracts, grants, and other assistance agreements to individuals, companies, and organizations; (2) intrusions into and attacks against EPA's network, as well as incidents of computer misuse and theft of intellectual property or sensitive data; (3) infrastructure/terrorist threat; (4) criminal activity or serious misconduct affecting EPA program integrity or involving EPA personnel which could undermine or erode the public trust; (5) laboratory fraud relating to payments made by EPA for compromised environmental testing data and results that could undermine the bases for EPA decision-making, regulatory compliance, and enforcement actions; and (6) release of, unauthorized access to, or use of sensitive or proprietary information.

Follow-up and Policy/Regulatory Analysis

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.

Also, as directed by the IG Act, the OIG conducts reviews and analysis of proposed and existing policies, rules, regulations and legislation to identify vulnerability to waste, fraud and abuse.

These reviews also consider possible duplication, gaps or conflicts with existing authority, leading to recommendations for improvements in their structure, content and application.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Environmental and business actions taken for improved performance or risk reduction.	463	334	318	334	Actions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations.	186	150	120	120	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Environmental and business recommendations or risks identified for corrective action.	624	971	903	950	Recommendations

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Criminal, civil, administrative, and fraud prevention actions.	84	80	80	75	Actions

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$845.0K) This reflects an increase for payroll and cost of living for existing FTE.
- (-$845.0K) This reflects a decrease to primarily contract nonpayroll resources. The decrease will not negatively impact program objectives.
- (+24.6 FTE) Staff level increases to enhance the OIG's capability for program oversight.

Statutory Authority:

Inspector General Act, as amended; Inspector General Reform Act; Reports Consolidation Act; Single Audit Act; CFO Act; GMRA; PRIA; RCRA; FFMIA; FISMA; FQPA.

Inspector General Reform Act:

Following the requirements of the Inspector General Reform Act, the OIG of the Environmental Protection Agency submits the following information relating to the OIG's requested budget for FY 2010:

- the aggregate budget request for the operations of the OIG is $54,766,000 ($44,791,000 Inspector General; $9,975,000 Superfund Transfer),
- the portion of this amount needed for OIG training is $1,000,000, and
- the portion of this amount needed to support the Council of the Inspectors General on Integrity and Efficiency (CIGIE) is $131,000.

I certify as the IG of the Environmental Protection Agency that the amount I have requested for training satisfies all OIG training needs for FY 2010.

Table of Contents - Buildings and Facilities

Resource Summary Table **510**
Program Projects in B&F **510**
Program Area: Homeland Security **511**
Homeland Security: Protection of EPA Personnel and Infrastructure 512
Program Area: Operations and Administration **514**
Facilities Infrastructure and Operations 515

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

APPROPRIATION: Building and Facilities
Resource Summary Table
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Building and Facilities				
Budget Authority	$36,307.4	$35,001.0	$37,001.0	$2,000.0
Total Workyears	0.0	0.0	0.0	0.0

Bill Language: Buildings and Facilities

For construction, repair, improvement, extension, alteration, and purchase of fixed equipment or facilities of, or for use by, the Environmental Protection Agency, [$35,001,000] $37,001,000, to remain available until expended.

Program Projects in B&F
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Homeland Security				
Homeland Security: Protection of EPA Personnel and Infrastructure	$8,225.9	$8,070.0	$8,070.0	$0.0
Operations and Administration				
Facilities Infrastructure and Operations	$28,081.5	$26,931.0	$28,931.0	$2,000.0
Subtotal, Facilities Infrastructure and Operations	$28,081.5	$26,931.0	$28,931.0	$2,000.0
TOTAL, EPA	$36,307.4	$35,001.0	$37,001.0	$2,000.0

Program Area: Homeland Security

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$5,462.5	$6,292.0	$6,414.0	$122.0
Science & Technology	$1,428.1	$587.0	$594.0	$7.0
Building and Facilities	***$8,225.9***	***$8,070.0***	***$8,070.0***	***$0.0***
Hazardous Substance Superfund	$585.0	$1,194.0	$1,194.0	$0.0
Total Budget Authority / Obligations	$15,701.5	$16,143.0	$16,272.0	$129.0
Total Workyears	2.9	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 in the event of an emergency to help safeguard staff 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 2010 Activities and Performance Plan:

In FY 2010, the Agency will continue to implement the Smart Card program 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 that new construction, new leases, and major modernization projects meet Federal physical security requirements, expand or realign existing laboratories for homeland security support activities, and protect critical infrastructures.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$296,235.0	$303,884.0	$320,612.0	$16,728.0
Science & Technology	$69,239.2	$73,835.0	$72,882.0	($953.0)
Building and Facilities	***$28,081.5***	***$26,931.0***	***$28,931.0***	***$2,000.0***
Leaking Underground Storage Tanks	$890.3	$902.0	$903.0	$1.0
Oil Spill Response	$498.6	$596.0	$498.0	($98.0)
Hazardous Substance Superfund	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Total Budget Authority / Obligations	$467,188.5	$482,398.0	$502,423.0	$20,025.0
Total Workyears	400.4	410.6	411.1	0.5

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 thousand must use B&F funding. Deferring maintenance often increases the eventual cost of maintenance projects and may worsen other repair issues.

FY 2010 Activities and Performance Plan:

The resources requested will help to improve operating efficiency, sustain safe work environments, and encourage the use of new 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 as 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. EPA will further emphasize on improving operating efficiency and encouraging the use of new, advanced technologies and energy sources. EPA will continue to direct resources

towards acquiring and adopting measures to improve energy efficiency, reduce greenhouse gas emissions, reduce energy intensity, and meet the goals set by Executive Order (EO) 13423.[1] In particular, EPA will employ re-commissioning initiatives, and sustainable building design in Agency construction and alteration projects.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,000.0) This increase provides additional funding for the upgrade of labs' safety and power facilities in order for EPA to continue meeting the three percent annual energy intensity reduction targets set for Federal facilities in compliance with Executive Order 13423, which in turn contributes to the reduction of Green House Gas emissions.

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; Energy Policy Act 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).

[1] Information available at http://www.fedcenter.gov/programs/eo13423/, *Strengthening Federal Environmental, Energy, and Transportation Management*.

ENVIRONMENTAL PROTECTION AGENCY
2010 Annual Performance Plan and Congressional Justification

Table of Contents - Superfund

Resource Summary Table **519**
Program Projects in Superfund **519**
Program Area: Air Toxics And Quality **522**
Radiation: Protection 523
Program Area: Audits, Evaluations And Investigations **525**
Audits, Evaluations, and Investigations 526
Program Area: Compliance **529**
Compliance Assistance and Centers 530
Compliance Incentives 531
Compliance Monitoring 533
Program Area: Enforcement **535**
Environmental Justice 536
Superfund: Enforcement 538
Superfund: Federal Facilities Enforcement 542
Criminal Enforcement 544
Enforcement Training 547
Forensics Support 549
Program Area: Homeland Security **551**
Homeland Security: Critical Infrastructure Protection 552
Homeland Security: Preparedness, Response, and Recovery 554
Homeland Security: Protection of EPA Personnel and Infrastructure 558
Program Area: Information Exchange / Outreach **560**
Exchange Network 561
Program Area: IT / Data Management / Security **564**
Information Security 565
IT / Data Management 567
Program Area: Legal / Science / Regulatory / Economic Review **571**
Alternative Dispute Resolution 572
Legal Advice: Environmental Program 573
Program Area: Operations and Administration **574**
Facilities Infrastructure and Operations 575
Financial Assistance Grants / IAG Management 578
Acquisition Management 580
Human Resources Management 582
Central Planning, Budgeting, and Finance 584
Program Area: Research: Human Health And Ecosystems **586**
Human Health Risk Assessment 587
Program Area: Research: Land Protection **591**
Research: Land Protection and Restoration 592
Program Area: Research: Sustainability **596**
Research: Sustainability 597
Program Area: Superfund Cleanup **598**
Superfund: Emergency Response and Removal 599

Superfund: EPA Emergency Preparedness..... 602
Superfund: Federal Facilities..... 604
Superfund: Remedial..... 608
Superfund: Support to Other Federal Agencies 614

APPROPRIATION: Hazardous Substance Superfund
Resource Summary Table
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund				
Budget Authority	$1,425,588.8	$1,285,024.0	$1,308,541.0	$23,517.0
Total Workyears	3,066.4	3,202.1	3,193.3	-8.8

Bill Language: Hazardous Substance Superfund
(including transfers of funds)

For necessary expenses to carry out the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, including sections 111(c)(3), (c)(5), (c)(6), and (e)(4) (42 U.S.C. 9611) [$1,285,024,000] $1,308,541,000, to remain available until expended, consisting of such sums as are available in the Trust Fund on September 30, [2008] 2009, as authorized by section 517(a) of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and up to [$1,285,024,000] $1,308,541,000 as a payment from general revenues to the Hazardous Substance Superfund for purposes as authorized by section 517(b) of SARA, as amended: Provided, That funds appropriated under this heading may be allocated to other Federal agencies in accordance with section 111(a) of CERCLA: Provided further, That of the funds appropriated under this heading, [$9,975,000] $9,975,000 shall be paid to the "Office of Inspector General" appropriation to remain available until September 30, [2010] 2011, and [$26,417,000] $26,834,000 shall be paid to the "Science and Technology" appropriation to remain available until September 30, [2010] 2011.

Program Projects in Superfund
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Air Toxics and Quality				
Radiation: Protection	$2,165.0	$2,295.0	$2,596.0	$301.0
Audits, Evaluations, and Investigations				
Audits, Evaluations, and Investigations	$12,037.8	$9,975.0	$9,975.0	$0.0
Compliance				
Compliance Assistance and Centers	$33.1	$22.0	$0.0	($22.0)
Compliance Incentives	$58.7	$137.0	$0.0	($137.0)
Compliance Monitoring	$1,251.3	$1,192.0	$1,247.0	$55.0
Subtotal, Compliance	$1,343.1	$1,351.0	$1,247.0	($104.0)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Enforcement				
Environmental Justice	$502.1	$818.0	$822.0	$4.0
Superfund: Enforcement	$168,674.1	$166,148.0	$173,176.0	$7,028.0
Superfund: Federal Facilities Enforcement	$9,124.8	$9,872.0	$10,378.0	$506.0
Civil Enforcement	$591.0	$0.0	$0.0	$0.0
Criminal Enforcement	$7,687.0	$7,767.0	$8,336.0	$569.0
Enforcement Training	$785.1	$793.0	$851.0	$58.0
Forensics Support	$2,629.1	$2,378.0	$2,471.0	$93.0
Subtotal, Enforcement	$189,993.2	$187,776.0	$196,034.0	$8,258.0
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
Decontamination	$181.4	$198.0	$198.0	$0.0
Homeland Security: Critical Infrastructure Protection (other activities)	$1,584.9	$1,538.0	$1,626.0	$88.0
Subtotal, Homeland Security: Critical Infrastructure Protection	$1,766.3	$1,736.0	$1,824.0	$88.0
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	$8,153.4	$10,613.0	$10,774.0	$161.0
Laboratory Preparedness and Response	$3,792.6	$9,588.0	$9,621.0	$33.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$33,337.2	$33,440.0	$33,148.0	($292.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$45,283.2	$53,641.0	$53,543.0	($98.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	$585.0	$1,194.0	$1,194.0	$0.0
Subtotal, Homeland Security	$47,634.5	$56,571.0	$56,561.0	($10.0)
Information Exchange / Outreach				
Congressional, Intergovernmental, External Relations	$145.9	$0.0	$0.0	$0.0
Exchange Network	$1,429.8	$1,433.0	$1,433.0	$0.0
Subtotal, Information Exchange / Outreach	$1,575.7	$1,433.0	$1,433.0	$0.0
IT / Data Management / Security				
Information Security	$474.6	$783.0	$799.0	$16.0
IT / Data Management	$15,929.7	$16,896.0	$17,124.0	$228.0
Subtotal, IT / Data Management / Security	$16,404.3	$17,679.0	$17,923.0	$244.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Legal / Science / Regulatory / Economic Review				
Alternative Dispute Resolution	$776.9	$874.0	$895.0	$21.0
Legal Advice: Environmental Program	$802.4	$708.0	$746.0	$38.0
Subtotal, Legal / Science / Regulatory / Economic Review	$1,579.3	$1,582.0	$1,641.0	$59.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$44,867.0	$45,353.0	$44,300.0	($1,053.0)
Utilities	$1,176.7	$3,042.0	$3,397.0	$355.0
Security	$6,392.7	$6,524.0	$8,299.0	$1,775.0
Facilities Infrastructure and Operations (other activities)	$19,807.5	$21,331.0	$22,601.0	$1,270.0
Subtotal, Facilities Infrastructure and Operations	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Financial Assistance Grants / IAG Management	$3,044.7	$3,168.0	$3,283.0	$115.0
Acquisition Management	$20,705.1	$24,361.0	$23,229.0	($1,132.0)
Human Resources Management	$4,681.2	$5,386.0	$8,068.0	$2,682.0
Central Planning, Budgeting, and Finance	$20,861.5	$25,478.0	$26,746.0	$1,268.0
Subtotal, Operations and Administration	$121,536.4	$134,643.0	$139,923.0	$5,280.0
Research: Human Health and Ecosystems				
Human Health Risk Assessment	$6,799.6	$3,377.0	$3,395.0	$18.0
Research: Land Protection				
Research: Land Protection and Restoration	$19,392.9	$20,905.0	$21,401.0	$496.0
Research: Sustainability				
Research: Sustainability	$99.7	$79.0	$0.0	($79.0)
Superfund Cleanup				
Superfund: Emergency Response and Removal	$223,136.3	$195,043.0	$202,843.0	$7,800.0
Superfund: EPA Emergency Preparedness	$9,608.7	$9,442.0	$9,791.0	$349.0
Superfund: Federal Facilities	$33,558.3	$31,306.0	$32,203.0	$897.0
Superfund: Remedial	$726,765.3	$604,992.0	$605,000.0	$8.0
Superfund: Support to Other Federal Agencies	$4,888.0	$6,575.0	$6,575.0	$0.0
Brownfields Projects	$7,070.7	$0.0	$0.0	$0.0
Subtotal, Brownfields Projects	$7,070.7	$0.0	$0.0	$0.0
Subtotal, Superfund Cleanup	$1,005,027.3	$847,358.0	$856,412.0	$9,054.0
TOTAL, EPA	$1,425,588.8	$1,285,024.0	$1,308,541.0	$23,517.0

Program Area: Air Toxics And Quality

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

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$10,820.8	$10,957.0	$11,272.0	$315.0
Science & Technology	$2,069.1	$2,156.0	$2,242.0	$86.0
Hazardous Substance Superfund	***$2,165.0***	***$2,295.0***	***$2,596.0***	***$301.0***
Total Budget Authority / Obligations	$15,054.9	$15,408.0	$16,110.0	$702.0
Total Workyears	85.8	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 2010 Activities and Performance Plan:

In FY 2010, 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 laboratories 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. Both laboratories also provide specialized technical support on-site including field measurement capability using unique capabilities and tools. In addition, both laboratories 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 in-situ analysis, and air sampling equipment and expert personnel.

EPA recently developed several outcome-oriented strategic and annual performance measures for this program in response to OMB recommendations. The measures all have baseline data and some historical data which provide a benchmark to assist in the development of the outyear targets.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	92	85	90	95	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP.	50	46	53	53	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Population covered by Radiation Protection Program monitors per million dollars invested.	4,536,000	4,729,000	5,254,000	5,254,000	Dollars

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.

FY 2010 Change from FY 2009 Enacted (Dollars in Thousands):

- (+$301.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Inspector General	$41,896.5	$44,791.0	$44,791.0	$0.0
Hazardous Substance Superfund	***$12,037.8***	***$9,975.0***	***$9,975.0***	***$0.0***
Total Budget Authority / Obligations	$53,934.3	$54,766.0	$54,766.0	$0.0
Total Workyears	287.1	331.8	361.8	30.0

Program/Project Description:

EPA's Office of Inspector General (OIG) provides audit, evaluation, and investigative 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 management identify and resolve risks and challenges, opportunities for savings, and implement actions 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, contract lab fraud, and cyber crime.

FY 2010 Activities and Performance Plan:

The EPA OIG will assist the Agency in its efforts to reduce environmental and human health risks and save taxpayer dollars by helping to improve Superfund program operations and resolve major management challenges. In FY 2010, the OIG will continue focusing on land restoration and reuse, verification of data used to support actions and reported results, as well as areas associated with risk, fraud, and waste. The OIG will further 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. Major themes of OIG assignments will include: internal controls to determine their adequacy both within EPA and its grantees and contractors; project management to ensure that EPA and its grantees have clear plans and accountability for performance progress; enforcement to evaluate whether there is consistent, adequate and appropriate application of the laws and regulations across jurisdictions with coordination between federal, state and local law enforcement activities; grants and

contracts to verify that grants are made based upon uniform risk assessment and capacity to account and perform, and that contractors for the grantees perform with integrity and value.

Audits and Evaluations

OIG audits and evaluations related to the Superfund program will identify program and management risks and determine if EPA is 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. Therefore, the OIG will review: (1) EPA's management of Superfund special accounts; (2) billing and collection of Superfund fines and penalties; (3) funds obligated for Superfund cooperative agreements with selected states; (4) long-term safety at Superfund Federal facilities; (5) efforts to address vapor intrusion at Superfund and Brownfield sites, and (6) independent site sampling. 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 also focus on identifying criminal activity pertaining to the Superfund program. The OIG will conduct investigations into allegations, and seek prosecution of: 1) fraudulent practices in awarding, performing, 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) contract laboratory fraud relating to Superfund data, and 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.

Follow-up and Policy/Regulatory Analysis

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 informed of accomplishments and apprised of needed corrective actions, and will facilitate greater accountability for results from OIG operations. For example, in FY 2008 we identified and reported to EPA 14 unimplemented Superfund related recommendations, of which 8 were subsequently implemented for operational improvements. This oversight over the Agency audit

management process ensures that action on all opportunities for and improvements identified through OIG reports are appropriately taken.

Also, as directed by the IG Act, the OIG conducts reviews and analysis of proposed and existing policies, rules, regulations and legislation to identify vulnerability to waste, fraud and abuse. These reviews also consider possible duplication, gaps or conflicts with existing authority, leading to recommendations for improvements in their structure, content and application.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$583.0K) 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.

- (+$583.0K) This reflects an increase to primarily contract nonpayroll resources.

- (+5.4 FTE) Staff level increases to enhance the OIG's capability for program oversight.

Statutory Authority:

Inspector General Act, as amended; Inspector General Reform Act; SARA; CERCLA; TSCA.

Inspector General Reform Act:

Following the requirements of the Inspector General Reform Act, the OIG of the Environmental Protection Agency submits the following information relating to the OIG's requested budget for FY 2010:

- the aggregate budget request for the operations of the OIG is $54,766,000 ($44,791,000 Inspector General; $9,975,000 Superfund Transfer),
- the portion of this amount needed for OIG training is $1,000,000, and
- the portion of this amount needed to support the Council of the Inspectors General on Integrity and Efficiency (CIGIE) is $131,000.

I certify as the IG of the Environmental Protection Agency that the amount I have requested for training satisfies all OIG training needs for FY 2010.

Program Area: Compliance

Compliance Assistance and Centers
Program Area: Compliance
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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$28,063.5	$23,770.0	$26,070.0	$2,300.0
Leaking Underground Storage Tanks	$787.5	$817.0	$788.0	($29.0)
Oil Spill Response	$285.3	$277.0	$317.0	$40.0
Hazardous Substance Superfund	***$33.1***	***$22.0***	***$0.0***	***($22.0)***
Total Budget Authority / Obligations	$29,169.4	$24,886.0	$27,175.0	$2,289.0
Total Workyears	197.0	181.1	180.1	-1.0

Program Project Description:

EPA's compliance assistance programs provide information to millions of regulated entities, Federal agencies, particularly small businesses and local governments, to help them understand and meet their environmental obligations. This information lets regulated entities know of their legal obligations under federal environmental laws. Compliance assistance resources include comprehensive Web sites, compliance guides, emission calculators, and training materials aimed at specific business communities or industry sectors. Also, onsite compliance assistance and information is sometimes provided by EPA inspectors during an inspection.

FY 2010 Activities and Performance Plan:

The activities previously funded from the Superfund appropriation under this program for supporting ICIS are consolidated with the rest of the Agency's ICIS Superfund budget in the Compliance Monitoring program. No new activity or funding is planned for this program under the Superfund appropriation.

Performance Targets:

Currently there are no specific performance measures for this program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$22.0) This decrease reflects the consolidation of the Superfund portion of ICIS under the Compliance Monitoring program.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NEPA; NAAEC; LPA-US/MX-BR.

Compliance Incentives
Program Area: Compliance
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$10,250.7	$8,992.0	$10,702.0	$1,710.0
Hazardous Substance Superfund	***$58.7***	***$137.0***	***$0.0***	***($137.0)***
Total Budget Authority / Obligations	$10,309.4	$9,129.0	$10,702.0	$1,573.0
Total Workyears	68.1	61.8	69.4	7.6

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., educating regulated entities how to comply with often complex regulations), compliance monitoring (i.e., identifying existing violations through on-site inspections, investigations, and collection and analysis of compliance data), compliance incentives (i.e., motivating regulated facilities/companies to identify, disclose, and correct violations), 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. EPA uses a variety of approaches to encourage entities to self-disclose environmental violations under various environmental statutes. EPA's Audit Policy encourages internal audits of environmental compliance and subsequent correction of self-discovered violations, providing a uniform enforcement response toward disclosures of violations and accelerating compliance.

FY 2010 Activities and Performance Plan:

The activities previously funded from the Superfund appropriation under this program for supporting ICIS are consolidated with the rest of the Agency's ICIS Superfund budget in the Compliance Monitoring program.

No new activity or funding is planned for this program under the Superfund appropriation.

Performance Targets:

Currently there are no specific performance measures for this program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$126.0 \ -0.9 FTE) These resources are being realigned to support the Agency's priorities in the Superfund Enforcement program.
- (-$11.0) This decrease reflects the consolidation of the Superfund portion of ICIS under the Compliance Monitoring program.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$92,048.1	$96,064.0	$99,859.0	$3,795.0
Hazardous Substance Superfund	***$1,251.3***	***$1,192.0***	***$1,247.0***	***$55.0***
Total Budget Authority / Obligations	$93,299.4	$97,256.0	$101,106.0	$3,850.0
Total Workyears	600.6	623.0	612.3	-10.7

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 2010 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 2010, 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 2010, the Superfund portion of this program for ICIS-related work is $ .19 million.

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[1]. 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 thousand queries per month.

[1] For more information, refer to: http://www.epa-echo.gov/echo/

The Superfund program contributes to the following agency wide performance measures.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate air pollutants through concluded enforcement actions.				480	Million Pounds
Outcome	Reduce, treat, or eliminate water pollutants through concluded enforcement actions.				320	Million Pounds
Outcome	Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.				3.8	Million Pounds
Outcome	Reduce, treat, or eliminate hazardous waste through concluded enforcement actions.				6,500	Million Pounds

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$12.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$17.0) This reflects an increase for IT and telecommunications resources.
- (+$33.0) These funds are being transferred from the Compliance Assistance Centers and Compliance Incentives programs to align all Superfund ICIS related funding to one program.
- (-$7.0) This reflects a redirection to support increased IT and telecommunication costs.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA.

Program Area: Enforcement

Environmental Justice
Program Area: Enforcement
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$4,332.1	$6,993.0	$7,203.0	$210.0
Hazardous Substance Superfund	***$502.1***	***$818.0***	***$822.0***	***$4.0***
Total Budget Authority / Obligations	$4,834.2	$7,811.0	$8,025.0	$214.0
Total Workyears	21.5	20.9	32.9	12.0

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. The Superfund portion of the program focuses on issues that affect communities at or near Superfund sites. 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 complements and enhances the community outreach work done under the Superfund program at affected sites. 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.[2]

FY 2010 Activities and Performance Plan:

In FY 2010, 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. EPA will also continue to manage its Environmental Justice Small Grants program, which assists community-based organizations in developing solutions to local environmental issues.

[2] For more information on the Environmental Justice program, please refer to: www.epa.gov/compliance/environmentaljustice/index.html.

Performance Targets:

Work under this program supports the Healthy Communities objective 4.2.2. In FY 2010, eight communities with potential environmental justice concerns will achieve significant measurable environmental or public health improvement through collaborative problem-solving strategies. However, measure(s) pertaining to environmental justice are under review and may be modified in the coming months.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$23.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$19.0) This reflects a decrease in grant resources.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund	***$168,674.1***	***$166,148.0***	***$173,176.0***	***$7,028.0***
Total Budget Authority / Obligations	$168,674.1	$166,148.0	$173,176.0	$7,028.0
Total Workyears	919.3	957.2	949.9	-7.3

Program Project Description:

EPA's Superfund enforcement program ensures prompt site cleanup and uses an "enforcement first" approach that maximizes the participation of liable and viable parties in performing and paying for cleanups. In both remedial and removal programs, the Superfund enforcement program includes nationally significant or precedential civil, judicial, and administrative site remediation cases, and provides legal and technical enforcement support on Superfund enforcement actions and emerging issues. The Superfund enforcement program also develops waste cleanup enforcement policies, and provides guidance and tools that clarify potential environmental cleanup liability with specific attention to the reuse and revitalization of contaminated properties, including Brownfield properties.

EPA negotiates cleanup 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. In some cases, EPA takes both actions. When EPA uses appropriated Trust Fund dollars, the Superfund Enforcement program takes action against any viable 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, 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 sustains the "polluter pays" principle, cleans up more sites, and preserves appropriated dollars for sites without viable PRPs. Since the program's inception, EPA has achieved more than eight dollars in private party cleanup commitments and cost recovery for every dollar spent by EPA on Superfund enforcement costs. The cumulative value of private

party commitments is more than $29 billion ($24.3 billion for cleanup work and $4.9 billion in cost recovery).

FY 2010 Activities and Performance Plan:

Throughout FY 2010, 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 a remedial action starts 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 $.2 million. The Agency also will continue efforts to recover past costs at sites where total costs are below $.2 million in the most cost-efficient manner possible.

In FY 2010, 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 (or both). When appropriated dollars are used to clean up sites, the program will recover the associated cleanup costs from the PRPs. If future work remains at a site, recovered funds could be placed in a site-specific special account. Special accounts are sub-accounts within the Trust Fund which 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. The Agency also will continue its efforts to establish and use special accounts to facilitate cleanup, improve tracking and plan the use of special account funds. Through the end of FY 2008, more than 860 site-specific special accounts have been established and over $2.7 billion have been deposited into special accounts (including earned interest). Approximately $1.4 billion from special accounts has been used by EPA for site response actions.

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 enforcement program will help oversee the implementation and enforcement of institutional controls as part of its remedies, focusing particularly on sites where construction of engineered remedies has been completed.

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.[3] 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.

[3] For more information about EPA's Superfund enforcement program, and its various components, refer to: www.epa.gov/compliance/cleanup/superfund/.

In FY 2010, the Agency will provide the DOJ with $25.6 million, through an Interagency Agreement, 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.

During FY 2010, 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 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA.	100	95	95	95	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	100	100	100	100	Percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	$200,000 and report value of costs 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$7,198.0) This reflects an increase for payroll and cost of living for all FTE.
- (-$170.0) This reflects a decrease for IT and telecommunications and other support cost resources.
- (-7.3 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. This decrease will not impede program goals.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund	***$9,124.8***	***$9,872.0***	***$10,378.0***	***$506.0***
Total Budget Authority / Obligations	$9,124.8	$9,872.0	$10,378.0	$506.0
Total Workyears	60.4	72.8	67.5	-5.3

Program Project Description:

The Superfund Federal Facilities Enforcement program ensures that sites with Federal entities performing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response and CERCLA sites with Federal ownership are monitored and appropriate enforcement responses are pursued. 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 2010 Activities and Performance Plan:

Pursuant to the CERCLA Section 120, EPA will enter into interagency agreements (IAs) with responsible Federal entities to ensure protective cleanup at a timely pace. Priority areas for FY 2010 include ensuring that: 1) all Federal facility sites on the National Priorities List have IAs, which provide enforceable schedules for the progression of the entire cleanup; 2) these IAs are monitored for compliance; 3) formerly utilized defense sites and mines with Federal involvement are evaluated for action; and 4) Federal sites that are transferred to new owners are transferred in an environmentally responsible manner. EPA also will monitor milestones in existing IAs, resolve disputes, and oversee all remedial work being conducted at Federal facilities. EPA also works to ensure that required legally enforceable institutional controls and five-year review requirements are in place at Superfund sites to ensure the long-term protectiveness of cleanup actions. EPA also will continue its work with affected agencies to resolve outstanding policy issues relating to the cleanup of Federal facilities.

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 the Restore Land and Improve Compliance objective, although currently no specific performance measures exist for the program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$468.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$38.0) This reflects an increase for contracts.
- (-5.3 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. These resources will be redirected to the Civil Enforcement program in order to pursue national priority cases (Air priority, RCRA priority Water priority, etc.), reducing the amount of illegal pollution, and bringing regulated entities into compliance with the nation's environmental laws.

Statutory Authority:

CERCLA; SBLRBRERA; DBCRA; Defense Authorization Amendments; BRAC; PPA; CERFA; NEPA; AEA; UMTRLWA; PHSA; DRAA; SDWA; Executive Order 12241; Executive Orders 12656 and 12580.

Criminal Enforcement
Program Area: Enforcement
Goal: Compliance and Environmental Stewardship
Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$40,128.8	$45,763.0	$49,399.0	$3,636.0
Hazardous Substance Superfund	***$7,687.0***	***$7,767.0***	***$8,336.0***	***$569.0***
Total Budget Authority / Obligations	$47,815.8	$53,530.0	$57,735.0	$4,205.0
Total Workyears	254.8	281.1	291.8	10.7

Program Project Description:

EPA's 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 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 may then request 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.[4]

FY 2010 Activities and Performance Plan:

In FY 2010, the criminal enforcement program will continue to investigate and assist in the prosecution of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – related cases with significant environmental, human health, and deterrence impact. The program will increase the number of agents to complete its three-year hiring strategy of

[4] For more information visit: http://www.epa.gov/compliance/criminal/index.html.

raising its special agent workforce to 200 criminal investigators. With these resources, the program will expand its capacity in supporting efforts to address complex environmental cases.

The criminal enforcement program will emphasize six priority areas: national compliance and enforcement priorities, regional enforcement priorities, stationary source air cases, high impact cases based upon specific criteria, repeat or chronic civil noncompliance, and import/export violations. Working with its Federal, state and local law enforcement partners, EPA's criminal enforcement emphasis on these priorities will yield greater environmental and public health benefits and deter illegal corporate and individual behavior.

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 employing 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 program 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 2010, the program will use data from the electronic Criminal Case Reporting System. 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 Agencywide, program-specific or Regional enforcement priorities. 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 Web site. Established in 2006, the Web site has resulted in two successful prosecutions of criminal enforcement cases initiated by public feedback.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of recidivism.				<1%	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of closed cases with criminal enforcement consequences (indictment, conviction, fine, or penalty).				33%	Percentage

During FY 2010, the two primary criminal enforcement program performance measures will be:

- recidivism (current measure, with target and baseline established in FY 2008)
- cases with an enforcement consequence (new measure, with target and baseline to be determined)

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$483.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$86.0) This reflects an increase for IT and telecommunications resources.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$2,924.9	$2,938.0	$3,097.0	$159.0
Hazardous Substance Superfund	***$785.1***	***$793.0***	***$851.0***	***$58.0***
Total Budget Authority / Obligations	$3,710.0	$3,731.0	$3,948.0	$217.0
Total Workyears	22.0	20.9	20.8	-0.1

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 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.[5]

FY 2010 Activities and Performance Plan:

In FY 2010, NETI will continue to develop and deliver training 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 materials, and in determining the most effective methods to deliver quality training to the nation's enforcement professionals.

Performance Targets:

Currently there are no specific performance measures for this program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$29.0) This reflects an increase for payroll and cost of living for existing FTE.

[5] For more information, please refer to: http://www.epa.gov/compliance/training/neti/index.html

- (+$29.0) This reflects adjustments for IT and telecommunications resources.

- (-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:

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	$14,042.7	$15,087.0	$15,946.0	$859.0
Hazardous Substance Superfund	***$2,629.1***	***$2,378.0***	***$2,471.0***	***$93.0***
Total Budget Authority / Obligations	$16,671.8	$17,465.0	$18,417.0	$952.0
Total Workyears	96.8	105.8	105.2	-0.6

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 as well as technical expertise for Agency compliance efforts. EPA's National Enforcement Investigations Center (NEIC) is a fully accredited environmental forensics center under International Standards Organization (ISO) 17025, the main standard used by testing and calibration laboratories. NEIC's Accreditation Standard has been customized to cover both laboratory and field activities.

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. 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.[6]

FY 2010 Activities and Performance Plan:

Efforts to stay at the forefront of environmental enforcement in FY 2010 will include continuing to focus on 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.

In FY 2010, NEIC will continue to function under stringent ISO requirements for environmental data measurements to maintain its accreditation. The program also will continue development of

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

emerging technologies in field measurement and laboratory analytical techniques, as well as identification of pollution sources at abandoned Superfund and other waste sites.

Performance Targets:

Currently, no specific performance measures exist for this program project.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$90.0) This reflects an increase for payroll and cost of living for all FTE.
- (+$3.0) This reflects an increase for IT and telecommunications resources.
- (-0.6 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$4,814.4	$6,837.0	$7,014.0	$177.0
Science & Technology	$32,656.7	$19,460.0	$28,329.0	$8,869.0
Hazardous Substance Superfund	***$1,766.3***	***$1,736.0***	***$1,824.0***	***$88.0***
Total Budget Authority / Obligations	$39,237.4	$28,033.0	$37,167.0	$9,134.0
Total Workyears	47.3	49.0	49.0	0.0

Program Project Description:

This program includes 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 also has direct responsibilities pursuant to the National Response Framework (NRF), Emergency Support Functions 10 and 13, and the Oil and Hazardous Materials Annex.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will continue to train all criminal investigators within the Criminal Enforcement, Forensics and Training program 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 Framework (NRF) during a national emergency. Additionally, agents in the Homeland Security program will provide more robust support, involving forensic evidence collection, to the BioWatch, Water Security Initiative, and RadNet programs.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$68.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$20.0) This increase enhances support for training EPA's criminal investigators.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$4,105.3	$3,378.0	$3,443.0	$65.0
Science & Technology	$40,807.3	$43,671.0	$42,409.0	($1,262.0)
Hazardous Substance Superfund	***$45,283.2***	***$53,641.0***	***$53,543.0***	***($98.0)***
Total Budget Authority / Obligations	$90,195.8	$100,690.0	$99,395.0	($1,295.0)
Total Workyears	176.5	174.2	174.2	0.0

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 2010 Activities and Performance Plan:

In FY 2010, 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 2010, EPA and its Federal, state, local, and tribal homeland response partners will continue to develop and participate in a wide range of exercises and trainings designed to test EPA's response capabilities.

- Strengthen the Agency's responder base during large-scale catastrophic incidents by training volunteers of the Response Support Corps (RSC) and members 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 opportunities to participate in exercises and workshops, health and safety training, medical monitoring, and equipment acquisition, as necessary. The focus is on their assigned responsibilities during a response, interactions with the emergency response program personnel, and understanding lines of communication within an IMT.

- Accelerate current efforts to build laboratory capacity and capability to analyze, verify, and validate CWA samples during a nationally significant incident. The Agency will maintain and operate existing fixed CWA labs and a Portable High-Throughput Integrated Laboratory Identification System (PHILIS) unit. A recent analysis, conducted by the Department of Homeland Security (DHS), 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 upgrade two existing PHILIS units to enhance the Agency's mobile analytical capability for CWA and also will award grants and/or interagency agreements (IAGs) to state and/or Federal agencies for fixed CWA labs to increase capacity. Working with 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 for the purpose of screening *unknown* chemical, biological, radiological, and/or nuclear (CBRN) agents.

- Operate and expand the Environmental Response Laboratory Network (ERLN) in Headquarters and Regional offices to provide lab analysis for routine and emergency response and removal operations including a terrorist attack. In addition, in FY 2010, EPA will continue to improve an electronic data deliverable (EDD) for ERLN laboratories. The EDD enables laboratories to report analytical data electronically rather than manually via hard copy reports, which will support and potentially expedite decision-making. The current EDD basically reports results only. An improved version will include additional quality parameters.

- Continue to develop and validate environmental sampling, analysis, and human health risk assessment methods for known and emerging biological threat agents. 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.

- Continue to maintain one Airborne Spectral Photometric Environmental Collection Technology (ASPECT) aircraft. The EPA ASPECT provides direct assistance to first responders by remotely detecting chemical and radiological vapors, plumes, and clouds.

- Continue to populate the Decontamination Portfolio with additional agents and maintain existing agent information.

- 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 keep the public informed of health and environmental risks.

- Maintain and improve the Emergency Management Portal (EMP). EPA will continue to manage, collect, and validate new information including the portfolio content as new 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 2010.

- 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$887.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$1,000.0) This change reflects significant progress the Agency has made in equipment procurement, thereby reducing the need for such procurements in FY 2010.
- (+$15.0) This increase supports research in the areas of environmental sampling, analysis, and human health risk assessment methods.

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: 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$5,462.5	$6,292.0	$6,414.0	$122.0
Science & Technology	$1,428.1	$587.0	$594.0	$7.0
Building and Facilities	$8,225.9	$8,070.0	$8,070.0	$0.0
Hazardous Substance Superfund	***$585.0***	***$1,194.0***	***$1,194.0***	***$0.0***
Total Budget Authority / Obligations	$15,701.5	$16,143.0	$16,272.0	$129.0
Total Workyears	2.9	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 2010 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 2010, EPA plans to support training activities and participate in a major interagency COOP exercise and an EPA internal COOP exercise with Headquarters and Regional offices. EPA will continue activities 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$14,133.2	$16,860.0	$18,213.0	$1,353.0
Hazardous Substance Superfund	***$1,429.8***	***$1,433.0***	***$1,433.0***	***$0.0***
Total Budget Authority / Obligations	$15,563.0	$18,293.0	$19,646.0	$1,353.0
Total Workyears	22.5	24.0	24.0	0.0

Program Project Description:

The Exchange Network[7] (Network) is a standards-based network that uses the Internet to make it possible for states, tribes, territories, EPA and other partners to share environmental data faster, and at greater cost savings. With the Network, federal and state environmental decision-makers have better access to the right data when they need it. Access to the data will allow the sharing of information, which will improve environmental protection and results across jurisdictions. The Water Quality Exchange (WQX) project, for example, enables states to query ambient water conditions in other states and portray the quality of an entire watershed, for example along the Columbia or Missouri Rivers, or make decisions based on the totality of data available, rather than just the data they have about their own particular stream reach.

The state-led Homeland Emergency Response Exchange (HERE) uses the Network to assist environmental decision-makers. With HERE and the Exchange Network, emergency personnel can get the latest information about the location and contents of EPA and state regulated facilities containing hazardous or toxic wastes or other points of interest that may lie in the vicinity of a local emergency, such as a fire. In California firefighters have used HERE to download this GIS-displayed information onto their laptops while in their fire truck, on the way to a fire.

The Central Data Exchange[8] (CDX) is the largest activity within the Exchange Network program; it is the electronic gateway through which environmental data enters the Agency. CDX enables fast, efficient and more accurate environmental data submissions from state and local governments, industry and tribes to EPA. The CDX budget supports development, test and production infrastructure, sophisticated hardware and software, data exchange and Web form programs, standards setting projects with states for e-reporting, as well as significant security and quality assurance activities. By reducing administrative burden on EPA programs, CDX helps

[7] For more information on the Exchange Network, please visit: http://www.epa.gov/Networkg/
8 For more information on the Central Data Exchange, please visit: http://www.epa.gov/cdx/

the Superfund program focus more manpower and resources on enforcement and programmatic work; less on data collection and manipulation.

Other tools and services in the Central Data Exchange and Exchange Network program project include:

- The Facility Registry System (FRS), a widely used source of environmental data about facilities that allows multimedia display and integration of environmental information which offers obvious benefits for enforcement targeting, homeland security, data integration, as well as other benefits such as those described above with the HERE project which uses FRS as key data source.
- The National Geospatial Program[9], which supports environmental protection, planning, risk assessment, enforcement, permitting and outreach to the public as well as emergency response efforts by EPA, other Federal agencies, states and communities.
- The System of Registries[10] (SOR) which adds meaning to EPA's data and promotes access, sharing and understanding of it. The SOR helps environmental professionals and the public find systems where data is stored, and ensures that those sources are identified and authentic, and that names, definitions and concepts are available and understandable.

This activity is funded under the Superfund appropriation. Superfund funds pay for approximately 20% of selected work done under the Exchange Network, Information Security and IT/Data Management program projects. SF funds are selectively applied to projects that have Agency-wide benefits

FY 2010 Activities and Performance Plan:

In FY 2010, the major focus of the Exchange Network and CDX for the Superfund program will be to increase the amount of critical environmental data flowing on the Network, expand the program's role in sharing data among partners, provide increased business value through reduced burden and better quality data, and improve data access and transparency through the use of new, innovative technologies. These activities build on prior efforts and represent the latest efforts of EPA and its Network partners to provide better data quality, timeliness and accessibility at a lower cost.

In FY 2010, EPA, states, and tribes and territories will continue to re-engineer data systems so information that was previously difficult to share can be transferred via the Exchange Network using common data standards and data formats, which are called schemas. . In addition, EPA is adding new features to the Network such as RSS (real simple syndication) feeds, which are news channels that Network partners can request that will promote greater data availability and encourage broader use of the Network. These efforts will be closely coordinated with the Agency's program offices as well as with EPA's partners on the Network. As data flows are added, the broader use of data standards, quality tools that check data before it is submitted, reusable schemas and other reusable components will increase the accuracy and timeliness of the data, improve analytical capabilities, and create savings through economies of scale.

9 For more information on the National Geospatial Program, please visit: http://www.epa.gov/geospatial/
10 For more information on the System of Registries, please visit: http://iaspub.epa.gov/sor_internet/

EPA continues to improve Network data security by implementing electronic reporting standards that support the authentication and electronic signatures of report submitters. In addition, the Agency has recently stepped up its assistance to states, tribes, and territories in implementing these standards.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	48	45	50	60	Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.	120,000	100,000	130,000	140,000	Users

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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

Information Security
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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$6,157.6	$5,854.0	$6,015.0	$161.0
Hazardous Substance Superfund	***$474.6***	***$783.0***	***$799.0***	***$16.0***
Total Budget Authority / Obligations	$6,632.2	$6,637.0	$6,814.0	$177.0
Total Workyears	10.8	15.8	15.8	0.0

Program Project Description:

The Agency Information Security Program is designed to protect the confidentiality, availability and integrity of EPA's information assets related to the Superfund program. The protection strategy includes, but is not limited to, enterprise policy, procedure and practice management; information security awareness, training and education; risk-based Certification & Accreditation (C&A); Plans of Action & Milestone (POA&M's) management to ensure remediation of weaknesses; defense-in-depth and breadth technology and operational security management; incident response and handling; and Federal Information Security Management Act (FISMA) reporting.

FY 2010 Activities and Performance Plan:

Effective information security is a constantly moving target. Every year, Agency security practitioners are challenged with responding to increasingly creative and sophisticated attempts to breach organizational protections. EPA's integrated efforts in FY 2010 will allow the Agency's Information Security Program to take a more proactive role in dealing with these threats.

In FY 2010, EPA will continue to protect, defend and sustain its information assets related to the Superfund program by continuing to migrate its Information Security Program. The Agency will focus initially on asset definition and management, compliance, incident management, knowledge and information management, risk management, and technology management. Secondary activities in FY 2010 include, but are not limited to, access management, organizational training and awareness, measurement and analysis, and service continuity. These efforts will strengthen the Agency's ability to ensure operational resiliency. The final result will be an information security program that can rely on effective and efficient processes and documented plans when threatened by disruptive events.

Concurrently, EPA will continue its performance-based information security activities with a particular emphasis on risk management, incident management and information security architecture (defense-in-depth/breadth). These three areas are critical to the Agency's security position. They are also key components of various Federal mandates, such as the Office of Budget and Management (OMB) information security initiatives, which will be implemented throughout FY 2010, including Trusted Internet Connection (TIC), Domain Name Service Security (DNSSec) and the Federal Desktop Core Configuration (FDCC). These mandates are rapidly enhancing the Agency's security requirements for information policy, technology standards and practices.

EPA also is initiating efforts to transition from Internet Protocol version 4 (IPv4) to IPv6 in accordance with the June 30, 2008 OMB M-05-22, *Transition Planning for Internet Protocol Version 6 (IPv6)*. This effort is a Federal initiative designed to retain our nation's technical and market leadership in the Internet sector and to expand and improve services for Americans. As with many enterprise initiatives, there are significant security challenges that must be addressed in order to make this capability secure. EPA will analyze and plan our long-term strategy for implementing, monitoring and securing an IPv6 environment in FY 2010.

Additionally, EPA will begin its implementation of the Homeland Security Presidential Directive 12 (HSPD-12) requirements for logical access as identified in the Federal Information Processing Standards (FIPS) 201, *Personal Identity Verification (PIV) of Federal Employees and Contractors*. This Enterprise Identity and Access Management (IAM) project will be combined with the Enterprise Single Sign-On (SSO) to enable the required enhanced authentication mechanism without burdening EPA systems users.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	100	100	100	100	Percent

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$16.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$91,928.2	$93,171.0	$103,305.0	$10,134.0
Science & Technology	$3,762.6	$3,969.0	$4,073.0	$104.0
Leaking Underground Storage Tanks	$178.0	$162.0	$162.0	$0.0
Oil Spill Response	$15.0	$24.0	$24.0	$0.0
Hazardous Substance Superfund	***$15,929.7***	***$16,896.0***	***$17,124.0***	***$228.0***
Total Budget Authority / Obligations	$111,813.5	$114,222.0	$124,688.0	$10,466.0
Total Workyears	492.2	503.1	503.1	0.0

Program Project Description:

The Information Technology/Data Management (IT/DM) program 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. IT/DM provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access. IT/DM manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines. And IT/DM supports regional information technology infrastructure, administrative and environmental programs, and telecommunications.

The work performed under IT/DM encompasses more than 30 distinct activities. For descriptive purposes they can be categorized into the following major functional areas: information access; geospatial information and analysis; Envirofacts; IT/information management (IT/IM) policy and planning; electronic records and content management; internet operations and maintenance (IOME); information reliability and privacy; and IT/IM infrastructure. Most of these areas are provided to support the Superfund program.

FY 2010 Activities and Performance Plan:

In FY 2010, the following IT/DM activities will continue to be provided for the Superfund program:

- **Information Access** – FY 2010 activities in this area are principally geared toward making environmental information accessible to all users. This includes: access to Environmental Indicators; support for Toxics Release Inventory (TRI) data; a major role in electronic government (eGov) activities such as to improve Freedom of Information Act (FOIA) activities using electronic workflow management, and eRule – a Web-based system to facilitate, and provide greater public access to, Federal rulemakings; and development of analytical tools to help users understand the meaning of environmental data. It includes facility data collected from numerous federal programs, and tools to help those who use information from a variety of sources to reconfigure that data so it can be easily compared and analyzed. In FY 2010, EPA's Integrated Portal activities will continue to implement identity and access management solutions, integrate geospatial tools and link the CDX. 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. (In FY 2010, the Information Access activities will be funded, under the Superfund appropriation, at $0.33 million)
- **Envirofacts** - FY 2010 activities in this area support a single point of access to EPA databases containing information about environmental activities that may affect air, water, and land anywhere in the United States; houses data that has been collected from regulated entities and the states; and makes that data accessible to environmental professionals, the regulated community, citizens groups, and to state and EPA employees through an easy-to-use, one-stop access point. Its components include databases and applications that make integrated environmental information available to all EPA stakeholders. Envirofacts directly supports the Agency's strategic goal of fulfilling Americans "Right-to-Know" about their environment which in turn supports EPA's mission to protect human health and the environment. It also supports integrated data access, a key component in the planned enterprise architecture that will support EPA's current and future business needs. Envirofacts is also being used to help plan and conduct multi-media inspections, and to support emergency response and planning. (In FY 2010, the Envirofacts activities will be funded, under the Superfund appropriation, at $0.54 million)
- **IT/Information Management (IT/IM) Policy and Planning** – FY 2010 activities in this area ensure that all due steps are taken to reduce redundancy among information systems and data bases, streamline and systematize the planning and budgeting for all IT/IM activities, and monitor the progress and performance of all IT/IM activities and systems. This category includes EPA's implementation of an Enterprise Architecture and the Capital Planning and Investment Control process (CPIC), to assist the Agency in making better informed decisions on IT/IM investments and resource allocations. These activities also include the Agency's quality system, which is the basis for ensuring that the Agency's data and information are sufficient for supporting Agency decisions and of appropriate quality for use. (In FY 2010, the IT/IM Policy and Planning activities will be funded, under the Superfund appropriation, at $2.46 million)

- **Geospatial Information and Analysis**[11] **–** In FY 2010 EPA will continue to provide place-based analysis of environmental conditions and trends across the country. A broad range of data pertinent to specific places (facilities, roads, waste sites, etc.) and natural features (wetlands, soil types, hydrographic features, etc.) has been cataloged and can be accessed digitally, or viewed as overlays on maps. Geospatial information and analysis play a critical role the Agency's ability to rapidly and effectively respond in times of emergency. Additionally, geographic location is becoming a key way to access EPA digital data and documents, and the Agency is in the process of building tools that will allow Web-users to retrieve relevant documents by specifying a location that they are interested in. Implemented as a holistic, enterprise solution, these projects also save money, assure compatibility, and reduce the need for multiple subscriptions to software, data and analytical services. (In FY 2010, the Geospatial Information and Analysis activities will be funded, under the Superfund appropriation, at $0.86 million)
- **Electronic Records and Content Management** – FY 2010 activities in this area primarily create the systems, and establish and maintain the processes, to convert paper documents into electronic documents, convert paper-based processes into systems that rely less on paper documents, and manage the electronic documents. By doing so, these activities reduce costs, improve accessibility, and improve security for all of the documents entered into the system. Electronic documents do not take up storage space, and do not need a filing staff to locate documents for customers, and then re-file them after they are used. A single copy of an electronic document can be accessed simultaneously by numerous individuals, and from virtually any place on the planet. In FY 2010 the Agency will continue using a collaborative process to implement the ECMS project, an enterprise-wide, multi-media solution designed to manage and organize native and environmental data and documents for EPA, Regions, field offices and laboratories. Previously fragmented data storage approaches will be converted into a single tool on a standard platform, which is accessible to everyone, reducing data and document search time and assisting in security and information retention efforts. Efforts in 2010 will focus on making the use of ECMS and saving records more transparent to the end user. EPA will strategically partner with programs and/or regions to develop and implement applications that add value for ECMS users and EPA, and make ECMS more understandable and seamless. (In FY 2010, the Electronic Records and Content Management activities will be funded, under the Superfund appropriation, at $0.38 million)
- **Internet Operations and Maintenance (IOME**) – FY 2010 activities in this area implement and maintain the EPA Home Page (www.EPA.gov) and over 200 top-level pages that facilitate access to the many information resources available on the EPA Web site. In addition, IOME provides the funding to support Web hosting for all of the Agency's Web sites and pages. The EPA Web site is the primary delivery mechanism for environmental information to EPA staff, partners, stakeholders and the public, and is becoming a resource for emergency planning and response. (In FY 2010, IOME activities will be funded, under the Superfund appropriation, at $0.72 million)
- **IT/IM Infrastructure –**FY 2010 activities in this area support the information technology infrastructure, administrative and environmental programs, and

11 For more information on the Geospatial program, please visit: http://www.epa.gov/geospatial/

telecommunications for all EPA employees and other on-site workers at over 100 locations, including EPA Headquarters, all ten regions, and the various labs and ancillary offices. More specifically, these activities provide what is known as "workforce support," which includes desktop equipment, network connectivity, e-mail, application hosting, remote access, telephone services and maintenance, web and network servers, IT related maintenance, IT security, and electronic records and data. In FY 2010, EPA will be upgrading is WAN infrastructure to keep pace with demands on bandwidth. Those demands increase as system capabilities and public users grow, and EPA also needs to keep pace with the states in the areas of data collection, management and utilization. (In FY 2010, the IT/IM Infrastructure activities will be funded, under the Superfund appropriation, at $11.83 million)

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$228.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

FACA; GISRA; CERCLA; CAAA; CWA and amendments; ERD; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$1,136.8	$1,374.0	$1,423.0	$49.0
Hazardous Substance Superfund	***$776.9***	***$874.0***	***$895.0***	***$21.0***
Total Budget Authority / Obligations	$1,913.7	$2,248.0	$2,318.0	$70.0
Total Workyears	6.1	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 2010 Activities and Performance Plan:

In FY 2010, 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$21.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

EPA's General Authorizing Statutes.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$39,021.3	$40,247.0	$41,922.0	$1,675.0
Hazardous Substance Superfund	***$802.4***	***$708.0***	***$746.0***	***$38.0***
Total Budget Authority / Obligations	$39,823.7	$40,955.0	$42,668.0	$1,713.0
Total Workyears	244.3	248.2	247.2	-1.0

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 program's extensive legal work with Potentially Responsible Parties (PRPs) and other entities and landowners involved in the program.

FY 2010 Activities and Performance Plan:

In FY 2010, 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$38.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$296,235.0	$303,884.0	$320,612.0	$16,728.0
Science & Technology	$69,239.2	$73,835.0	$72,882.0	($953.0)
Building and Facilities	$28,081.5	$26,931.0	$28,931.0	$2,000.0
Leaking Underground Storage Tanks	$890.3	$902.0	$903.0	$1.0
Oil Spill Response	$498.6	$596.0	$498.0	($98.0)
Hazardous Substance Superfund	***$72,243.9***	***$76,250.0***	***$78,597.0***	***$2,347.0***
Total Budget Authority / Obligations	$467,188.5	$482,398.0	$502,423.0	$20,025.0
Total Workyears	400.4	410.6	411.1	0.5

Program Project Description:

Superfund resources in the Facilities Infrastructure and Operations Program 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 safety, 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.

FY 2010 Activities and Performance Plan:

EPM will continue to manage its lease agreements with GSA 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. (For FY 2010, the Agency is requesting in the Superfund appropriation a total of $44.3 million for rent, $3.4 million for utilities, $8.3 million for security, $2.95 million for transit subsidy, and $3.16 million for Regional moves.)

These resources also help to improve operating efficiency and encourage the use of new 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[12], *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.

EPA will provide transit subsidy to eligible applicants as directed by EO 13150[13] *Federal Workforce Transportation.* EPA will continue its integration of Environmental Management Systems (EMS) across the Agency, consistent with requirements of Executive Order 13423[14]. 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 while 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$169.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$742.0) This reflects an increase in transit subsidy.
- (-$1,053.0) This decrease in rent reflects the rebalancing of cost allocation methodologies between the Superfund, Environmental Program Management, Science & Technology, and Oil Spill Response appropriations.
- (+$355.0) This change reflects an increase in utility costs.
- (+$1,775.0) This increase provides additional resources for security costs.
- (+$654.0) This increase provides additional resources for a planned Regional move in Puerto Rico for a lease that is expiring, and GSA is moving EPA from two facilities to one.
- (-$295.0) This reduction in EPA owned laboratory's operations and maintenance costs is a result of streamlining in facilities management operations.

[12] Information available at http://www.fedcenter.gov/programs/eo13423/
[13] Additional information available at http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html
[14] Information available at http://www.fedcenter.gov/programs/eo13423/

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; Energy Policy Act 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$24,174.4	$25,868.0	$26,681.0	$813.0
Hazardous Substance Superfund	***$3,044.7***	***$3,168.0***	***$3,283.0***	***$115.0***
Total Budget Authority / Obligations	$27,219.1	$29,036.0	$29,964.0	$928.0
Total Workyears	180.0	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 (IAs), 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 IAs 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 substantial portion of the Superfund program is implemented through IAs with the U.S. Army Corps of Engineers and the Coast Guard.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will achieve key objectives under its long-term Grants Management Plan. These objectives include strengthening accountability, competition, achieving positive environmental outcomes, and aggressively implementing new and revised policies on at-risk grantees of the Superfund grants and IAs.[15] 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, performing indirect cost rate reviews, providing Tribal technical assistance, and implementing its Agency-wide training program for project officers, grant specialists, and managers. EPA is in the process of consolidating the administration of

[15] US EPA, *EPA Grants Management Plan.* EPA-216-R-03-001, April 2003, http://www.epa.gov/ogd/EO/finalreport.pdf.

interagency agreements (IA) at Headquarters and Regional offices into the IA Shared Service Centers (IA SSC) into two strategic locations, Washington D.C. and Seattle. The IA SSC will provide cradle to grave Superfund IA administration, including all pre-award, award, management, post-award, and close out activities.

Performance Targets:

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

FY 2010 Change from the FY 2009 Enacted Budget (Dollars in Thousands):

- (+$115.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$29,868.9	$31,872.0	$32,281.0	$409.0
Leaking Underground Storage Tanks	$154.2	$165.0	$165.0	$0.0
Hazardous Substance Superfund	***$20,705.1***	***$24,361.0***	***$23,229.0***	***($1,132.0)***
Total Budget Authority / Obligations	$50,728.2	$56,398.0	$55,675.0	($723.0)
Total Workyears	329.9	362.9	362.9	0.0

Program Project Description:

Sound contract management fosters efficiency and effectiveness assisting all of EPA's programs. Superfund resources in this program fund support contract, acquisition management at Headquarters, Regional offices, Research Triangle Park and Cincinnati offices. 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 2010 Activities and Performance Plan:

In FY 2010, EPA will complete the deployment of its new acquisition system. 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 feasible.

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 meet the E-Government (E-Gov) requirements, and the needs of Agency personnel, resulting in more efficient process implementation. The benefits of the new system are that program offices will be able to track the progress of individual actions, extensive querying and reporting capabilities will allow the Agency to meet internal and external demands, and the system will integrate with the Agency's financial systems and government-wide shared services.

In FY 2010, EPA will reinforce its contract oversight responsibilities through A-123 Entity Level Assessments, a Federal Procurement Data System (FPDS) Verification and Validation exercise, increased targeted oversight training for acquisition management personnel, and Simplified

Acquisition Contracting Officer (SACO) reviews. These measures will further strengthen EPA's acquisition management business processes, thus enhancing contract oversight.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,147.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$2,279.0) This change reflects a shift of development costs for the Agency's new Acquisition Management System (EAS) to support the transition to a new human resource system. The EAS project will move to the implementation phase which will result in requiring lower funding levels.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$40,886.6	$44,141.0	$47,106.0	$2,965.0
Leaking Underground Storage Tanks	$3.0	$3.0	$0.0	($3.0)
Hazardous Substance Superfund	***$4,681.2***	***$5,386.0***	***$8,068.0***	***$2,682.0***
Total Budget Authority / Obligations	$45,570.8	$49,530.0	$55,174.0	$5,644.0
Total Workyears	285.2	304.6	303.1	-1.5

Program Project Description:

Superfund resources in this program support activities related to the provision of human capital, and human resources management services for the entire Agency. EPA supports organizational development and management activities through Agency and interagency councils and committees, and through participation in 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 2010 Activities and Performance Plan:

In FY 2010, the Agency will continue its efforts to strengthen its workforce by focusing on key areas that further develop our existing talent, and by strengthening our recruitment and hiring programs. EPA remains committed to fully implementing *EPA's Strategy for Human Capital* US EPA, *Investing in Our People II, EPA's Strategy for Human Capital.* Available at http://www.epa.gov/oarm/strategy.pdf, which was issued in December 2003 and updated in 2005. As result of the review, the desired outcomes for each strategy were strengthened to focus on measurable results. In FY 2010, 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 the application process.

- Implementing innovative recruitment and hiring flexibilities that address personnel shortages in mission critical occupations.

As part of these activities, EPA will continue to improve the effectiveness and efficiency of Agency human resources operations through the newly established Shared Service Centers. These Shared Service Centers process personnel and benefits actions for EPA's 17,000 employees, as well as vacancy announcements. 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 through employing the E-government, and Human Resources Line of Business (HR LoB) initiatives. In FY2010, EPA will continue to support the transition to a new or improved HR system which will establish modern, cost-effective, standardized, and interoperable HR solutions that provide common core functionality and 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$553.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$2,129.0) This increase reflects the shift of funding from the Enterprise Acquisition System (EAS) development cost to support the transition to a new improved HR system which will establish modern, cost-effective, standardized, interoperable HR solutions that provide common core functionality and support the strategic management of human capital.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$68,083.1	$73,432.0	$85,215.0	$11,783.0
Leaking Underground Storage Tanks	$708.9	$987.0	$1,122.0	$135.0
Hazardous Substance Superfund	***$20,861.5***	***$25,478.0***	***$26,746.0***	***$1,268.0***
Total Budget Authority / Obligations	$89,653.5	$99,897.0	$113,083.0	$13,186.0
Total Workyears	529.1	547.4	547.7	0.3

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 2010 Activities and Performance Plan:

In 2010, the Agency will continue to ensure sound financial and budgetary management of the Superfund program though the use of routine and ad hoc analysis, statistical sampling and other evaluation tools. We will continue to provide direction and support for the Superfund program in financial management activities; implementing costs accounting requirements; financial payment and support services; and Superfund-specific fiscal and accounting services. 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 continues to develop and modernize the Agency's financial systems and business processes. The Agency will replace its legacy accounting system and related modules with a new system certified to meet the latest government accounting standards. This extensive modernization will allow the Agency to improve efficiency and automate quality control functions to simplify the

practical use of the system as well as comply with Congressional direction and the new Federal financial systems requirements. This work will be framed by the Agency's Enterprise Architecture and will make maximum use of enabling technologies for e-Gov initiatives. Total FY 2010 funding for the Financial System Modernization Project is $17 million under the Environmental Program and Management appropriation and $4.5 million under the Superfund appropriation.

In FY 2010, EPA will have made significant strides in 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 initiatives for improved financial performance. We will also continue to ensure more accessibility to 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,249.0) This reflects an increase for payroll and cost of living for FTE.
- ($38.0) This change is associated with an increase in the service fee for the Defense Finance and Accounting Service (DFAS) payroll system which EPA uses to process the Agency employees' payroll.
- (-$19.0) This is a decrease in grants resources.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	$34,569.9	$39,350.0	$45,133.0	$5,783.0
Hazardous Substance Superfund	***$6,799.6***	***$3,377.0***	***$3,395.0***	***$18.0***
Total Budget Authority / Obligations	$41,369.5	$42,727.0	$48,528.0	$5,801.0
Total Workyears	187.9	178.6	188.6	10.0

Program Project Description:

The Human Health Risk Assessment (HHRA) program provides health hazard assessments and develops assessment methods. EPA's HHRA program provides the scientific foundation for the Agency's actions to protect Americans' public health and environment. It receives resources under both the Science and Technology and the Superfund appropriations.

Risk assessments and methodologies to support EPA's Superfund program are detailed in the HHRA MYP[16]. This risk assessment work is informed by EPA's superfund research program. This superfund research is described in the *Waste Research Strategy*[17], which was developed with participation from major clients and outlines research needs and priorities. These research efforts are guided by multi-year plans (MYPs)[18], developed with input from across the Agency, including scientific staff in the Superfund program and the Regional offices. The MYPs outline steps for meeting the needs of Agency programs and for evaluating progress through annual performance goals and measures.

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 assessment resources in response to significant events. A subsequent BOSC subcommittee program review was completed in April 2008. This prospective and retrospective review evaluated the program's relevance, quality, performance, and scientific leadership. The BOSC summarized the HHRA program's

[16] Available at: http://www.epa.gov/osp/bosc/pdf/hhramypdraft.pdf.
[17] 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.
[18] For more information, see http://www.epa.gov/ord/htm/multi-yearplans.htm.
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.

performance as making substantial and satisfactory progress in each of the above areas based both on clearly defined milestones and on providing the additional support requested by EPA programs including technical support in response to unscheduled emergency needs. 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 2010 Activities and Performance Plan:

The Superfund portion of the program includes:

The Integrated Risk Information System (IRIS)[19], Provisional Peer-Reviewed Toxicity Values (PPRTVs), and other health hazard assessments (FY 2010 Request, $2.3 million): Based on the expressed needs of EPA's Solid Waste and Emergency Response program, the Human Health Risk Assessment program prepares IRIS hazard characterization and dose-response profiles for environmental pollutants of specific relevance to superfund site assessments and remediation. At the end of 2008 more than 548 health hazard assessments were available through IRIS, and the majority of these chemicals assessments are relevant to superfund's' decision making. 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 EPA's Superfund Technical Support Centers. At the end of 2008, new or renewed PPRTVs had been developed for 231 chemicals.

Risk assessment guidance, methods, and model development (FY 2010 Request, $1.1 million): As part of the Human Health Risk Assessment program's broader efforts to improve risk assessment guidance, methods, and models, Superfund resources are used to support EPA's Superfund program through the development of exposure-response data arrays, revised reference concentration (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.

In FY 2010, the HHRA program 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. 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) which consist of provisional reference doses/concentrations (pRfD/Cs), and/or cancer slope factors. The Solid Waste and Emergency Response program develops and prioritizes requests for these PPRTV's, which provide health hazard evaluations for priority pollutants to support Agency risk management decisions;

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

- Communicating results of peer reviewed publications on methods and tools for assessing cumulative risk (also supported by HHRA under the Science and Technology appropriation); and

- Continuing to provide technical support to Superfund site and program managers on human health risk assessment through the Superfund Technical Support Centers.

The Human Health Risk Assessment program has a variety of performance measures that demonstrate its effectiveness. The BOSC's independent evaluations have found that "In the absence of IRIS values for a chemical, PPRTVs can have a significant impact on regulatory decisions." In response to recent performance assessments, the program is currently 1) revising its management controls to better incorporate both programmatic priorities and the level of effort required to increase the number completions of IRIS assessments; 2) revising its efficiency measure and using it to improve performance management; and 3) investigating alternative approaches for measuring progress related to providing timely, high quality scientific assessments. The program has taken action on each of these recommendations. For example, the program is examining how best to expand its efficiency measure to ensure consistency with other approaches being developed across EPA's Research and Development program.

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. The program continues to track the percent completion of key milestones. In FY 2010, the program plans to meet at least 90 percent of its planned outputs in support of 1) HHRA Health assessments and 2) HHRA Technical Support Documents. In response to recommendations in the Government Accountability Office's High Risk Series report to streamline the current IRIS process, the program's newest measures, which are reported in EPA's quarterly EPA*stat* report, will be revised and the targets for outputs increased appropriately.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$45.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$13.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

- (-$40.0) This reflects a decrease to research in the area of risk assessment guidance, methods and model development.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	$11,212.5	$13,586.0	$13,782.0	$196.0
Leaking Underground Storage Tanks	$567.7	$475.0	$484.0	$9.0
Oil Spill Response	$794.6	$720.0	$737.0	$17.0
Hazardous Substance Superfund	***$19,392.9***	***$20,905.0***	***$21,401.0***	***$496.0***
Total Budget Authority / Obligations	$31,967.7	$35,686.0	$36,404.0	$718.0
Total Workyears	132.9	154.7	154.7	0.0

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. EPA's Land Research Program provides the scientific foundation for the Agency's actions to protect America's land. 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 calls for "...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)[20] which outlines steps for meeting the needs of Agency programs and for evaluating progress through annual performance goals and measures. To enhance communication with customers, EPA has developed a Land research program web site.[21] The site includes a description of the program; fact sheets (science issues, research activities, and research impacts); research publications and accomplishments; and links to tools and models. 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 underwent an external process evaluation by a subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee comprised of independent, expert scientists and engineers—and the BOSC delivered

[20] EPA, Office of Research and Development, *Land Research Program MYP*. Washington, DC : EPA. For more information, see http://www.epa.gov/ord/htm/multi-yearplans.htm#land.
[21] For more information, see www.epa.gov/ord/landscience.

their report to EPA in FY 2009 (December 2008). The BOSC found that, building on the full evaluation in FY 2006, the Land program has an MYP that articulates research goals for meeting the critical needs of the program. The BOSC also indicated that the Land research program is responsive to recommendations for the implementation of research activities, and as a result of the review, the program received a rating of "exceeds expectations."[22]

FY 2010 Activities and Performance Plan:

In FY 2010, 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. Planned research products for FY 2010 include key reports that will determine the degree of resuspended sediments and assess the significance of changes in bioavailability of organic and inorganic contaminants following resuspension and redeposition during dredging of contaminated sediments. 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," FY 2010 resources will be used to integrate 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,"[23] EPA will continue the development of alternative sediment remedies that have the potential to be more effective than conventional dredging.

The program will continue research to develop and apply several technologies to address complex treatment issues. Permeable reactive barriers (PRBs) are a cost-effective technology to replace pump and treat methods, and the application of this technology to sites for treatment of chlorinated organic compounds has demonstrated success. Research will address the application of PRBs to treat inorganic compounds. The program also is addressing the fundamental mechanisms involved in oxidation and reduction transformations during in-situ chemical oxidation and this technology will continue to be applied to treat chromium contamination at Superfund sites providing a cost-effective treatment to reduce health risks.

Recent accomplishment in ground water remediation research includes the use of Permeable Reactive Barrier (PRBs) over traditional pump & treat methods, which has resulted in significant operations and maintenance savings at two Superfund sites in EPA Regions 4 and 8. Another technology, in-situ chemical reduction, produced an innovative technology for remediating chromium in ground water. Application of this patented technology has provided additional cost

[22] BOSC Land Restoration and Preservation Research Mid-Cycle Subcommittee Report. For more information, see http://www.epa.gov/osp/bosc/pdf/landmc0901rpt.pdf.
[23] For more information, see http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=11968

savings at Superfund sites in EPA Region 4. EPA also developed a new application of PRBs to treat arsenic contaminated mine drainage at a mining site in East Helena, Montana.

Research efforts also will address monitored natural attenuation, specifically in metal contaminated ground water. Key synthesis and state-of-the-science documents will provide EPA program offices, regions, and states with remediation technologies and long-term stewardship for treatment of dense non-aqueous phase liquids, like trichloroethylene, in ground water. 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.

Multi-media research under the Land research program 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. Full-scale treatment of mine drainage is underway and the program will continue activities in mining research to demonstrate and apply methods to treat acid mine drainage in a cost-effective manner. Bioavailability of metals in media is a new area which will provide data to support site specific risk assessments. EPA will continue to provide support to Superfund project managers via technical support centers (TSCs) and two modeling assistance web sites. These resources provide site-specific technical support to more than 100 cleanup program sites by responding 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.

Contaminated sediment researchers worked to evaluate the amount of sediment contaminants in post-dredging residuals in the Ashtabula River. These results, coupled with ongoing polychlorinated biphenyl (PCB) bioavailability studies will improve risk assessments and decision making at sediment sites.

The Land research program also conducts research with an increased emphasis on asbestos health effects in order to develop data to support dosimetric and toxicologic assessment of amphibole asbestos fiber-containing material from Libby, Montana. This effort will 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.

To improve performance management, the program established a process by which the BOSC rates each program long-term performance as part of its reviews. In addition, the National Academy of Sciences (NAS) completed a study commissioned by EPA's Research and Development program. According to the NAS study, efficiency in federal research and development programs is best assessed by using an external expert-review panel to evaluate the relevance, quality, and performance of the research. Considering these findings, the program is engaging the BOSC to better evaluate investment efficiency and the extent to which the program

is "doing the right research and doing it well." The program is also exploring a measure that tracks the percentage of its budget allocated to direct science activities.

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.

In FY 2010, 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 its average technical response time to 27 days, which is the average time for technical support centers to process and respond 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$405.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+$25.0) These resources will fund land restoration activities such as contaminated sediment research.

- (+$66.0) This represents a restoration of resources transferred in FY 2009 to the Research: Sustainability Program to support the Small Business Innovation Research Program (SBIR). For that program, EPA is required to set aside 2.5 percent of funding for contracts to small businesses to develop and commercialize new environmental technologies. After the FY 2010 budget is enacted, when the exact amount of the mandated requirement is known, FY 2010 funds will be transferred to the SBIR program.

Statutory Authority:

SWDA; HSWA; SARA; CERCLA; RCRA; OPA; BRERA.

Program Area: Research: Sustainability

Research: Sustainability

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

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	$22,346.0	$21,157.0	$24,107.0	$2,950.0
Hazardous Substance Superfund	***$99.7***	***$79.0***	***$0.0***	***($79.0)***
Total Budget Authority / Obligations	$22,445.7	$21,236.0	$24,107.0	$2,871.0
Total Workyears	74.2	70.8	70.8	0.0

Program Project Description:

Under the Small Business Research (SBIR) Program[24], as required by the Small Business Act as amended[25], EPA sets aside 2.5 percent of its extramural research budget for contracts to small businesses to develop and commercialize new environmental technologies. Since its inception, EPA's SBIR Program has provided incentive funding to small businesses to translate their innovative ideas into commercial products that address environmental problems. These innovations are the primary source of new technologies that can provide improved environmental protection at lower cost with better performance and effectiveness. SBIR has helped spawn successful commercial ventures that not only improve our environment, but also create jobs, increase productivity and economic growth, and enhance the international competitiveness of the U.S. technology industry.

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.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$79.0) This reflects an adjustment for Small Business Innovation Research (SBIR). Enacted funding levels for this program project include the amount EPA is required to set aside for contracts to small businesses to develop and commercialize new environmental technologies. This adjustment is necessary because the SBIR set aside, at this point in the budget cycle, is redistributed to other research programs in the President's Budget request. After the budget is enacted, when the exact amount of the mandated requirement is known, the funds will be transferred to the SBIR program in this program project.

Statutory Authority:

CAA; CWA; FIFRA; PPA; RCRA; SDWA; SBA; SARA; TSCA.

[24] For more information, see http://es.epa.gov/ncer/sbir.
[25] 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

Superfund: Emergency Response and Removal
Program Area: Superfund Cleanup
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund	***$223,136.3***	***$195,043.0***	***$202,843.0***	***$7,800.0***
Total Budget Authority / Obligations	$223,136.3	$195,043.0	$202,843.0	$7,800.0
Total Workyears	297.4	292.4	292.4	0.0

Program Project Description:

The Superfund program was initially designed, and has been consistently used, to implement two complementary types of response actions: remedial actions and removal actions. Remedial actions fully address wastes at the largest, most complex contamination sites (i.e., National Priorities List (NPL) sites). Removal actions quickly address those releases, whether on the NPL or not, that pose an imminent threat to public health or welfare or the environment. The Superfund Emergency Response and Removal program addresses removal actions.

Each year, more than 20,000 emergencies involving the release (or threatened release) of oil and hazardous substances are reported in the United States, potentially affecting both communities and the surrounding natural environment. 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)[26], 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.[27]

FY 2010 Activities and Performance Plan:

EPA personnel assess, respond to, mitigate, and clean up thousands of releases, whether accidental, deliberate, or naturally occurring. EPA Federal OSCs conduct and/or provide support for removal assessments, emergency responses, and cleanup response actions at NPL and non–NPL sites.

[26] EPA's roles and responsibilities are further outlined in the National Contingency Plan (NCP), please refer to http://www.epa.gov/OEM/content/lawsregs/ncpover.htm.
[27] For more information about the Superfund Emergency Response and Removal program, please refer to http://www.epaosc.net/default.htm.

In FY 2010, EPA will continue to respond and conduct 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.

EPA will continue to conduct an annual readiness training event for Federal OSCs, which is widely attended by EPA and its government partners from other Federal agencies, states, and local entities. This training offers courses on a variety of environmentally related emergency response topics designated to strengthen the knowledge and skills of Federal first responders. This very successful training program is designed to ensure the readiness of EPA OSCs nationwide by focusing on EPA's efforts to create necessary consistency across the Agency, highlight priorities for further policy development and coordination, and build partnerships with local, state, and other Federal responders.

The Superfund Removal program has received two program assessments by OMB (2003 and 2005). As a result, the program established performance and efficiency measures and 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).

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Superfund-lead removal actions completed annually.	215	195	195	170	removals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	PRP removal completions (including voluntary, AOC, and UAO actions) overseen by EPA.				170	removals

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Superfund-lead removal actions completed annually per million dollars.	1.05	0.93	0.94	0.95	removals

Due to aggressive enforcement, EPA has been able to compel PRPs to conduct additional site removals. OSWER and OECA have jointly developed a new measure to track related progress over time. In FY 2010, EPA will oversee 170 PRP removal actions. In addition, EPA will conduct 170 Superfund-lead removal actions.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,090.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+$7,800.0) This funding allows EPA to respond and conduct removal actions potentially impacting both large and small communities and the surrounding environment.
- (-$2,090.0) This reflects a decrease in contracts. This reduction is not expected to impede achievement of program goals because of greater efficiency and better use of program assets.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund	***$9,608.7***	***$9,442.0***	***$9,791.0***	***$349.0***
Total Budget Authority / Obligations	$9,608.7	$9,442.0	$9,791.0	$349.0
Total Workyears	42.9	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 Framework (NRF), which provides the comprehensive framework and structure for managing national emergencies. EPA is the designated lead for the NRF'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 2010 Activities and Performance Plan:

Preparedness on a national level is essential to ensure that EPA, other Federal agencies, and state, local and tribal emergency responders are able to deal with multiple emergencies. This program will continue to enhance the Agency's readiness capabilities in FY 2010 by improving internal and external coordination with those agencies.

In FY 2010, 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, respond to, and recover from releases of hazardous substances, terrorist attacks, major disasters, 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 NRF

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 2010, EPA will provide technical assistance, training, and exercises to continue fostering a working relationship between state, local, tribal, 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 NRF. When activated under the NRF, EPA supports activities at the NRT, RRTs, Domestic Readiness Group, Incident Advisory Council, and the National Operations Center.

As part of its strategy for improving effectiveness, the Agency will improve response readiness in FY 2010 through information obtained from the Agency's National Approach to Response (NAR). EPA's NAR ensures efficient use of emergency response assets within the Agency by maintaining highly skilled technical personnel in the field and ensuring their readiness to respond to releases of dangerous materials without compromising health and safety.

Performance Targets:

Work under this program supports EPA's objective for restoring land. Currently, there are no performance measures specific to this Program/Project.

For several years, EPA has been implementing an annual assessment of its response and removal preparedness, known as Core Emergency Response (ER). Core ER was expanded to address Agency-wide implementation of EPA's NAR and measure its progress towards being ready to respond to multiple nationally significant events. In FY 2007, Core ER criteria were revised to focus on improved preparedness, in line with the EPA 2006-2011 Strategic Plan. Beginning in FY 2010, the assessment will be called "Core NAR". The Core NAR criteria are based on items found in EPA's Homeland Security Priority Workplan and the NAR Preparedness Plan. The target for FY 2010 is to maintain a readiness score of 55 percent. There will be three components of Core NAR: Headquarters (coordinated through the National Incident Coordination Team), Regional offices (coordinated through the Regional Incident Coordination Teams), and Special Teams. The three scores will be averaged to obtain an Agency-wide score.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$349.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund	***$33,558.3***	***$31,306.0***	***$32,203.0***	***$897.0***
Total Budget Authority / Obligations	$33,558.3	$31,306.0	$32,203.0	$897.0
Total Workyears	143.7	134.0	144.1	10.1

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 thousands of 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. EPA 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. The program ensures statutory responsibilities related to the transfer of contaminated Federal properties at both NPL and non-NPL sites are met. Such responsibilities include the approval authority for transfers prior to implementation of remedies at NPL sites (i.e., early transfer), and for 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, the extent of contamination, ongoing facility operations needs, 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/**.**

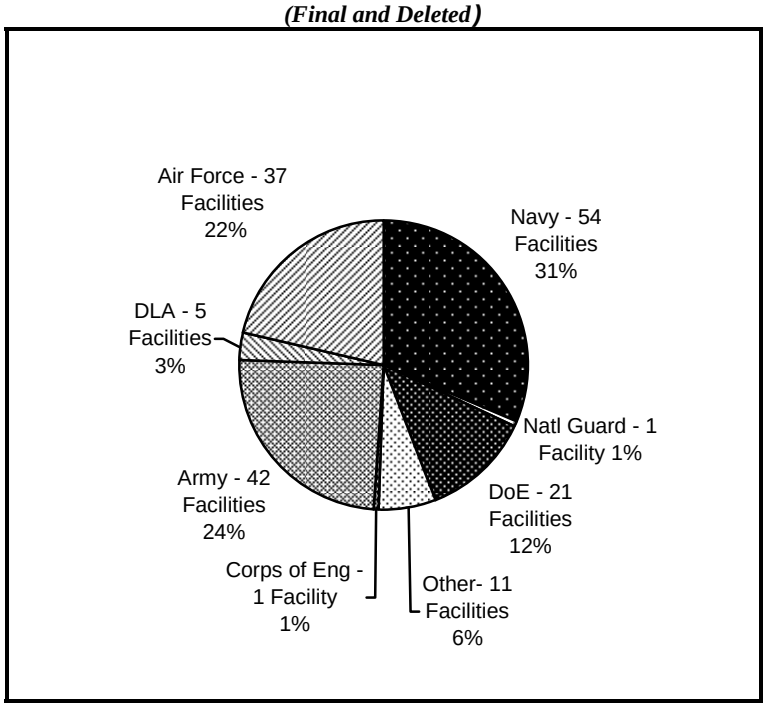
FY 2010 Activities and Performance Plan:

The Superfund Federal Facilities Response program will continue strengthening its efforts towards ensuring the safe reuse of former Federal properties and 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 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 2010, 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 at Federal facilities on the NPL. As of October 2008, there were: 157 final Federal facilities on the NPL, 15 Federal facilities deleted from the NPL, 73 Federal facilities with a final remedy selected, 61 Federal facilities that had achieved site construction completion, and 28 Federal facilities identified as site-wide ready for anticipated use. In FY 2008, the program conducted oversight and technical assistance on 398 ongoing Remedial Investigations/Feasibility Studies and 204 ongoing Remedial Actions at final NPL Federal facilities.

NPL Federal Facilities by Agency
(Final and Deleted)



**Other Federal Agencies include: U.S. Coast Guard (1), Dept. of Interior (2), Dept. of Transportation (1), EPA (1), Federal Aviation Administration (1), National Aeronautics and Space Administration (2), Small Business Administration (1), U.S. Dept. of Agriculture (2). Source:CERCLIS end of year 2008 data FFRRO's website,* http://www.epa.gov/fed/fac/documents/npl2007.htm#2

In FY 2010, 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. DOD's FY 2007 Defense Environmental Programs Report to Congress states there are currently 3,537 munitions response sites in DOD's inventory.[28]

[28] https://www.denix.osd.mil/portal/page/portal/denix/environment/ARC/FY2007.

The program will continue monitoring the progress and improving the quality and consistency of five-year reviews being conducted at Federal sites where waste has been left in place and land use is restricted. In FY 2010, the program will review approximately 31 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.

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.

The Superfund Federal Facilities Response program will continue working with the Forest Service, the National Park Service (NPS) and the Bureau of Land Management (BLM) in expediting the remediation of abandoned mine sites; and DOE in maximizing the progress of cleanup and reducing the footprint of the Environmental Management program's legacy properties.

The program will continue supporting DOD at selected Base Realignment and Closure (BRAC) installations that have closed or been realigned during the first four rounds of BRAC (BRAC I-IV). The BRAC I-IV accelerated cleanup program is funded by DOD through an interagency agreement which is scheduled to expire on September 30, 2011. The fifth round of BRAC (BRAC V) has resulted in additional EPA work requirements at selected non-NPL BRAC V installations. This includes, but is not limited to, meeting and expediting statutory obligations for overseeing cleanup and facilitating property transfer. EPA's FY 2010 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 Superfund Federal Facilities Response program underwent a program performance assessment by OMB in FY 2005. As a follow-up, the program has been working with other Federal agencies to achieve long-term environmental goals. These efforts will continue in FY 2010. In addition, the program conducted a program evaluation in FY 2008 in an effort to evaluate and improve performance accuracy of regional target-setting for site cleanup milestones. The program is currently implementing several of the resulting recommendations in FY 2009 and will implement additional recommendations in FY 2010.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Program dollars expended annually per operable unit completing cleanup activities.	898	920	813	813	thousand

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of Federal Facility Superfund sites where all remedies have completed construction.	61	60	64	68	sites

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined.	73	81	77	92	remedies

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. EPA's ability to meet its annual Superfund targets is partially dependent on work performed at Federal facility sites on the NPL.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$994.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-$97.0) This reflects a decrease for contracts and general expenses. This reduction will not impede achievement of the program measures.

- (+10.1 FTE) This change reflects a redirection of reimbursable FTE from the BRAC program to the Federal Facilities program. The additional FTE will support increased workload needs at non-DOD Federal sites, such as DOE and USACE. Sufficient reimbursable FTE are retained to support BRAC program needs, which have declined steadily since inception of DOD's program in the early 1990s.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund	***$726,765.3***	***$604,992.0***	***$605,000.0***	***$8.0***
Total Budget Authority / Obligations	$726,765.3	$604,992.0	$605,000.0	$8.0
Total Workyears	947.8	944.2	944.2	0.0

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 ground water 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, ground water, 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 ground water;
- 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 2010 Activities and Performance Plan:

In FY 2010, as in prior years, construction 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 ground water 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 interim response actions, when appropriate, to protect people and the environment from the immediate threats posed by uncontrolled hazardous wastes or contaminated ground water. These efforts demonstrate EPA'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, states and our Federal partners have made significant progress towards reducing the number of sites needing final assessment decisions. In addition, EPA has an active pre-screening process which allows only the most contaminated sites to get further Federal attention. The number of assessment decisions made each year exceeds the number of new sites being identified by EPA each year. As a result, EPA has revised its target to align with the current universe of sites that still require final decisions. EPA plans to complete 330 site assessment decisions in FY 2010.

For those sites requiring additional action to protect human health and the environment, EPA's NPL identifies sites that are the nation's highest priorities. Sites posing immediate risks may also be addressed under the Superfund Emergency Response and Removal program. In FY 2010, EPA will continue investigating sites to determine the best approach for individual sites to be addressed, including listing them on the NPL. In FY 2008, EPA added 18 new sites to the NPL, and proposed 17 sites to the NPL. As of the end of FY 2008, 1,650 sites were either proposed to, final on, or deleted from the NPL, of which 178 were Federal facility sites.

At NPL sites, 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 2008, over 430 sites had 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. In FY 2010, a significant number of sites will 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 Record of Decision (ROD). Following the RD, the actual construction or implementation of the cleanup remedy (called the Remedial Action (RA)) will be performed by EPA (or states with EPA funding) or potentially responsible parties (PRPs) under EPA or state oversight. EPA is committed to providing resources to maintain 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 2010, the program will continue to work with EPA's Regional offices to improve long-term planning construction estimates, including planning for the use of resources received from settlements with 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 2010, EPA estimates it will achieve 22 site construction completions for a cumulative total of 1102 NPL sites, and will continue to delete sites from the NPL as appropriate.

EPA will 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. 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. Five-Year Reviews are used to evaluate the implementation and performance of the selected remedy and to determine whether the remedy 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 240 Five-Year Reviews in FY 2010. EPA will continue to need resources to conduct these activities to ensure remedies are working optimally and as intended.

The future use of NPL sites plays an important role in revitalizing communities and ensuring the long-term protection of human health and the environment. While cleaning up these sites, EPA is working with communities and other partners in considering and integrating appropriate future use opportunities into the cleanup process. The Agency also is working with communities on already remediated sites to ensure long-term stewardship of site remedies and to create opportunities for reuse. In May 2006, EPA established the Site-Wide Ready for Anticipated Use measure, which communicates that all cleanup goals for an entire site have been achieved for both current and reasonably anticipated future land uses. 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 complete

activities at NPL sites. At the end of FY 2008, 85 additional sites achieved the Site-Wide Ready for Anticipated Use designation for a cumulative total of 343 sites. In FY 2010, EPA will achieve 65 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 by measuring the incremental progress achieved in controlling unacceptable current human exposures at a NPL site. In FY 2010, 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 1,329 sites under control. The Migration of Contaminated Ground Water Under Control environmental indicator applies to NPL sites that contain contaminated ground water and serves 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 2010, 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 1,026 sites under control.

EPA will continue to take actions to improve program management and increase efficiency. In FY 2010, the Agency, in coordination with the U.S. Army Corps of Engineers and consulting engineers, will continue to best stage significant design and construction projects. The effort will augment the Agency's technical outreach to the Regional offices by expanding their access to technical resources, to help promote the efficiency of project delivery and to facilitate project progress through the Superfund pipeline. In addition, EPA will continue focusing on optimizing ground water remedies and sharing best practices with Regional offices for cost management and efficiency improvements.

The Superfund Remedial program strives to utilize its resources so that its activities use natural resources and energy efficiently, reduce negative impacts on the environment, minimize or eliminate pollution at its source, and reduce waste to the greatest extent possible. In FY 2010, the program will continue its efforts to advance green remediation practices and identify new opportunities and tools to make "greener" decisions across Superfund cleanup sites.

This program also is supported by the 2009 American Recovery and Reinvestment Act (ARRA) funds. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of Superfund sites ready for anticipated use site-wide.	85	30	45	65	sites

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Annual number of Superfund sites with remedy construction completed.	30	30	20	22	completions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Superfund sites with contaminated groundwater migration under control.	20	15	15	10	sites

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Superfund final site assessment decisions completed.	415	400	400	330	assessments

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Human exposures under control per million dollars.	7.6	6.4	6.7	7.0	sites

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of Superfund sites with human exposures under control.	24	10	10	10	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 addition, the program also tracks efficiency by measuring the number of NPL sites with human exposure under control per million dollars. In FY 2008, the Superfund Remedial program met or exceeded all of its performance measure targets. In FY 2010, the program plans to continue to maintain progress toward achieving the long-term goals that will be identified in EPA's FY 2009-2014 Strategic Plan.

Performance goals and measures for the Superfund Federal Facilities Response program are a component of the Superfund Remedial program's measures.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$6,818.0) This reflects an increase for payroll and cost of living for all FTE.

- (-$6,810.0) This reflects a decrease for contracts and other non-payroll expenses. This reduction is not expected to impede site cleanup progress, because of improved program management and increased efficiency.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Hazardous Substance Superfund	***$4,888.0***	***$6,575.0***	***$6,575.0***	***$0.0***
Total Budget Authority / Obligations	$4,888.0	$6,575.0	$6,575.0	$0.0
Total Workyears	0.1	0.0	0.0	0.0

Program Project Description:

Other Federal agencies are given responsibilities under Comprehensive Environmental Response Compensation and Liability Act (CERCLA) which are funded out of the Superfund Trust Fund. 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 2010 Activities and Performance Plan:

In FY 2010, the Agency will continue to provide resources through interagency agreements to support other Federal agencies. The following table illustrates the levels of funding proposed to be provided to each Federal agency in EPA's FY 2010 request:

Other Federal Agency Funding
($ in thousands)

Agency	FY 2010 Pres Bud
DOI	$546.0
NOAA	$1,063.0
USCG	$4,966.0
TOTAL	**$6,575.0**

Under the EPA/DOI interagency agreement, DOI provides response preparedness and management assistance that supports the National Response Team/Regional Response Teams (NRT/RRTs), EPA's Special Units including the Environmental Response Team, the National Decontamination Team, and the Radiation Response Team. In addition, DOI provides assistance in the development and implementation of comprehensive and environmentally protective remedies at Superfund sites as well as the coordination of natural resource trustee agency[29] support. DOI provides technical assistance at Superfund sites in areas of their expertise, such as ecological risk assessment, habitat mitigation and identification of damages to natural resources.

[29] Natural Resource Trustees are outlined in CERCLA and have different, but complementary, roles and responsibilities. For more information, please refer to http://www.epa.gov/superfund/programs/nrd/fields.pdf.

Under the EPA/NOAA interagency agreement, EPA Regional offices are provided access to NOAA's multidisciplinary technical support experts in the fields of coastal remediation, scientific support coordination and response management. NOAA, which is also a natural resource trustee agency, provides site-specific technical coordination support during site investigations, assistance on ecological risk assessments, identification and evaluation related to risks posed to natural resources from Superfund sites, and evaluates strategies and methods of minimizing those risks. NOAA's experts produce evaluations of risk to the environment and natural resources from releases at Superfund sites, development and implementation of comprehensive environmentally protective remedies, and coordination of trustee support.

Under the EPA/USCG interagency agreement, USCG and EPA are Federal partners who share lead responsibilities under 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 2010, 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 separate performance measures specific to this program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CERCLA Sections 104, 105, 106, 120; CWA; OPA.

ENVIRONMENTAL PROTECTION AGENCY
2010 Annual Performance Plan and Congressional Justification

Table of Contents - Leaking Underground Storage Tanks

Resource Summary Table **618**
Program Projects in LUST **618**
Program Area: Compliance **620**
  Compliance Assistance and Centers 621
Program Area: IT / Data Management / Security **623**
  IT / Data Management 624
Program Area: Operations and Administration **626**
  Facilities Infrastructure and Operations 627
  Acquisition Management 629
  Central Planning, Budgeting, and Finance 630
  Human Resources Management 632
Program Area: Research: Land Protection **633**
  Research: Land Protection and Restoration 634
Program Area: Underground Storage Tanks (LUST / UST) **636**
  LUST / UST 637
  LUST Cooperative Agreements 640
  LUST Prevention 643

APPROPRIATION: Leaking Underground Storage Tanks
Resource Summary Table
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Leaking Underground Storage Tanks				
Budget Authority	$108,093.9	$112,577.0	$113,101.0	$524.0
Total Workyears	65.6	75.3	75.3	0.0

Bill Language: Leaking Underground Storage Tank Trust Fund Program

For necessary expenses to carry out leaking underground storage tank cleanup activities authorized by subtitle I of the Solid Waste Disposal Act, as amended, [$112,577,000] $113,101,000, to remain available until expended, of which [$77,077,000] $78,671,000 shall be for carrying out leaking underground storage tank cleanup activities authorized by section 9003(h) of the Solid Waste Disposal Act, as amended; [$35,500,000] $34,430,000 shall be for carrying out the other provisions of the Solid Waste Disposal Act specified in section 9508(c) of the Internal Revenue Code, as amended: Provided, That the Administrator is authorized to use appropriations made available under this heading to implement section 9013 of the Solid Waste Disposal Act to provide financial assistance to federally recognized Indian tribes for the development and implementation of programs to manage underground storage tanks.

Program Projects in LUST
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Compliance				
Compliance Assistance and Centers	$787.5	$817.0	$788.0	($29.0)
IT / Data Management / Security				
IT / Data Management	$178.0	$162.0	$162.0	$0.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$685.0	$696.0	$696.0	$0.0
Facilities Infrastructure and Operations (other activities)	$205.3	$206.0	$207.0	$1.0
Subtotal, Facilities Infrastructure and Operations	$890.3	$902.0	$903.0	$1.0
Acquisition Management	$154.2	$165.0	$165.0	$0.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Central Planning, Budgeting, and Finance	$708.9	$987.0	$1,122.0	$135.0
Human Resources Management	$3.0	$3.0	$0.0	($3.0)
Subtotal, Operations and Administration	$1,756.4	$2,057.0	$2,190.0	$133.0
Research: Land Protection				
Research: Land Protection and Restoration	$567.7	$475.0	$484.0	$9.0
Underground Storage Tanks (LUST / UST)				
LUST / UST				
EPAct & Related Authorities Implemention	$1,058.5	$0.0	$0.0	$0.0
LUST / UST (other activities)	$14,193.0	$11,105.0	$11,855.0	$750.0
Subtotal, LUST / UST	$15,251.5	$11,105.0	$11,855.0	$750.0
LUST Cooperative Agreements				
EPAct & Related Authorities Implemention	$26,496.8	$0.0	$0.0	$0.0
LUST Cooperative Agreements (other activities)	$63,056.0	$62,461.0	$63,192.0	$731.0
Subtotal, LUST Cooperative Agreements	$89,552.8	$62,461.0	$63,192.0	$731.0
LUST Prevention				
EPAct & Related Authorities Implemention	$0.0	$35,500.0	$34,430.0	($1,070.0)
Subtotal, LUST Prevention	$0.0	$35,500.0	$34,430.0	($1,070.0)
Subtotal, Underground Storage Tanks (LUST / UST)	$104,804.3	$109,066.0	$109,477.0	$411.0
TOTAL, EPA	$108,093.9	$112,577.0	$113,101.0	$524.0

Program Area: Compliance

Compliance Assistance and Centers
Program Area: Compliance
Goal: Land Preservation and Restoration
Objective(s): Preserve Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$28,063.5	$23,770.0	$26,070.0	$2,300.0
Leaking Underground Storage Tanks	***$787.5***	***$817.0***	***$788.0***	***($29.0)***
Oil Spill Response	$285.3	$277.0	$317.0	$40.0
Hazardous Substance Superfund	$33.1	$22.0	$0.0	($22.0)
Total Budget Authority / Obligations	$29,169.4	$24,886.0	$27,175.0	$2,289.0
Total Workyears	197.0	181.1	180.1	-1.0

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), this program provides compliance assistance tools, technical assistance, and training to promote and enforce UST systems compliance and cleanups.[1]

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will continue to provide general and targeted compliance assistance to the regulated community and integrate assistance into its enforcement and compliance assurance efforts. 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 and to promote UST cleanups. The Agency also will continue to provide guidance to foster the use of new technology to enhance compliance.

As part of the Agency's transition to a new strategic plan for FY 2009-2014, the Enforcement and Compliance Assurance program is planning to shift from a tool-based approach to a problem-based approach for program measurement. This will allow the program to highlight its results from its national priority work in the problem-based areas of the strategic plan - air, water, and waste; and to better characterize results by pollutants and impacts on ecological and human health benefits. Measures pertaining to enforcement and compliance actins are under review and may be modified in the coming months.

[1] For more information refer to: www.epa.gov/swerust1/cat/index.htm.

Performance Targets: These three measures on the total entities that change behavior resulting in direct and preventative environmental benefits are new performance measures beginning in FY 2010; no performance targets exist for these new measures for FY 2008-2009.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for air as a result of EPA enforcement and compliance actions.				127	Entities
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for water as a result of EPA enforcement and compliance actions.				608	Entities
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for land as a result of EPA enforcement and compliance actions.				213	Entities

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$29.0) 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:

PPA; CERFA; NEPA; AEA; UMTRLWA; RCRA.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$91,928.2	$93,171.0	$103,305.0	$10,134.0
Science & Technology	$3,762.6	$3,969.0	$4,073.0	$104.0
Leaking Underground Storage Tanks	***$178.0***	***$162.0***	***$162.0***	***$0.0***
Oil Spill Response	$15.0	$24.0	$24.0	$0.0
Hazardous Substance Superfund	$15,929.7	$16,896.0	$17,124.0	$228.0
Total Budget Authority / Obligations	$111,813.5	$114,222.0	$124,688.0	$10,466.0
Total Workyears	492.2	503.1	503.1	0.0

Program Project Description:

The Information Technology/Data Management (IT/DM) program 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. IT/DM provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access. IT/DM manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines. And IT/DM supports regional information technology infrastructure, administrative and environmental programs, and telecommunications.

The work performed under IT/DM encompasses more than 30 distinct activities. For descriptive purposes they can be categorized into the following major functional areas: information access; geospatial information and analysis; Envirofacts; IT/information management (IT/IM) policy and planning; electronic records and content management; internet operations and maintenance (IOME); information reliability and privacy; and IT/IM infrastructure. The activities funded under the Leaking Underground Storage Tank (LUST) appropriation are IT/IM infrastructure and Internet Operations and Maintenance (IOME).

In FY 2010 the IT/Data Management LUST resources continue to provide EPA's "Readiness to Serve" IT 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 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).

FY 2010 Activities and Performance Plan:

In FY 2010, the following ITDM activities will continue to be provided for the LUST programs:

- **Internet Operations and Maintenance (IOME**) – FY 2010 activities in this area implement and maintain the EPA Home Page (www.EPA.gov) and over 200 top-level pages that facilitate access to the LUST program information resources available on the EPA Web site. In addition, IOME provides the funding to support Web hosting for all of the Agency's Web sites and pages. The EPA Web site is the primary delivery mechanism for environmental information to EPA staff, partners, stakeholders and the public, and is becoming a resource for emergency planning and response. (In FY 2010, IOME activities will be funded at $0.06 million under the LUST appropriation)
- **IT/IM Infrastructure** – FY 2010 activities in this area support the information technology infrastructure, administrative and environmental programs, and telecommunications for all EPA employees and other on-site workers at over 100 locations, including EPA Headquarters, all ten regions, and the various labs and ancillary offices. More specifically, these activities provide what is known as "workforce support," which includes desktop equipment, network connectivity, e-mail, application hosting, remote access, telephone services and maintenance, web and network servers, IT related maintenance, IT security, and electronic records and data. (In FY 2010, the IT/IM Infrastructure activities will be funded at $0.10 million under the LUST appropriation)

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

FACA; GISRA; CERCLA; CAAA; CWA and amendments; ERD; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$296,235.0	$303,884.0	$320,612.0	$16,728.0
Science & Technology	$69,239.2	$73,835.0	$72,882.0	($953.0)
Building and Facilities	$28,081.5	$26,931.0	$28,931.0	$2,000.0
Leaking Underground Storage Tanks	***$890.3***	***$902.0***	***$903.0***	***$1.0***
Oil Spill Response	$498.6	$596.0	$498.0	($98.0)
Hazardous Substance Superfund	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Total Budget Authority / Obligations	$467,188.5	$482,398.0	$502,423.0	$20,025.0
Total Workyears	400.4	410.6	411.1	0.5

Program Project Description:

The Facilities Infrastructure and Operations Program provide activities and support services in many centralized administrative areas at EPA. These include health and safety, environmental compliance, occupational health, medical monitoring, fitness, wellness, safety, and environmental management functions. LUST resources for this program 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.

FY 2010 Activities and Performance Plan:

- For FY 2010, the Agency is requesting a total of $.7 million for rent and $.06 million for transit subsidy in the LUST appropriation.

- The Agency will continue to manage its lease agreements with General Services Administration (GSA), and other private landlords by conducting rent reviews and verifying that monthly billing statements are correct.

- EPA will provide transit subsidy to eligible application as directed by Executive Order 13150[2] *Federal Workforce Transportation.*

[2] Additional information available at http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1.0) Provides additional resources for increases in transit subsidy cost.

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).

Acquisition Management
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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$29,868.9	$31,872.0	$32,281.0	$409.0
Leaking Underground Storage Tanks	***$154.2***	***$165.0***	***$165.0***	***$0.0***
Hazardous Substance Superfund	$20,705.1	$24,361.0	$23,229.0	($1,132.0)
Total Budget Authority / Obligations	$50,728.2	$56,398.0	$55,675.0	($723.0)
Total Workyears	329.9	362.9	362.9	0.0

Program Project Description:

LUST resources in the Acquisition Management program support contract and acquisition management activities at Headquarters, Regional offices, Research Triangle Park, and Cincinnati offices. 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 2010 Activities and Performance Plan:

In FY 2010, 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$68,083.1	$73,432.0	$85,215.0	$11,783.0
Leaking Underground Storage Tanks	***$708.9***	***$987.0***	***$1,122.0***	***$135.0***
Hazardous Substance Superfund	$20,861.5	$25,478.0	$26,746.0	$1,268.0
Total Budget Authority / Obligations	$89,653.5	$99,897.0	$113,083.0	$13,186.0
Total Workyears	529.1	547.4	547.7	0.3

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. This includes developing, managing, and supporting a goals-based management system for the Agency that involves strategic planning and accountability for environmental, fiscal, and managerial results; providing policy, systems, training, reports and oversight essential for the financial operations of EPA; coordinating the Agency-wide planning processes for the Working Capital Fund; provides financial payment and support services for EPA through three finance centers, as well as, specialized fiscal and accounting services for many EPA programs; and managing the Agency's annual budget process. GPRA coordination is also a priority. (Refer to http://www.epa.gov/ocfo/functions.htm for additional information).

FY 2010 Activities and Performance Plan:

The Agency will continue to ensure sound financial and budgetary management of the Leaking Underground Storage Tanks (LUST) program 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.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$135.0) This increase is the net effect of increases for payroll and cost of living for FTE.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$40,886.6	$44,141.0	$47,106.0	$2,965.0
Leaking Underground Storage Tanks	***$3.0***	***$3.0***	***$0.0***	***($3.0)***
Hazardous Substance Superfund	$4,681.2	$5,386.0	$8,068.0	$2,682.0
Total Budget Authority / Obligations	$45,570.8	$49,530.0	$55,174.0	$5,644.0
Total Workyears	285.2	304.6	303.1	-1.5

Program Project Description:

This program supports 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 2010 Activities and Performance Plan:

There are no proposed LUST funded activities under this program in FY 2010.

Performance Targets:

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

FY 2010 Change from FY 2009 President's Budget (Dollars in Thousands):

- (-$3.0) This reduction eliminates the LUST appropriation's share of workers compensation and unemployment cost.

Statutory Authority:

Title V USC.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	$11,212.5	$13,586.0	$13,782.0	$196.0
Leaking Underground Storage Tanks	***$567.7***	***$475.0***	***$484.0***	***$9.0***
Oil Spill Response	$794.6	$720.0	$737.0	$17.0
Hazardous Substance Superfund	$19,392.9	$20,905.0	$21,401.0	$496.0
Total Budget Authority / Obligations	$31,967.7	$35,686.0	$36,404.0	$718.0
Total Workyears	132.9	154.7	154.7	0.0

Program Project Description:

Leaking underground storage tanks (LUSTs) research focuses on the assessment and cleanup of leaks for fuels and various fuel additives, including methyl tertiary butyl ether (MTBE). EPA's Land Research Program provides the scientific foundation for the Agency's actions to protect America's land. The purpose of the Land Protection LUST research program is the prevention and control of pollution at LUST sites. Specific activities include the development of source term and transport modeling modules for use by state project managers and the development of 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. To enhance communication with customers, EPA developed a Land Research Program web site.[4] The site includes a description of the program; fact sheets (science issues, program research, and impacts); research publications and accomplishments; and links to tools and models.

FY 2010 Activities and Performance Plan:

In FY 2010, resources will continue to be utilized to address prevention and control. This goal is best achieved by proper characterization of both fuels and release sites, as well as the development of effective risk management approaches. The expected increase in the use of various biofuels that may not be compatible with existing fuel storage infrastructure makes this research even more important. Research activities will include:

- Fuels analysis, including understanding current and future shifts in supply.

[3] EPA, Office of Research and Development, *Land Research Program MYP*. Washington, D.C.: EPA. For more information, see http://www.epa.gov/ord/htm/multi-yearplans.htm#land
[4] For more information, see www.epa.gov/ord/landscience.

- Understanding fate and transport of MTBE, ethanol, and other fuel oxygenates in the subsurface using models that incorporate defining characteristics of releases.
- Working with the public and private sectors, analysis of infrastructure to determine vulnerabilities in the tank storage system to prevent water quality impairment.
- Development of treatment options, including a patented Biomass Concentrator Reactor for cost-effective treatment of ground water to remove contamination due to oxygenates, fuels, and fuel blends. Use of this reactor ensures that treated ground water meets established drinking water standards.
- Treatment options anticipating fuel composition changes and the nature of sites where releases will occur.
- Determining the role of vapor release of gasoline from underground storage tanks on fuel constituent contamination in ground water both in the field and in laboratory settings.
- Technical support to regulators in various states including California, Michigan, New York, Rhode Island, Utah, Virginia, West Virginia, and Wisconsin. Examples of this support include fate and transport studies at Long Island, New York, sites and presentation of a course on Modeling and Transport for a state of West Virginia Agency.

This research will complement biofuels research conducted in the global change and air programs.

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 LUST research activities are included under the Superfund Land Protection and Restoration program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

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

Statutory Authority:

BRERA; CERCLA; ERDDA; HSWA; OPA; RCRA; SARA; SWDA.

Program Area: Underground Storage Tanks (LUST / UST)

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$11,157.9	$11,946.0	$12,451.0	$505.0
Leaking Underground Storage Tanks	***$15,251.5***	***$11,105.0***	***$11,855.0***	***$750.0***
Total Budget Authority / Obligations	$26,409.4	$23,051.0	$24,306.0	$1,255.0
Total Workyears	119.7	132.0	132.0	0.0

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. Under this program project, EPA provides oversight and financial assistance for states, tribes and non-profit organizations. Activities in support of this mission 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 assist states in implementing their oversight and programmatic role.[5]

EPA works with state and Tribal UST programs to clean up LUST sites, promote innovative and environmentally friendly approaches in corrective action in order to enhance and streamline the remediation process, and measure and evaluate national program progress and performance. In addition, the Energy Policy Act[6] (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 for these activities, including providing tribes with financial assistance for cleanups.

FY 2010 Activities and Performance Plan:

Almost 80 percent (or 377,019) of all reported leaks have been addressed to date, leaving a backlog of almost 103,000 old leaks that have not yet been cleaned up.[7] In FY 2010, EPA will

[5] Refer to http://www.epa.gov/swerust1/20clenup.htm.
[6] 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).
[7] U.S. Environmental Protection Agency Memorandum, *FY 2008 End of Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated November 20, 2008, http://www.epa.gov/swerust1/cat/ca_08_34.pdf.

continue to work with the states and tribes to complete LUST cleanups in an effort to reduce the remaining backlog.

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 2010, 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.

The EPAct requirement to develop a strategy[8] 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.

To improve the LUST (cleanup) program, 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.

In FY 2008, EPA and state tank programs completed 98 percent of the nation's target for cleanups completed (12,768).[9] Of this total, 40 cleanups were completed in Indian country. In FY 2009, EPA and OMB agreed to revise the program's goal for LUST cleanups to 12,250, with a subset of 30 LUST cleanups in Indian country. The FY 2010 total program goal for LUST cleanups is 12,250 and the Indian country remains at 30.

Work under this program supports EPA's objectives under Goal 3 of the Agency's proposed FY 2009-2014 Strategic Plan commitments. 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.

[8] 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.
[9] http://www.epa.gov/swerust1/cat/ca_08_34.pdf.

This program also supports the 2009 American Recovery and Reinvestment Act (ARRA) as detailed in "Tab 13" of this document. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of LUST cleanups completed that meet risk-based standards for human exposure and groundwater migration in Indian country.	40	30	30	30	cleanups

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,533.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$783.0) This decrease reduces funding for contract resources. This decrease will not impede achievement of program objectives.

Statutory Authority:

SWDA of 1976, as amended by the Superfund Amendments and Reauthorization Act 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): Restore Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Leaking Underground Storage Tanks	***$89,552.8***	***$62,461.0***	***$63,192.0***	***$731.0***
Total Budget Authority / Obligations	$89,552.8	$62,461.0	$63,192.0	$731.0
Total Workyears	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. Almost 80 percent (or 377,019) of all reported leaks have been addressed to date, leaving a backlog of almost 103,000 old leaks that have not yet been cleaned up.[10] 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 of emergency and 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. Thirty-six states[12] 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 2010 Activities and Performance Plan:

In FY 2010, EPA will continue to work with the states and Tribes to complete LUST cleanups in an effort to reduce the remaining backlog. EPA's LUST cleanup program will focus on increasing the efficiency of LUST cleanups nationwide. EPA and its state partners will continue

[10] U.S. Environmental Protection Agency Memorandum, *FY 2008 End of Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated November 20, 2008, http://www.epa.gov/swerust1/cat/ca_08_34.pdf.
[11] Refer to http://www.epa.gov/OUST/ltffacts.htm
[12] There are 36 state funds that accept new releases and an additional 7 that have "sunset," meaning that they stopped accepting claims. Because the span of these "sunset" funds varies, the program has characterized this number as approximately 40 states.

to make progress in cleaning up petroleum leaks by initiating and completing cleanups, and reducing the backlog of sites not yet cleaned up. At the FY 2010 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.

To improve the LUST (cleanup) program, 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:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of LUST cleanups completed that meet state risk-based standards for human exposure and groundwater migration.	12,768	13,000	12,250	12,250	cleanups

In FY 2008, EPA and state tank programs completed 98 percent of the nation's target for cleanups completed (12,768).[14] Of this total, 40 cleanups were completed in Indian country. In FY 2009, EPA and OMB agreed to revise the program's goal for LUST cleanups to 12,250, with a subset of 30 LUST cleanups in Indian country. The targets for FY 2010 are the same.

Work under this program will support EPA's objectives under Goal 3 of the Agency's proposed FY 2009-2014 Strategic Plan commitments. 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.

This program also supports the 2009 American Recovery and Reinvestment Act (ARRA) as detailed in "Tab 13" of this document. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

FY 2010 Change from FY 2009 Enacted (Dollars in Thousands):

- (+$731.0) This increase will provide additional grant resources to states for LUST cleanup.

[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).
[14] http://www.epa.gov/swerust1/cat/ca_08_34.pdf.

Statutory Authority:

SWDA of 1976, as amended by the Superfund Amendments and Reauthorization Act of 1986 (Subtitle I), Section 9003(h); Section 9004(f); Section 8001(a)(1); Section 9003(h)(7) of the SWDA.

LUST Prevention
Program Area: Underground Storage Tanks (LUST / UST)
Goal: Land Preservation and Restoration
Objective(s): Preserve Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Leaking Underground Storage Tanks	***$0.0***	***$35,500.0***	***$34,430.0***	***($1,070.0)***
Total Budget Authority / Obligations	$0.0	$35,500.0	$34,430.0	($1,070.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Since the beginning of the Leaking Underground Storage Tank (LUST) program, preventing petroleum releases into the environment has been one of the primary goals. EPA and its state partners have made major progress in reducing the number of new releases, but thousands of new leaks are still discovered each year. The lack of proper operation and maintenance of underground storage tank (UST) systems is a main cause of these new releases. EPA continues to work with the states, tribes and other partners to advance prevention efforts and quickly detect releases when they occur.

In recent years, these efforts have been enhanced by the release prevention requirements mandated by the Energy Policy Act of 2005 (EPAct). The LUST Prevention program will provide assistance to States to meet their responsibilities under Title XV, Subtitle B of the Energy Policy Act of 2005 and for Tribes to implement the LUST Prevention program, as highlighted in EPA's "Strategy For An EPA/Tribal Partnership To Implement Section 1529 Of The Energy Policy Act Of 2005." At the end of FY 2008, there were over 623,000 federally-regulated active USTs at approximately 235,000 sites across the country. The LUST Prevention program will assist States with inspections and other release prevention and compliance assurance activities for federally-regulated underground storage tanks, as well as for enforcement activities related to release prevention. For Tribes, the LUST Prevention program will assist with all aspects of the Tribal programs, e.g. inspection capacity.

FY 2010 Activities and Performance Plan:

This new program project was implemented in the Agency's FY 2009 Operating Plan to fund EPAct pollution prevention activities from the LUST Trust Fund appropriation rather than the State and Tribal Assistance Grant (STAG) appropriation. The FY 2010 President's Budget is the first request to reflect this new structure.

In FY 2010, EPA will make grants or cooperative agreements to states and tribes, and/or Intertribal Consortia for activities authorized by the EPAct.[15] Major activities will include inspections, enforcement, development of leak prevention regulations and other program infrastructure. Specifically, these major activities include inspecting UST facilities to complete the three-year inspection requirement, and assisting States in adopting measures (e.g., delivery prohibition, secondary containment, operator training, etc.), as required by the EPAct and EPA's grant guidelines. These activities are geared toward bringing all UST systems into compliance with release detection and release prevention requirements and minimizing future releases.

For Tribes, the LUST Prevention program will assist with all aspects of the Tribal programs, e.g., develop inspection capacity. 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.

To improve the LUST (prevention) program, 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:

At the end of FY 2008, EPA achieved 66 percent significant operational compliance and confirmed 7,364 new releases. The UST funds will assist the Agency in meeting its FY 2010 performance targets ensuring that 65.5 percent of UST facilities are in significant operational compliance with both the release detection and release prevention requirements and to minimize the number of confirmed releases at UST facilities to 9,000 or fewer.

One of EPA's challenges has been to maintain the UST compliance rates. Prior to the Energy Policy Act of 2005, many UST facilities were inspected infrequently, and as a result, there were low compliance rates. EPA and states are now inspecting those infrequently-inspected facilities, and finding that many are out of compliance, thus explaining the lower compliance rates. However, EPA believes that by doing more frequent inspections in the future we will ensure better compliance and fewer releases.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$1,070.0) This reduction to grants resources will not impede achievement of program objectives.

Statutory Authority:

Sections 9003(i), 9003(j), 9005(c), 9010, 9011, 9012 and other applicable provisions of Subtitle I of the Solid Waste Disposal Act (SWDA) of 1976, as amended for States and Territories and EPA's annual Appropriation Acts for Tribes and Intertribal Consortia, and P.L. 105-276.

[15] 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).

Table of Contents - Oil Spill

Resource Summary Table **647**
Program Projects in Oil Spills **647**
Program Area: Compliance **649**
Compliance Assistance and Centers 650
Program Area: Enforcement **652**
Civil Enforcement 653
Program Area: IT / Data Management / Security **655**
IT / Data Management 656
Program Area: Oil **658**
Oil Spill: Prevention, Preparedness and Response 659
Program Area: Operations and Administration **662**
Facilities Infrastructure and Operations 663
Program Area: Research: Land Protection **665**
Research: Land Protection and Restoration 666

APPROPRIATION: Leaking Underground Storage Tanks
Resource Summary Table
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Leaking Underground Storage Tanks				
Budget Authority	$108,093.9	$112,577.0	$113,101.0	$524.0
Total Workyears	65.6	75.3	75.3	0.0

Bill Language: Leaking Underground Storage Tank Trust Fund Program

For necessary expenses to carry out leaking underground storage tank cleanup activities authorized by subtitle I of the Solid Waste Disposal Act, as amended, [$112,577,000] $113,101,000, to remain available until expended, of which [$77,077,000] $78,671,000 shall be for carrying out leaking underground storage tank cleanup activities authorized by section 9003(h) of the Solid Waste Disposal Act, as amended; [$35,500,000] $34,430,000 shall be for carrying out the other provisions of the Solid Waste Disposal Act specified in section 9508(c) of the Internal Revenue Code, as amended: Provided, That the Administrator is authorized to use appropriations made available under this heading to implement section 9013 of the Solid Waste Disposal Act to provide financial assistance to federally recognized Indian tribes for the development and implementation of programs to manage underground storage tanks.

Program Projects in LUST
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Compliance				
Compliance Assistance and Centers	$787.5	$817.0	$788.0	($29.0)
IT / Data Management / Security				
IT / Data Management	$178.0	$162.0	$162.0	$0.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$685.0	$696.0	$696.0	$0.0
Facilities Infrastructure and Operations (other activities)	$205.3	$206.0	$207.0	$1.0
Subtotal, Facilities Infrastructure and Operations	$890.3	$902.0	$903.0	$1.0
Acquisition Management	$154.2	$165.0	$165.0	$0.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Central Planning, Budgeting, and Finance	$708.9	$987.0	$1,122.0	$135.0
Human Resources Management	$3.0	$3.0	$0.0	($3.0)
Subtotal, Operations and Administration	$1,756.4	$2,057.0	$2,190.0	$133.0
Research: Land Protection				
Research: Land Protection and Restoration	$567.7	$475.0	$484.0	$9.0
Underground Storage Tanks (LUST / UST)				
LUST / UST				
EPAct & Related Authorities Implemention	$1,058.5	$0.0	$0.0	$0.0
LUST / UST (other activities)	$14,193.0	$11,105.0	$11,855.0	$750.0
Subtotal, LUST / UST	$15,251.5	$11,105.0	$11,855.0	$750.0
LUST Cooperative Agreements				
EPAct & Related Authorities Implemention	$26,496.8	$0.0	$0.0	$0.0
LUST Cooperative Agreements (other activities)	$63,056.0	$62,461.0	$63,192.0	$731.0
Subtotal, LUST Cooperative Agreements	$89,552.8	$62,461.0	$63,192.0	$731.0
LUST Prevention				
EPAct & Related Authorities Implemention	$0.0	$35,500.0	$34,430.0	($1,070.0)
Subtotal, LUST Prevention	$0.0	$35,500.0	$34,430.0	($1,070.0)
Subtotal, Underground Storage Tanks (LUST / UST)	$104,804.3	$109,066.0	$109,477.0	$411.0
TOTAL, EPA	$108,093.9	$112,577.0	$113,101.0	$524.0

Program Area: Compliance

Compliance Assistance and Centers
Program Area: Compliance
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$28,063.5	$23,770.0	$26,070.0	$2,300.0
Leaking Underground Storage Tanks	$787.5	$817.0	$788.0	($29.0)
Oil Spill Response	***$285.3***	***$277.0***	***$317.0***	***$40.0***
Hazardous Substance Superfund	$33.1	$22.0	$0.0	($22.0)
Total Budget Authority / Obligations	$29,169.4	$24,886.0	$27,175.0	$2,289.0
Total Workyears	197.0	181.1	180.1	-1.0

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.

FY2010 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 2010 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 measures pertaining to enforcement and compliance actions are under review and may be modified in the coming months.

Performance Targets:

These three measures on the total entities that change behavior resulting in direct and preventative environmental benefits are new performance measures beginning in FY 2010; no performance targets exist for these new measures for FY 2008-2009.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for air as a result of EPA enforcement and compliance actions.				127	Entities
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for water as a result of EPA enforcement and compliance actions.				608	Entities
Outcome	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for land as a result of EPA enforcement and compliance actions.				213	Entities

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$40.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

OPA; CWA; CERCLA; PPA; NEPA; PHSA; DREAA; SDWA; Executive Order 12241; Executive Order 12656.

Program Area: Enforcement

Civil Enforcement
Program Area: Enforcement
Goal: Land Preservation and Restoration
Objective(s): Restore Land

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$131,986.8	$137,182.0	$145,949.0	$8,767.0
Oil Spill Response	***$1,851.0***	***$2,117.0***	***$2,406.0***	***$289.0***
Hazardous Substance Superfund	$591.0	$0.0	$0.0	$0.0
Total Budget Authority / Obligations	$134,428.8	$139,299.0	$148,355.0	$9,056.0
Total Workyears	940.6	974.2	988.5	14.3

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 2010 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 refer civil judicial actions to the Department of Justice, 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 2010, the program also will provide support for field investigations and inspections of spills, as well as Spill Control Countermeasure compliance assistance.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate air pollutants through concluded enforcement actions.				480	Million Pounds

[1] For more information refer to: www.epa.gov/oilspill/index.htm.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate water pollutants through concluded enforcement actions.				320	Million Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.				3.8	Million Pounds

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Reduce, treat, or eliminate hazardous waste through concluded enforcement actions.				6,500	Million Pounds

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$289.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$91,928.2	$93,171.0	$103,305.0	$10,134.0
Science & Technology	$3,762.6	$3,969.0	$4,073.0	$104.0
Leaking Underground Storage Tanks	$178.0	$162.0	$162.0	$0.0
Oil Spill Response	***$15.0***	***$24.0***	***$24.0***	***$0.0***
Hazardous Substance Superfund	$15,929.7	$16,896.0	$17,124.0	$228.0
Total Budget Authority / Obligations	$111,813.5	$114,222.0	$124,688.0	$10,466.0
Total Workyears	492.2	503.1	503.1	0.0

Program Project Description:

The Information Technology/Data Management (IT/DM) program 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. IT/DM provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access. IT/DM manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines. And IT/DM supports regional information technology infrastructure, administrative and environmental programs, and telecommunications.

The work performed under IT/DM encompasses more than 30 distinct activities. For descriptive purposes they can be categorized into the following major functional areas: information access; geospatial information and analysis; Envirofacts; IT/information management (IT/IM) policy and planning; electronic records and content management; internet operations and maintenance (IOME); information reliability and privacy; and IT/IM infrastructure. The activity funded under the Oil Spill Response (Oil) appropriation is Internet Operations and Maintenance (IOME).

In FY 2010 the IT/Data Management Oil resources continue to provide EPA's "Readiness to Serve" IT 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 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).

FY 2010 Activities and Performance Plan:

In FY 2010, the following ITDM activities will continue to be provided for by the Oil appropriation:

- **Internet Operations and Maintenance (IOME**) – FY 2010 activities in this area implement and maintain the EPA Home Page (www.EPA.gov) and over 200 top-level pages that facilitate access to the many information resources available on the EPA Web site. In addition, IOME provides the funding to support Web hosting for all of the Agency's Web sites and pages. The EPA Web site is the primary delivery mechanism for environmental information to EPA staff, partners, stakeholders and the public, and is becoming a resource for emergency planning and response. (In FY 2010, IOME activities will be funded at $0.01 million, under the Oil appropriation)
- **IT/IM Infrastructure** – FY 2010 activities in this area support, using funding from the Oil appropriation, the information technology infrastructure, administrative and environmental programs, and telecommunications for all EPA employees and other on-site workers at over 100 locations, including EPA Headquarters, all ten regions, and the various labs and ancillary offices. More specifically, these activities provide what is known as "workforce support," which includes desktop equipment, network connectivity, e-mail, application hosting, remote access, telephone services and maintenance, web and network servers, IT related maintenance, IT security, and electronic records and data. (In FY 2010, the IT/IM Infrastructure activities will be funded at $0.02 million, under the LUST appropriation)

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

FACA; GISRA; CERCLA; CAAA; CWA and amendments; ERD; 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Oil Spill Response	***$13,880.8***	***$13,953.0***	***$14,397.0***	***$444.0***
Total Budget Authority / Obligations	$13,880.8	$13,953.0	$14,397.0	$444.0
Total Workyears	86.7	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 24,000 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 100,000 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 2010 Activities and Performance Plan:

FY 2010 priorities include improvements to the Oil Spill program's regulatory requirements. As appropriate, EPA will begin to implement regulatory changes, and update guidance that was issued previously to ensure it reflects current final rule requirements and input from stakeholders.

In FY 2010, EPA will continue to review/approve FRPs and conduct inspections and exercises. 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. EPA also will finalize and begin using guidance for FRP inspectors.

Working with state, local, tribal and Federal officials in a given geographic location, EPA will continue to strengthen area contingency plans (ACPs), regional contingency plans and to enhance preparedness exercises. 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 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. * The efficiency measure reflects long-term performance with targets set every three years.

In FY 2010, EPA will ensure that 15 percent of FRP facilities that are found to be non-compliant will be brought into compliance by the end of the fiscal year. EPA will emphasize emergency preparedness, particularly through the use of unannounced drills and exercises, to ensure facilities and responders can effectively implement response plans. An SPCC measure will also be instituted for FY 2010. Similar to the FRP measure mentioned above, EPA will ensure that 15 percent of SPCC facilities found to be non-compliant will be brought into compliance by the end of the fiscal year.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Gallons of oil spilled to navigable waters per million program dollar spent annually on prevention and preparedness at Facility Response Plan (FRP) facilities.	152,165	90,000	no target	no target	gallons

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of all SPCC inspected facilities found to be non-compliant brought into compliance.				15	percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of all FRP inspected facilities found to be non-compliant brought into compliance.				15	percent

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,133.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-$689.0) This decrease reduces funding for contract resources with no impact to program goals.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program & Management	$296,235.0	$303,884.0	$320,612.0	$16,728.0
Science & Technology	$69,239.2	$73,835.0	$72,882.0	($953.0)
Building and Facilities	$28,081.5	$26,931.0	$28,931.0	$2,000.0
Leaking Underground Storage Tanks	$890.3	$902.0	$903.0	$1.0
Oil Spill Response	***$498.6***	***$596.0***	***$498.0***	***($98.0)***
Hazardous Substance Superfund	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Total Budget Authority / Obligations	$467,188.5	$482,398.0	$502,423.0	$20,025.0
Total Workyears	400.4	410.6	411.1	0.5

Program Project Description:

The Facilities Infrastructure and Operations Program provides wide range of activities and support services in many centralized administrative areas such as health and safety, environmental compliance, occupational health, medical monitoring, fitness, wellness, safety, and environmental management functions at EPA. Oil Spill Response 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.

FY 2010 Activities and Performance Plan:

- For FY 2010, the Agency is requesting a total of $.44 million for rent and $.06 million for transit subsidy in the Oil Spill Response 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 *Federal Workforce Transportation*.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2.0) This change reflects an increase in transit subsidy.

- (-$100.0) This decrease in rent reflects the rebalancing of cost allocation methodologies between the Superfund, Environmental Program Management, Science & Technology, and Oil Spill Response appropriations.

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).

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Science & Technology	$11,212.5	$13,586.0	$13,782.0	$196.0
Leaking Underground Storage Tanks	$567.7	$475.0	$484.0	$9.0
Oil Spill Response	***$794.6***	***$720.0***	***$737.0***	***$17.0***
Hazardous Substance Superfund	$19,392.9	$20,905.0	$21,401.0	$496.0
Total Budget Authority / Obligations	$31,967.7	$35,686.0	$36,404.0	$718.0
Total Workyears	132.9	154.7	154.7	0.0

Program Project Description:

Oil spills research focuses on three aspects: test protocol development, fate and transport modeling, and remediation. EPA's Land Research Program provides the scientific foundation for the Agency's actions to protect America's land. 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. Testing products ensures that they work as claimed and provides access to effective means to reduce damage when an oil spill occurs.

These research efforts are guided by the Land Multi-Year Plan (MYP)[2], 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. To enhance communication with customers, EPA developed a Land Research Program web site.[3] The site includes a description of the program, fact sheets (science issues, program research, and impacts), research publications and accomplishments, and links to tools and models.

FY 2010 Activities and Performance Plan:

In FY 2010, the Land Research program will continue remediation research into advances associated with physical, chemical, and biological risk management methods for petroleum and non-petroleum oil spills in freshwater and marine environments as well as development of a protocol for testing solidifiers and treating oil. The program also will develop testing guidelines that address environment, type of oil (e.g. petroleum-based, vegetable), and agent for remediation. Additionally, the program will model the composition and properties of spilled oil, natural dispersion, emulsification, weathering, and effectiveness of control strategies. Research

[2] EPA, Office of Research and Development, *Land Research Program MYP*. Washington, DC: EPA. For more information, see http://www.epa.gov/ord/htm/multi-yearplans.htm#land.
[3] For more information, see www.epa.gov/ord/landscience.

products are presented at meetings and posted or linked on EPA's oil spills web site for use by oil spill managers.

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 research activities in this program are included under the Superfund Land Protection and Restoration program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$17.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

SWDA; HSWA; SARA; CERCLA; RCRA; OPA; BRERA.

Table of Contents - State and Tribal Assistance Grants

Resource Summary Table **670**
Program Projects in STAG **672**
Program Area: State and Tribal Assistance Grants (STAG) **673**
- **Brownfields Projects** 674
- **Diesel Emissions Reduction Grant Program** 677
- **Infrastructure Assistance: Alaska Native Villages** 679
- **Infrastructure Assistance: Clean Water SRF** 681
- **Infrastructure Assistance: Drinking Water SRF** 684
- **Infrastructure Assistance: Mexico Border** 688

Program Area: Categorical Grants **691**
- **Categorical Grant: Beaches Protection** 692
- **Categorical Grant: Brownfields** 694
- **Categorical Grant: Environmental Information** 696
- **Categorical Grant: Hazardous Waste Financial Assistance** 698
- **Categorical Grant: Homeland Security** 700
- **Categorical Grant: Lead** 701
- **Categorical Grant: Local Govt Climate Change** 703
- **Categorical Grant: Nonpoint Source (Sec. 319)** 704
- **Categorical Grant: Pesticides Enforcement** 707
- **Categorical Grant: Pesticides Program Implementation** 708
- **Categorical Grant: Pollution Control (Sec. 106)** 711
- **Categorical Grant: Pollution Prevention** 715
- **Categorical Grant: Public Water System Supervision (PWSS)** 717
- **Categorical Grant: Radon** 720
- **Categorical Grant: Sector Program** 722
- **Categorical Grant: State and Local Air Quality Management** 724
- **Categorical Grant: Toxics Substances Compliance** 727
- **Categorical Grant: Tribal Air Quality Management** 728
- **Categorical Grant: Tribal General Assistance Program** 730
- **Categorical Grant: Underground Injection Control (UIC)** 733
- **Categorical Grant: Underground Storage Tanks** 738
- **Categorical Grant: Wetlands Program Development** 741

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

APPROPRIATION: State and Tribal Assistance Grants
Resource Summary Table
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants				
Budget Authority	$3,237,929.7	$2,976,464.0	$5,191,274.0	$2,214,810.0
Total Workyears	0.0	0.0	0.0	0.0

Bill Language: State and Tribal Assistance Grants

For environmental programs and infrastructure assistance, including capitalization grants for State revolving funds and performance partnership grants, [$2,968,464,000] $5,191,274,000, to remain available until expended, of which [$689,080,000] $2,400,000,000 shall be for making capitalization grants for the Clean Water State Revolving Funds under title VI of the Federal Water Pollution Control Act, as amended (the ``Act''); of which [up to $75,000,000 shall be available for loans, including interest free loans as authorized by 33 U.S.C. 1383(d)(1)(A), to municipal, inter-municipal, interstate, or State agencies or nonprofit entities for projects that provide treatment for or that minimize sewage or stormwater discharges using one or more approaches which include, but are not limited to, decentralized or distributed stormwater controls, decentralized wastewater treatment, low-impact development practices, conservation easements, stream buffers, or wetlands restoration; $829,029,000] $1,500,000,000 shall be for capitalization grants for the Drinking Water State Revolving Funds under section 1452 of the Safe Drinking Water Act, as amended: Provided, That for fiscal year 2010, to the extent there are sufficient eligible project applications, not less than 20 percent of funds made available for Clean Water State Revolving Fund or Drinking Water State Revolving Fund capitalization grants for projects shall be for projects to address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities; [$20,000,000] $10,000,000 shall be for architectural, engineering, planning, design, construction and related activities in connection with the construction of high priority water and wastewater facilities in the area of the United States-Mexico Border, after consultation with the appropriate border commission; [$18,500,000] $10,000,000 shall be for grants to the State of Alaska to address drinking water and wastewater infrastructure needs of rural and Alaska Native Villages: Provided further, That, of these funds: (1) the State of Alaska shall provide a match of 25 percent; and (2) no more than 5 percent of the funds may be used for administrative and overhead expenses; [and (3) the State of Alaska shall make awards consistent with the State-wide priority list established in conjunction with the Agency and the U.S. Department of Agriculture for all water, sewer, waste disposal, and similar projects carried out by the State of Alaska that are funded under section 221 of the Federal Water Pollution Control Act (33 U.S.C. 1301) or the Consolidated Farm and Rural Development Act (7 U.S.C. 1921 et seq.) which shall allocate not less than 25 percent of the funds provided for projects in regional hub communities; $145,000,000 shall be for making special project grants for the construction of drinking water,

wastewater and storm water infrastructure and for water quality protection in accordance with the terms and conditions specified for such grants in the explanatory statement described in section 4 (in the matter preceding division A of this consolidated Act), and, for purposes of these grants, each grantee shall contribute not less than 45 percent of the cost of the project unless the grantee is approved for a waiver by the Agency; $97,000,000] $100,000,000 shall be to carry out section 104(k) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, including grants, interagency agreements, and associated program support costs; $60,000,000 shall be for grants under title VII, subtitle G of the Energy Policy Act of 2005, as amended; [$15,000,000 shall be for grants for cost-effective emission reduction projects in accordance with the terms and conditions of the explanatory statement described in section 4 (in the matter preceding division A of this consolidated Act);] and [$1,094,855,000] $1,111,274,000 shall be for grants, including associated program support costs, to States, federally recognized tribes, interstate agencies, tribal consortia, and air pollution control agencies for multi-media or single media pollution prevention, control and abatement and related activities, including activities pursuant to the provisions set forth under this heading in Public Law 104-134, [and for making grants under section 103 of the Clean Air Act for particulate matter monitoring and data collection activities subject to terms and conditions specified by the Administrator,] of which $49,495,000 shall be for carrying out section 128 of CERCLA, as amended, $10,000,000 shall be for Environmental Information Exchange Network grants, including associated program support costs, $18,500,000 of the funds available for grants under section 106 of the Act shall be for [water quality monitoring activities, $10,000,000 shall be for competitive grants to communities to develop plans and demonstrate and implement projects which reduce greenhouse gas emissions] state participation in national statistical surveys of water resources and enhancements to state monitoring programs, and, in addition to funds appropriated under the heading ``Leaking Underground Storage Tank Trust Fund Program'' to carry out the provisions of the Solid Waste Disposal Act specified in section 9508(c) of the Internal Revenue Code other than section 9003(h) of the Solid Waste Disposal Act, as amended, $2,500,000 shall be for grants to States under section 2007(f)(2) of the Solid Waste Disposal Act, as amended: Provided further, That notwithstanding section 603(d)(7) of the Federal Water Pollution Control Act, the limitation on the amounts in a State water pollution control revolving fund that may be used by a State to administer the fund shall not apply to amounts included as principal in loans made by such fund in fiscal year [2009] 2010 and prior years where such amounts represent costs of administering the fund to the extent that such amounts are or were deemed reasonable by the Administrator, accounted for separately from other assets in the fund, and used for eligible purposes of the fund, including administration: Provided further, That for fiscal year [2009] 2010, and notwithstanding section 518(f) of the Act, the Administrator is authorized to use the amounts appropriated for any fiscal year under section 319 of that Act to make grants to federally recognized Indian tribes pursuant to sections 319(h) and 518(e) of that Act: Provided further, That for fiscal year [2009] 2010, notwithstanding the limitation on amounts in section 518(c) of the Federal Water Pollution Control Act and section 1452(i) of the Safe Drinking Water Act, up to a total of [1\1/2\] 2 percent of the funds appropriated for State Revolving Funds under [title VI of that Act] such Acts may be reserved by the Administrator for grants under section 518(c) and section 1452(i) of [that Act] such Acts: Provided further, That for fiscal year 2010, in addition to the amounts specified in section 205(c) of the Federal Water Pollution Control Act, up to 1.2486 percent of the funds appropriated for the Clean Water State Revolving Fund program under the Act may be reserved by the

Administrator for grants made under Title II of the Clean Water Act for American Samoa, Guam, the Commonwealth of the Northern Marianas, and United States Virgin Islands: Provided further, That for fiscal year 2010, notwithstanding the limitations on amounts specified in section 1452(j) of the Safe Drinking Water Act, up to 1.5 percent of the funds appropriated for the Drinking Water State Revolving Fund programs under the Safe Drinking Water Act may be reserved by the Administrator for grants made under section 1452(j) of the Safe Drinking Water Act: Provided further, That no funds provided by this appropriations Act to address the water, wastewater and other critical infrastructure needs of the colonias in the United States along the United States-Mexico border shall be made available to a county or municipal government unless that government has established an enforceable local ordinance, or other zoning rule, which prevents in that jurisdiction the development or construction of any additional colonia areas, or the development within an existing colonia the construction of any new home, business, or other structure which lacks water, wastewater, or other necessary infrastructure.

Program Projects in STAG
(Dollars in Thousands)

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants (STAG)				
Infrastructure Assistance: Clean Water SRF	$836,929.7	$689,080.0	$2,400,000.0	$1,710,920.0
Infrastructure Assistance: Drinking Water SRF	$949,968.9	$829,029.0	$1,500,000.0	$670,971.0
Congressionally Mandated Projects	$75,837.8	$153,000.0	$0.0	($153,000.0)
Infrastructure Assistance: Alaska Native Villages	$21,193.7	$18,500.0	$10,000.0	($8,500.0)
Brownfields Projects	$94,611.8	$97,000.0	$100,000.0	$3,000.0
Clean School Bus Initiative	$6,868.8	$0.0	$0.0	$0.0
Diesel Emissions Reduction Grant Program				
EPAct & Related Authorities Implemention	$0.0	$60,000.0	$60,000.0	$0.0
CA Emission Reduction Project Grants	$9,844.0	$15,000.0	$0.0	($15,000.0)
Diesel Emissions Reduction Grant Program (other activities)	$19,954.9	$0.0	$0.0	$0.0
Subtotal, Diesel Emissions Reduction Grant Program	$29,798.9	$75,000.0	$60,000.0	($15,000.0)
Infrastructure Assistance: Mexico Border	$65,138.5	$20,000.0	$10,000.0	($10,000.0)
Subtotal, State and Tribal Assistance Grants (STAG)	$2,080,348.1	$1,881,609.0	$4,080,000.0	$2,198,391.0
Categorical Grants				
Categorical Grant: Beaches Protection	$10,642.2	$9,900.0	$9,900.0	$0.0
Categorical Grant: Brownfields	$51,070.6	$49,495.0	$49,495.0	$0.0
Categorical Grant: Environmental Information	$14,402.4	$10,000.0	$10,000.0	$0.0

Program Project	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Categorical Grant: Hazardous Waste Financial Assistance	$101,740.4	$101,346.0	$106,346.0	$5,000.0
Categorical Grant: Homeland Security	$5,688.0	$4,950.0	$0.0	($4,950.0)
Categorical Grant: Lead	$14,699.7	$13,564.0	$14,564.0	$1,000.0
Categorical Grant: Local Govt Climate Change	$0.0	$10,000.0	$0.0	($10,000.0)
Categorical Grant: Nonpoint Source (Sec. 319)	$207,166.5	$200,857.0	$200,857.0	$0.0
Categorical Grant: Pesticides Enforcement	$20,098.6	$18,711.0	$18,711.0	$0.0
Categorical Grant: Pesticides Program Implementation	$14,014.7	$12,970.0	$13,520.0	$550.0
Categorical Grant: Pollution Control (Sec. 106)				
Monitoring Grants	$26,737.7	$18,500.0	$18,500.0	$0.0
Categorical Grant: Pollution Control (Sec. 106) (other activities)	$217,098.4	$199,995.0	$210,764.0	$10,769.0
Subtotal, Categorical Grant: Pollution Control (Sec. 106)	$243,836.1	$218,495.0	$229,264.0	$10,769.0
Categorical Grant: Pollution Prevention	$5,076.8	$4,940.0	$4,940.0	$0.0
Categorical Grant: Public Water System Supervision (PWSS)	$101,503.0	$99,100.0	$105,700.0	$6,600.0
Categorical Grant: Radon	$10,007.4	$8,074.0	$8,074.0	$0.0
Categorical Grant: Sector Program	$1,666.3	$1,828.0	$1,828.0	$0.0
Categorical Grant: State and Local Air Quality Management	$226,155.9	$224,080.0	$226,580.0	$2,500.0
Categorical Grant: Targeted Watersheds	$21,027.7	$0.0	$0.0	$0.0
Categorical Grant: Toxics Substances Compliance	$5,273.6	$5,099.0	$5,099.0	$0.0
Categorical Grant: Tribal Air Quality Management	$12,066.9	$13,300.0	$13,300.0	$0.0
Categorical Grant: Tribal General Assistance Program	$58,628.8	$57,925.0	$62,875.0	$4,950.0
Categorical Grant: Underground Injection Control (UIC)	$12,114.5	$10,891.0	$10,891.0	$0.0
Categorical Grant: Underground Storage Tanks	$3,600.7	$2,500.0	$2,500.0	$0.0
Categorical Grant: Wastewater Operator Training	$670.3	$0.0	$0.0	$0.0
Categorical Grant: Water Quality Cooperative Agreements	$445.3	$0.0	$0.0	$0.0
Categorical Grant: Wetlands Program Development	$15,985.2	$16,830.0	$16,830.0	$0.0
Subtotal, Categorical Grant: Wetlands Program Development	$15,985.2	$16,830.0	$16,830.0	$0.0
Subtotal, Categorical Grants	$1,157,581.6	$1,094,855.0	$1,111,274.0	$16,419.0
TOTAL, EPA	$3,237,929.7	$2,976,464.0	$5,191,274.0	$2,214,810.0

Program Area: State and Tribal Assistance Grants (STAG)

Brownfields Projects
Program Area: State and Tribal Assistance Grants (STAG)
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$94,611.8***	***$97,000.0***	***$100,000.0***	***$3,000.0***
Hazardous Substance Superfund	$7,070.7	$0.0	$0.0	$0.0
Total Budget Authority / Obligations	$101,682.5	$97,000.0	$100,000.0	$3,000.0
Total Workyears	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.[1] 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 and cooperative agreements to eligible entities authorized by CERCLA Section 104(k). The statute requires the Brownfields program to allocate 25 percent of the total available funds appropriated to carry out CERCLA 104(k), to address sites contaminated by petroleum. With the funds requested, EPA will provide: 1) assessment cooperative agreements for recipients to inventory, characterize, assess and conduct cleanup and redevelopment planning related to brownfields sites; 2) cleanup cooperative agreements for recipients to clean up sites they own; 3) capitalization cooperative agreements for Revolving Loan Funds (RLFs) to provide low interest loans for cleanups; 4) job training cooperative agreements; 5) petroleum cooperative agreements; and 6) financial assistance to localities, states, tribes, and non-profit organizations for research, training, and technical assistance.

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.[2]

FY 2010 Activities and Performance Plan:

In FY 2010, funding provided will result in the assessment of one thousand brownfields properties and the cleanup of 60 brownfields properties, and one thousand acres made ready for

[1] Refer to http://www.epa.gov/swerosps/bf/index.html.
[2] Refer to http://www.epa.gov/docs/swerosps/bf/partners/federal_partnerships.htm.

reuse. Brownfields grantees will leverage five thousand cleanup and redevelopment jobs and $900 million in cleanup and redevelopment funding. Activities include:

- Funding and technical support for an estimated 110 assessment cooperative agreements (estimated $32.3 million) for recipients to inventory, assess, and conduct cleanup and redevelopment planning at brownfields sites as authorized under CERCLA 104(k)(2). In FY 2010, EPA expects to award fewer assessment cooperative agreements due to the new Assessment Coalition option which allows three or more eligible entities to submit one grant proposal for up to $1,000,000 to assess sites and target more areas. This option became available in FY 2009.

- The Agency will award approximately seven RLF cooperative agreements (estimated $13.0 million) of up to $1 Million each per eligible entity and provide supplemental funding to existing RLF recipients. The RLF program 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 cooperative agreements as authorized under CERCLA 104(k)(3) and (4).

- Funding also will support at least 108 cooperative agreements to eligible entities to clean up properties (estimated $21.6 million). EPA plans to increase funding to support more cleanup cooperative agreements in FY 2010 and to facilitate an increase in the cleanup and redevelopment of brownfields sites. The Agency will award direct cleanup cooperative agreements of up to $200 thousand per site to communities and non-profits as authorized under CERCLA 104(k)(3).

- Assessment and cleanup of abandoned underground storage tanks (USTs) and other petroleum contamination found on brownfields properties (estimated $25.0 million) in approximately 50 brownfields communities as authorized under CERCLA 104(k)(2) and CERCLA 104(k)(3).

- Brownfields job training and development cooperative agreements (estimated $2.6 million) of up to $$200,000 each for a two year period. This funding will provide for at least 13 new job training cooperative agreements for community residents to take advantage of new jobs leveraged by the assessment and cleanup of brownfields as authorized under CERCLA 104(k)(6).

- Training, research and technical assistance grants and cooperative agreements (estimated $5.5 million) as authorized under CERCLA Section 104(k)(6).

In 2003, the Brownfields program underwent an OMB assessment and received an “adequate” rating. OMB cited its 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Brownfield properties assessed.	1,453	1,000	1,000	1,000	Properties

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Acres of Brownfields properties made ready for reuse.	4,404	225	1,000	1,000	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields sites.	1.5	0.9	0.9	0.9	Billions of Dollars

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Ouput	Number of properties cleaned up using Brownfields funding.	78	60	60	60	Properties

The Brownfields project resources contribute overall to the Brownfields program's goals, and measures. The resources also contribute to EPA efforts to assess and clean up brownfields, as described in EPA's FY 2009-2014 Strategic Plan.

This program also is supported by the 2009 American Recovery and Reinvestment Act (ARRA) funds. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$3,000.0) This reflects an increase in extramural funding resources for training, research and technical assistance grants and cooperative agreements.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$29,798.9***	***$75,000.0***	***$60,000.0***	***($15,000.0)***
CA Emission Reduction Project Grants	$9,844.0	$15,000.0	$0.0	($15,000.0)
Total Budget Authority / Obligations	$29,798.9	$75,000.0	$60,000.0	($15,000.0)
Total Workyears	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, which apply to new engines. 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.

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will issue and manage various categories of Diesel Emission Reduction grants and loans including:

- 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 replacements as well as fuel switching and fuel efficiency measures associated with diesel trucks, ships, school buses and other diesel equipment.
    - 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.
    - Out of the competitive funds, the Agency will establish a pilot project involving competitive grants to help qualifying entities (states, local governments, ports, etc.) create innovative finance programs (i.e. revolving loan programs) that

provide low cost, flexible loans or other mechanisms for the purchase of new and cleaner used equipment, as recommended by the Agency's Environmental Finance Advisory Board (EFAB).

The FY 2010 Budget Request for DERA competitive grants totals $42.0 million.

- 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 DERA. State governors have the discretion to use these funds as direct grants or revolving loans as they see fit.

The FY 2010 Budget Request for DERA formula grants totals $18.0 million.

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.

In FY 2009, the DERA program was also funded at $300 million by the 2009 American Recovery and Reinvestment Act (ARRA). Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

Performance Targets:

Work under this program supports multiple performance objectives. Currently, there are no performance measures specific to this program. EPA estimates that the $60.0 million for Federal and State Diesel Emission Reduction grants/loans would leverage at least $130 million in funding assistance and reduce PM by approximately seven thousand tons.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$15,000.0) This decrease reflects the discontinuation of a congressionally directed program to the San Joaquin and South Coast Air Quality Management Districts.

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: 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$21,193.7***	***$18,500.0***	***$10,000.0***	***($8,500.0)***
Total Budget Authority / Obligations	$21,193.7	$18,500.0	$10,000.0	($8,500.0)
Total Workyears	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 2010 Activities and Performance Plan:

The ANV Program is administered by the State of Alaska and provides infrastructure funding to ANVs and rural Alaska communities which lack access to basic sanitation. The FY 2010 investment of $10 million will fund a portion of the need in rural Alaska homes and will be used to maintain the existing level of wastewater and drinking water services that meets public health standards given increased regulatory requirements on drinking water systems and the construction of new homes in rural Alaska. In FY 2010, 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 continue to implement the 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 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 has 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 2008 Alaska State single audit and the FY 2008 Inspector General follow-up audits concluded that all findings in the previous audits had been addressed or were being resolved.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	Data Avail. 2009	94	96	98	Percent Homes

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Number of homes that received improved service per $1,000,000 of Program funding.	70	45	50	50	Households

Work under this program supports EPA's Protect Water Quality objective.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$8,500.0) The FY 2010 investment will leverage funding for wastewater service and drinking water that meets public health standards given increased regulatory requirements on drinking water systems and the construction of new homes in rural Alaska. In addition, the President's budget will increase tribal funds set-aside for both the Clean Water SRF and Drinking Water SRF from 1.5% to 2.0%. This change, along with increases to both SRF budgets will boost the nation's SRF investment in tribal water infrastructure by several million dollars in FY 2010.

Statutory Authority:

SDWA Amendments of 1996.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$836,929.7***	***$689,080.0***	***$2,400,000.0***	***$1,710,920.0***
Total Budget Authority / Obligations	$836,929.7	$689,080.0	$2,400,000.0	$1,710,920.0
Total Workyears	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 set-aside funding for tribes to better address serious water infrastructure problems and associated health impacts. This 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. EPA estimates that for every Federal CWSRF dollar, at least two dollars are provided to municipalities: the $27 billion invested since CWSRF program inception has been leveraged to provide about $70 billion for clean water projects.[3] The CWSRF program measures and tracks the average national rate at which available funds are loaned, assuring that the fund expeditiously supports EPA's water quality goals.

FY 2010 Activities and Performance Plan:

Recognizing the substantial remaining need for additional wastewater infrastructure as well as the historical effectiveness and efficiency of the CWSRF program, the FY 2010 Budget requests $2.4 billion for the CWSRF. Combined with the FY 2009 funding provided through the American Recovery and Reinvestment Act ($4 billion) and the annual appropriation ($689 million), nearly $7.1 billion will be invested through Federal capitalization grants into the CWSRF over the course of two years. Details about the CWSRF funding in the 2009 American

[3] 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.

Recovery and Reinvestment Act (ARRA) are in "Tab 13" of this document. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

This Federal investment, along with other traditional sources of financing, will enable substantial progress for the nation's clean water needs, sustainable infrastructure priorities, and it will significantly contribute to the long-term environmental goal of attaining designated uses. To achieve these significant outcomes, EPA continues to work with states to meet several key objectives, such as:

- Funding projects designed as part of an integrated watershed approach;
- Linking projects to environmental results; and
- Maintaining the excellent fiduciary condition of CWSRF.

In FY 2010, the Agency is requesting an increase in the tribal set-aside from 1.5 percent to up to 2 percent, and an increase in the territories set-aside that will increase their total share of funding from 0.25 percent to up to 1.5 percent of the funds appropriated from the CWSRF. The increased resources for the tribes and territories, from within the significant FY 2010 overall request for the CWSRF, will provide much needed assistance to these communities and help meet long-term performance goals and address significant public health concerns.

In addition, to the extent there are sufficient eligible project applications, the Agency will assure that not less than 20 percent of the portion of a capitalization grant made available shall be for projects, or portions of projects, that include green infrastructure, water or energy efficiency improvements or other environmentally innovative activities.

The 2002 Johannesburg World Summit 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. Even with an increased set-aside, the FY 2010 request will ensure that every state also will get a significant increase.

EPA will also work with state and local partners to develop a sustainability policy for water infrastructure that includes management and pricing to encourage conservation and to provide adequate long-term funding for future capital needs.

Assessments have called for improved measures that capture the broad range of public health and environmental benefits provided by the program. In response, EPA, collaborating with state partners developed better performance measures, as well as a new CWSRF benefits reporting system designed to track public health and environmental goals progress, allowing the program to more effectively link CWSRF financing to the protection and restoration of our nation's waters.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	2,165	1,550	2,270	2,525	Number of Segments

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Percentage of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards	86	86	86	86	Percent POTWs

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Fund utilization rate for the CWSRF.	98	93.5	94.5	94.5	Percent 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.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,710,920.0) This investment will fund important state, tribal, and territories wastewater infrastructure projects. The proposed funds will be used to sustain communities, encourage and support green infrastructure, and preserve and create jobs. The assistance provided to states and communities will strengthen their ability to finance critical projects as documented by the Clean Watershed Needs Survey. This funding increase will address the nation's aging infrastructure and replacement requirements to sustain and achieve the nation's clean water goals.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$949,968.9***	***$829,029.0***	***$1,500,000.0***	***$670,971.0***
Total Budget Authority / Obligations	$949,968.9	$829,029.0	$1,500,000.0	$670,971.0
Total Workyears	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. In addition, to the extent there are sufficient eligible project applications, the Agency will assure that not less than 20 percent of the portion of a capitalization grant made available for DWSRF projects shall be for projects, or portions or projects, that include green infrastructure, water or energy efficiency improvements or other environmentally innovative activities.

States have considerable flexibility to tailor their DWSRF program to their unique circumstances. This flexibility ensures that each state has the opportunity to carefully and strategically consider exactly how best to achieve the maximum public health protection for each dollar expended through the program. For example, states can:

- establish programs to provide additional subsidies, including negative interest loans or principal forgiveness to communities that the state determines to be disadvantaged;
- balance infrastructure investment and programmatic investment; and
- set-aside capitalization grant funds to provide other types of assistance to encourage more efficient and sustainable drinking water system management and to fund programs to protect source water from contamination. (Historically the states have set-aside a total of 16 percent of the funds awarded to them for these purposes, which includes 4 percent to run the program).

For fiscal years 2010-2013, appropriated funds will be allocated to the states in accordance with each state's proportion of total drinking water infrastructure need as determined by the 2007

Needs Survey and Assessment,[4] with the statutory constraint that each state and the District of Columbia receive no less than one percent of the allotment.

The Federal investment is designed to be used in concert with other sources of funds to address drinking water infrastructure needs. States are required to provide a 20 percent match for their capitalization grant. Some states elect to leverage their capitalization grant through the public debt markets to enable the state to provide more assistance. These features, coupled with the revolving fund design of the program, have enabled the states to provide assistance equal to 194 percent of the Federal capitalization invested in the program. In other words, for every $1 the Federal government invests in this program, the states, in total, have been able to deliver $1.94 in assistance to water systems.

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 is proposing in FY 2010 to reserve up to 2.0 percent (up from 1.5 percent as outlined in Section 1452 (i) of SDWA, as amended) of appropriated funds for Indian tribes and Alaska Native Villages. These funds are awarded either directly to tribes or, on behalf of tribes, to the Indian Health Service through Interagency Agreements. EPA is also proposing to increase to the territories set aside to up to 1.5 percent (up from 0.33 percent).

(See http://www.epa.gov/safewater/dwsrf.html for more information.)

FY 2010 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. In FY 2010, EPA is requesting a total of $1.5 billion to fund nearly 700 additional infrastructure improvement projects to public drinking water systems. There is a significant backlog of projects that have substantial need for financing through the DWSRF. The requested increase in funding for this program will support urgently needed infrastructure investments to rebuild and enhance America's drinking water infrastructure. In FY 2009, the DWSRF was also funded by the 2009 American Recovery and Reinvestment Act (ARRA), details of which are in "Tab 13" of this document. Additional details can be found at http://www.epa.gov/recovery/ and http://www.recovery.gov/.

The fundamental functions of the DWSRF program are to provide access to financing and to offer a limited subsidy to help utilities moderate the magnitude of water rate increases necessary as they move to address decades of underinvestment in infrastructure repair and replacement. Most DWSRF assistance is offered in the form of loans which water utilities repay from the revenues they generate through the rates they charge their customers for service. Our nation's water utilities face the need to significantly increase the rate at which they invest in drinking water infrastructure repair and replacement to keep pace with their aging infrastructure, much of which is approaching the end of its useful life. At the same time, many utilities that would have traditionally financed infrastructure investment through public debt offerings will be turning to the DWSRF program to secure financing.
In FY 2010 EPA will work with State and local partners to develop a sustainability policy

[4] The 2007 Needs Survey was released in 2009.

including management and pricing to encourage conservation and to provide adequate long-term funding for future capital needs. We also will work with state and local governments to address Federal drinking water policy in order to provide equitable consideration of small system customers.

A recent performance assessment 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of additional projects initiating operations.	445	440	445	450	Number of Projects

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Fund utilization rate for the DWSRF.	90	86	89	89	Rate

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	92	90	90	90	Percent Population

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	89.5	90	90	Percent Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of additional projects initiating	445	440	445	450	Number of Projects

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	operations.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Fund utilization rate for the DWSRF.	90	86	89	89	Rate

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	92	90	90	90	Percent Population

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	89.5	90	90	Percent Systems

FY 2010 Change from FY 2009 Enacted (Dollars in Thousands):

- (+$670,971.0) This change reflects a historic investment in drinking water infrastructure to meet critical long-term water infrastructure needs in thousands of communities across the country. The proposed funds will be used to support sustainable drinking water infrastructure and communities to achieve the public health protection objectives of the Safe Drinking Water Act. EPA, in consultation with its partners, will develop a sustainability policy to encourage conservation and to provide adequate long-term funding for future capital needs. The assistance provided to states and communities will strengthen their ability to finance critical water infrastructure projects and will address the nation's aging infrastructure and replacement requirements to sustain and achieve the nation's drinking water goals.

Statutory Authority:

SDWA.

Infrastructure Assistance: Mexico Border
Program Area: State and Tribal Assistance Grants (STAG)
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$65,138.5***	***$20,000.0***	***$10,000.0***	***($10,000.0)***
Total Budget Authority / Obligations	$65,138.5	$20,000.0	$10,000.0	($10,000.0)
Total Workyears	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 program 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 ten 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 collaboratively to improve water quality along the border through a range of pollution control sanitation projects. 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 2010 Activities and Performance Plan:

The US-Mexico Border Water Infrastructure Program is in the process of transitioning to a new grants award process to separate the award of planning and design funds from the award of construction funds; the transition will be complete in FY 2011. In FY 2010, the final year of the transition, fully designed projects will be ready for construction funding. The FY 2010 investment of $10 million will fund a portion of the fully designed projects.

Since 1994, Congress has appropriated approximately $973 million to EPA for the U.S.-Mexico Border Water Infrastructure Program. These Border Environment Infrastructure Fund (BEIF) funds currently at the NADBank are assigned to projects that are under development or in construction. To ensure responsible fiscal management of these and future funds, in 2005 the Agency implemented project management enhancements to strengthen the program and reduce the balance of funds held at the NADBank. 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 led to considerable improvements in the program's unliquidated balances and project completions. As of January 2009, the program has completed 39 of 78 certified projects and reduced the unliquidated BEIF balance to $168.2 million.

In FY 2010, EPA expects to focus on funding construction and does not anticipate funding any design projects. EPA expects to fund two or three construction projects with the $10 million requested for FY 2010. Final decisions on FY 2010 funding will be determined based on the final prioritized project list and the construction readiness of fully designed projects.

In FY 2009, EPA finalized 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003.	5,162	2,500	1,500	28,434	More Homes

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003.	31,686	15,000	105,500	246,175	More Homes

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$10,000.0) As it continues to implement management controls and a new grant award process to reduce unliquidated obligations, EPA is closely monitoring fund disbursements and project completion rates to ensure timely 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$10,642.2***	***$9,900.0***	***$9,900.0***	***$0.0***
Total Budget Authority / Obligations	$10,642.2	$9,900.0	$9,900.0	$0.0
Total Workyears	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 2010 Activities and Performance Plan:

States and territories currently monitor 3,602 beaches. To continue making progress on monitoring beaches in FY 2010, 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	92.6	93	95	Percent Days/Season

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$51,070.6***	***$49,495.0***	***$49,495.0***	***$0.0***
Total Budget Authority / Obligations	$51,070.6	$49,495.0	$49,495.0	$0.0
Total Workyears	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. This program project provides funding to states, local, and Tribal governments in the form of categorical grants.

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 2010 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 $49.495 million in funds to establish or enhance response programs across all 50 states, U.S. territories, and approximately 50 tribes under CERCLA Section 128(a).

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.

[5] Refer to http://www.epa.gov/brownfields/state_tribal.htm#grant.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$14,402.4***	***$10,000.0***	***$10,000.0***	***$0.0***
Total Budget Authority / Obligations	$14,402.4	$10,000.0	$10,000.0	$0.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Environmental Information (Exchange Network) is a standards-based, secure information network operating on the Internet to facilitate electronic reporting, sharing, integration, analysis, and use of environmental data from many different sources. Exchange Network grants provide funding to states, territories, Federally-recognized Indian tribes, and Tribal consortia to support their participation in the Exchange Network. These grants help EPA's partners acquire and develop the hardware and software needed to connect to the Exchange Network, and to use the Exchange Network to develop or acquire the data they need with greater efficiencies and to integrate environmental data across programs in ways not possible before. By supporting the exchange and integration of data to meet the partners' program and business needs, the Exchange Network will facilitate better environmental and health decisions, and will enhance public access to environmental data.

FY 2010 Activities and Performance Plan:

Development of the Exchange Network has largely been funded through these grants. Currently all 50 states, 8 tribes, and one territory have submitted data to EPA using the Exchange Network. In FY 2008, 44 states, 6 tribes, and one territory used the Exchange Network to submit data for major regulatory programs and major national data systems. In addition, Exchange Network partners have submitted other non-regulatory data to EPA and have shared data with each other through the Exchange Network. EPA and the states are already reaping tremendous data management and environmental benefits from these activities. For example, the Water Quality Exchange (WQX) has dramatically expanded the proportion of the nation's surface waters for which pollution control officials have near-real-time water quality data. The addition of two states (Texas and Wisconsin), alone, have provided data at an additional 27,000 monitoring locations to Exchange Network partners.

More work is needed to fully realize the potential data management and environmental benefits that the Exchange Network can yield. Therefore, in FY 2010, the Exchange Network Grants Program will emphasize activities in the following four areas:

1) Grow the Exchange Network by developing the necessary infrastructure for tribes, territories and Federal agencies.
2) Support the development and exchange of regulatory and non-regulatory data flows. Because all 50 states have operational connections to the Exchange Network (nodes), the major emphasis of the grant program has shifted toward supporting partners as they expand the number of regulatory data flows, and the development and exchange of non-regulatory data flows such as WQX.
3) Expand data sharing among partners. The Agency plans to solicit applications for projects promoting data sharing for areas where air quality is a regional concern, and for geographic areas of concern, such as the Great Lakes, the Gulf of Mexico, and the Chesapeake Bay.
4) Support 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, making one of the Network's operating principles, "build one, use many times," a reality.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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; FY 2007, Public Law 109-54; FY 2008, Public Law 110-161.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$101,740.4***	***$101,346.0***	***$106,346.0***	***$5,000.0***
Total Budget Authority / Obligations	$101,740.4	$101,346.0	$106,346.0	$5,000.0
Total Workyears	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 2010 Activities and Performance Plan:

In FY 2010, additional funding will be provided for the following activities 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 proposed FY 2014 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 proposed FY 2014 goals for the RCRA Corrective Action program.

EPA developed efficiency measures to improve performance of the RCRA Corrective Action and RCRA Base, Permits and Grants programs. The efficiency measures for these programs will show the number of final remedy components constructed or RCRA facilities brought under controls, respectively, each year per million dollars of program cost.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$5,000.0) This change reflects additional funding for grantees as part of the 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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$5,688.0***	***$4,950.0***	***$0.0***	***($4,950.0)***
Total Budget Authority / Obligations	$5,688.0	$4,950.0	$0.0	($4,950.0)
Total Workyears	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 2010 Activities and Performance Plan:

There is no request for this program in FY 2010.

Performance Targets:

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

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$4,950.0) This change eliminates the homeland security grants for drinking water and wastewater systems due to low use of funding over a number of years and decreased state demand for these funds resulting from completion of high priority activities associated with the Bioterrorism Act of 2002.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$14,699.7***	***$13,564.0***	***$14,564.0***	***$1,000.0***
Total Budget Authority / Obligations	$14,699.7	$13,564.0	$14,564.0	$1,000.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Recent data from the Centers for Disease Control document tremendous progress on the government's goal of eliminating childhood lead poisoning as a public health concern. EPA's Lead Risk Reduction program contributes to the goal of alleviating the threat to human health, particularly to young children, from environmental lead exposure in the following ways:\

- Establishes standards governing lead abatement practices and maintains a national pool of lead abatement professionals trained and certified to implement those standards;
- Provides information to housing occupants so they can make informed decisions and take actions about lead hazards in their homes;
- Establishes lead-safe work practice standards governing renovation, repair and painting of target housing and child-occupied facilities; and
- Works to establish a national pool of renovation contractors trained and certified to implement those standards.

The Lead Categorical Grant program contributes to the lead program's goals by establishing and maintaining a national pool of trained and certified lead remediation professionals and trained and certified renovation contractors. The program also engages in outreach to educate 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 2010 Activities and Performance Plan:

In FY 2010, the target year for achievement of the federal government's goal of eliminating childhood lead poisoning as a public health concern, 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 2010, EPA will focus on implementation of a final regulation to address lead-safe work practices for renovation, repair, and painting. The additional funding will help accelerate the program's certification and training of contractors to provide additional support for the Department of Housing and Urban Development's work under the Lead Hazard Reduction program provided in the American Recovery and Reinvestment Act of 2009. Other activities will include training and certification requirements as well as updating accreditation requirements for training courses.

To meet the Federal goal of eliminating childhood lead poisoning 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 2010 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.

EPA uses the following measures to evaluate the program: 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 annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process. EPA also has 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. See http://www.epa.gov/opptintr/lead/index.html for additional information.

Performance Targets:

Activities for this appropriation support measures listed for Toxic Substances: Lead Risk Reduction Program (EPM).

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$1,000.0) This increase accelerates the program's certification and training of contractors to provide additional support for the Department of Housing and Urban Development's work under the Lead Hazard Reduction program provided in the American Recovery and Reinvestment Act of 2009.

Statutory Authority:

TSCA.

Categorical Grant: Local Govt Climate Change

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

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$0.0***	***$10,000.0***	***$0.0***	***($10,000.0)***
Total Budget Authority / Obligations	$0.0	$10,000.0	$0.0	($10,000.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The FY 2009 Enacted Budget included $10,000,000 for EPA's Air and Radiation program to initiate a new, competitive grant program to assist local communities in establishing and implementing their own climate change initiatives. The goal of this program is to implement programs, projects, and approaches, which demonstrate documentable reductions in greenhouse gases and are replicable elsewhere. While the Agency anticipates this program will lead to emission reductions, the Agency will rely on existing EPA partnership programs to achieve future greenhouse gas reductions.

FY 2010 Activities and Performance Plan:

There is no request for this program in FY 2010.

Performance Targets:

Currently, there are no performance measures for this specific Program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (-$10,000.0) The FY 2010 President's Budget does not continue funding for these grants.

Statutory Authority:

P.L. 111-8 (H.R. 1105), 123 STAT. 524.

Categorical Grant: Nonpoint Source (Sec. 319)
Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$207,166.5***	***$200,857.0***	***$200,857.0***	***$0.0***
Total Budget Authority / Obligations	$207,166.5	$200,857.0	$200,857.0	$0.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Nonpoint source pollution, caused by runoff that carries excess nutrients, toxics and other contaminants to waterbodies, 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 past NPS pollution and preventing or minimizing new NPS pollution.

Section 319 broadly authorizes states to use a range of tools to implement their programs, including: 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 2010 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 FY 2010, 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 and relative significance of pollutants of concern; cost-effective techniques to address those sources; availability of needed

resources, authorities, and community involvement to effect 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 nonpoint source 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.

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 three 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, such as pathogens, temperature, or acidity.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Estimated additional reduction in million pounds of nitrogen from nonpoint sources to waterbodies. (Section 319 funded projects only.)	N/A	8.5	8.5	8.5	Pounds in Millions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Estimated annual reduction in millions of pounds of phosphorus from nonpoint sources to waterbodies. (Section 319 funded projects only.)	Data Avail. 2009	4.5	4.5	4.5	Pounds in Millions

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Estimated additional reduction in thousands of tons of sediment from nonpoint sources to waterbodies. (Section 319 funded projects only.)	Data Avail. 2009	700,000	700,000	700,000	Tons

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$20,098.6***	***$18,711.0***	***$18,711.0***	***$0.0***
Total Budget Authority / Obligations	$20,098.6	$18,711.0	$18,711.0	$0.0
Total Workyears	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 inspections relating to pesticide worker safety protection, 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] The program also sponsors training for state/Tribal inspectors through the Pesticide Inspector Residential Program (PIRT) and for state/Tribal managers through the Pesticide Regulatory Education Program (PREP).

FY 2010 Activities and Performance Plan:

In FY 2010, 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.

Performance Targets:

Performance targets for this program are undergoing revision.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

FIFRA.

[6] For additional information, refer to: www.epa.gov/compliance/state/grants/fifra.html.

Categorical Grant: Pesticides Program Implementation

Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$14,014.7***	***$12,970.0***	***$13,520.0***	***$550.0***
Total Budget Authority / Obligations	$14,014.7	$12,970.0	$13,520.0	$550.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

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 provides grants to assist states, tribes and partners with worker safety activities, protection of endangered species and water sources from pesticide exposure, and promotion of environmental stewardship. In addition, the Agency provides grants to promote stronger Tribal pesticide programs. 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 2010 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 almost 200 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/.

EPA also supports environmental justice communities through the pesticides programs described above and in 2010 will improve pesticide control practices through enhanced education and outreach in these communities.

Performance Targets:

Work under this program supports the Chemical and Pesticide Risks objective. Currently there are no performance measures specific to this program.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$550.0) This increase will support multi-lingual education, outreach and training materials to address emerging pest control issues in environmental justice communities.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$243,836.1***	***$218,495.0***	***$229,264.0***	***$10,769.0***
Total Budget Authority / Obligations	$243,836.1	$218,495.0	$229,264.0	$10,769.0
Total Workyears	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 and assessment, 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 provide "in-kind" support through an EPA contract if a state or tribe so requests.

FY 2010 Activities and Performance Plan:

The Section 106 grant program supports prevention and control measures that improve state water quality management program through:

- Standards development;
- Monitoring and assessment;
- Permitting and enforcement;
- Advice and assistance to local agencies; and
- Provision of training and public information.

In FY 2010, EPA will continue to work with states, interstate agencies, and tribes to foster a "watershed approach" as the guiding principle of their clean water programs. This approach conducts and assesses monitoring efforts, develops Total Maximum Daily Load (TMDL), writes National Pollution Discharge Elimination System (NPDES) permits, and regulates Concentrated Animal Feeding Operations (CAFOs) with the goal of sustaining and improving the entire watershed. The increase of $10.8 million will advance efforts in implementing all of these programs.

In FY 2010, $18.5 million will be designated for states and tribes under the Monitoring Initiative: $8.5 million for monitoring as part of statistically-valid reports on national water condition, and $10 million for states to implement their monitoring strategies. EPA will assist states with the adoption of statistically-valid surveys for their state-level monitoring program.

In FY 2010, EPA, states, and tribes will collaborate to: issue a statistically-valid baseline condition report of lakes nationwide; analyze, in conjunction with additional partners, samples for a statistically-valid survey of rivers and streams to be published in a FY 2012 report highlighting changes in stream condition since 2006; sample coastal waters for a fifth statistically-valid survey; and conduct planning for a wetlands baseline survey to be completed and published in a FY 2013 report. Monitoring Initiative funds also will be used for sampling and analysis for a wetland condition survey.

EPA's goal is to achieve greater integration of Federal, regional, state, and local level monitoring efforts to connect monitoring and assessment activities across geographic scales in a cost-efficient and effective manner. This will ensure that scientifically defensive monitoring data is available to address issues and problems at each of these scales.

In impaired watersheds, EPA policy guides states to develop Total Maximum Daily Loads (TMDLs), critical tools for meeting water restoration goals, within 8 to 13 years from the time the impairment is identified on a 303(d) list. While the pace of TMDL completion has been affected as states have begun to tackle more challenging TMDLs, such as the recently approved broad-scale mercury TMDL for the Northeast Region and the nutrient TMDLs for the Mississippi River Delta Region, they are still encouraged by EPA to develop TMDLs as expeditiously as practicable. EPA also will continue to work with states to facilitate accurate, comprehensive, and georeferenced data made available to the public via the Assessment, TMDL Tracking, and Implementation System (ATTAINS). States and EPA have made significant progress in the development and approval of TMDLs. Cumulatively, more than 30,000 state TMDLs were completed through FY 2008 and more than 2,900 state TMDLs are expected to be developed in FY 2010. Resources in this program will continue to support TMDL implementation via NPDES permits.

The states will continue to implement the "*Permitting for Environmental Results Strategy,*" which focuses 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. Recent court decisions concerning vessel discharges and pesticides have significant potential to increase the universe of permitted entities. The actual magnitude of the increase is still unknown.

New regulations were finalized in FY 2008 for discharges from Concentrated Animal Feeding Operations (CAFOs). The revised regulations address the Second Circuit's 2005 decision in Waterkeeper Alliance et al. v. EPA and require EPA and authorized states to issue permits for an expanded universe (from the 1974 regulations) of CAFOs that discharge or propose to discharge

to waters of the U.S. In FY 2010, states must issue permits that comply with these regulatory requirements as well as revise their regulations to adopt the provisions of the new regulations.

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 85 percent of state and territorial submissions will be approvable in FY 2010. 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 FY 2010 is that 66 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 Agency has been successful in meeting or exceeding performance targets and continues to target, through an allocation formula, a portion of the appropriated funds to support statistically-valid surveys of water condition.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	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.	62.5	68	68	66	Percent States/Terr.

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of high priority state NPDES permits that are scheduled to be reissued.	120	95	95	95	Percent Permits

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Cost per impaired water segment now fully attaining standards.	547,676	643,119	708,276	769,661	Dollars Per Segment

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Number of TMDLs that are established by States and approved by EPA [State TMDL] on schedule consistent with national policy (cumulative).	30,658	28,527	33,540	36,495	Number of TMDLs

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of major dischargers in Significant Noncompliance (SNC) at any time during the fiscal year.	23.9	22.5	22.5	22.5	Percent Dischargers

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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).	2,165	1,550	2,270	2,525	Number of Segments

Note: A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion of the TMDL itself.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$10,769.0) This increase is for states' core water quality programs for activities such as addressing the NPDES expanded universe of regulated entities, including CAFOs, and to tackle more difficult TMDLs for pollutants such as mercury and nutrients.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$5,076.8***	***$4,940.0***	***$4,940.0***	***$0.0***
Total Budget Authority / Obligations	$5,076.8	$4,940.0	$4,940.0	$0.0
Total Workyears	0.0	0.0	0.0	0.0

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 2010 Activities and Performance Plan:

In FY 2010, the P2 grant program will continue assisting 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.

P2 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 obtains and evaluates Science Advisory Board Report recommendations for improving performance measures to better demonstrate Pollution Prevention results and works to reduce barriers confronted by industry and others in implementing source reduction.

Performance Targets:

Activities for this appropriation support OMB program assessment measures listed for the Pollution Prevention program funded under EPA's Environmental Program Management account.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$101,503.0***	***$99,100.0***	***$105,700.0***	***$6,600.0***
Total Budget Authority / Obligations	$101,503.0	$99,100.0	$105,700.0	$6,600.0
Total Workyears	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 (SDWA) 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 2010 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 2010, EPA is requesting $6.6 million to assist states in complying with drinking water standards which includes conducting sanitary surveys for an additional 140,000 ground water systems as required under the SDWA. 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");

3) Data quality issues are identified and addressed; and

4) All systems are having sanitary surveys conducted according to the required schedule.

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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	89.5	90	90	Percent Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 &	92	90	90	90	Percent Population

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	source water protection.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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	89.5	90	90	Percent Systems

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	92	90	90	90	Percent Population

FY 2010 Change from FY 2009 Likely Enacted Budget (Dollars in Thousands):

- (+$6,600.0) This change will assist the states in complying with drinking water standards; particularly, to conduct sanitary surveys for the additional 140,000 ground water systems as required under SDWA and the Ground Water Rule. The change also will allow states to better support technical, managerial, and financial capacity development for small water systems, and to identify system deficiencies and determine steps needed to protect public health.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$10,007.4***	***$8,074.0***	***$8,074.0***	***$0.0***
Total Budget Authority / Obligations	$10,007.4	$8,074.0	$8,074.0	$0.0
Total Workyears	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 2010 Activities and Performance Plan:

In FY 2010, states will:

- Continue to encourage 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; and
- Work with EPA to align performance measures.

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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of additional homes (new and existing) with radon reducing features	Avail. 2009	225,000	265,000	280,000	Homes

In FY 2010, EPA's goal is to add 280,000 homes with radon reducing features, bringing the cumulative number of U.S. homes with radon reducing features to over two million. EPA estimates that this cumulative number will prevent over 900 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 2010.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$1,666.3***	***$1,828.0***	***$1,828.0***	***$0.0***
Total Budget Authority / Obligations	$1,666.3	$1,828.0	$1,828.0	$0.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Strong State and Tribal Enforcement and Compliance Assurance programs are essential to achieving EPA's mission of protecting the environment and public health. Effective partnerships between EPA and government co-implementers are crucial for success in implementing approaches to ensure compliance with environmental laws and regulations.

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 support state and Tribal agencies that are responsible for implementing authorized, delegated, or approved environmental programs.[7]

FY 2010 Activities and Performance Plan:

In FY 2010, EPA will continue to support states and tribes in their efforts to build, implement, or improve compliance capacity for authorized, delegated, or approved environmental programs. FY 2010 annual funding priorities for the multi-media compliance and enforcement grants program include: 1) improving compliance data collection and quality, 2) modernizing data systems, 3) improving public access to enforcement and compliance data, and 4) providing compliance training to states and tribes to enhance their compliance monitoring capacity. The grants and/or cooperative agreements are competed for nationally. In many cases, these are the only funds available to assist states and tribes in strengthening and building their programs in these areas.

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.

[7] For more information, refer to: www.epa.gov/compliance/state/grants/stag/index.html

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$226,155.9***	***$224,080.0***	***$226,580.0***	***$2,500.0***
Total Budget Authority / Obligations	$226,155.9	$224,080.0	$226,580.0	$2,500.0
Total Workyears	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.

FY 2010 Activities and Performance Plan:

In FY 2010, the Agency will undertake air toxics monitoring and assessment activities at high priority schools throughout the country. EPA will work in partnership with state and local governments to assess the data from monitoring at schools and determine how best to proceed, which could involve additional monitoring or enforcement action where appropriate.

Although there is no definite schedule for updating State Implementation Plans (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 2010, EPA will work with states to correct any deficiencies in their FY 2008 and FY 2009 SIP submissions, and provide technical assistance in implementing their plans for the 8-hour ozone standard, the $PM_{2.5}$ standard, the lead standard, and Regional haze.

In October 2006, EPA revised the Particulate Matter ($PM_{2.5}$) NAAQS for 24-hour concentrations making it more stringent. Due to recent court action, the Agency is reviewing the annual standard which was not revised. Although the final rule did not revise network design criteria, a number of states voluntarily shifted monitoring equipment to new locations to investigate

possible problem areas with respect to the revised NAAQS. The final rule also provided that there be a better balance of filter-based and continuous methods employed to ensure more objectives would be served by each monitoring agencies' network.

The October 2006 final $PM_{2.5}$ NAAQS rule also established a new requirement for a 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 have already been working together on a voluntary basis to establish this network. In early FY 2010, EPA will be approving the sites, while states will acquire any remaining 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.

In the spring of 2008, EPA strengthened the ozone NAAQS and committed to proposing new requirements for monitoring of ozone in smaller urban areas and non-urban areas. The Agency expects a proposal on additional monitoring requirements to be published in late FY 2009 which may result in additional ozone monitoring needs among state and local agencies in FY 2010. Utilizing data from existing monitors, EPA will provide assistance to state and local air agencies in developing recommendations in 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 of 2008, EPA substantially strengthened the NAAQS for lead, by revising the standards to a level ten times tighter than the previous standards. To ensure protection with the revised NAAQS, EPA is improving the lead monitoring network by requiring monitors to be placed in areas with sources such as industrial facilities that emit one ton or more per year of lead and in urban areas with more than 500,000 people. Due to the small number of operating lead monitors, EPA will be working closely with affected monitoring agencies to deploy this revised network with near-source monitors to be operational by January 1, 2010 and the rest of the network to be operational by January 1, 2011.

As part of its commitment to review each NAAQS according to the Clean Air Act, EPA is planning to propose revisions to the Nitrogen Dioxide (NO_2) NAAQS by June of 2009, with a final by January of 2010. Any revisions to the NAAQS may have implications for monitoring, including the possibility of a revised monitoring design. EPA will work closely with states on any such changes to the NO_2 monitoring design. After NO_2, EPA also has committed to a review of the Sulfur Dioxide (SO_2) primary NAAQS, and the NO_2 and SO_2 secondary NAAQS, all within FY 2010. Each of these may result in changes to monitoring requirements.

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 2010, funds for air

toxic ambient monitoring will support the National Air Toxics Trends Stations (NATTS), consisting of 27 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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.	Avail. 2009	25	29	33	Percentage

- Achieve a 33 percent cumulative reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$2,500.0) This increase supports additional air toxics monitoring and assessment activities at high priority schools nationwide.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$5,273.6***	***$5,099.0***	***$5,099.0***	***$0.0***
Total Budget Authority / Obligations	$5,273.6	$5,099.0	$5,099.0	$0.0
Total Workyears	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 of school children, teachers, and staff to asbestos fibers in school buildings. The funds also support compliance with other Toxic Substances Control Act (TSCA) asbestos regulations such as the Asbestos Ban and Phase-out Rule. The program 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 2010 Activities and Performance Plan:

In FY 2010, EPA's Enforcement and Compliance Assurance program will continue to award state and Tribal grants to assist in the implementation of compliance and enforcement provisions of TSCA. These grants protect the public and the environment from PCBs, asbestos, and lead. States receiving grants for the PCB program and for asbestos programs must contribute 25 percent of the total cost of the grant. In FY 2010, EPA plans to continue to incorporate technology such as the use of portable personal computers and specific inspection software to improve efficiencies of the inspection process and support state and Tribal inspection programs.

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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$12,066.9***	***$13,300.0***	***$13,300.0***	***$0.0***
Total Budget Authority / Obligations	$12,066.9	$13,300.0	$13,300.0	$0.0
Total Workyears	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.

FY 2010 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 2010, Tribes will build expertise to effectively collaborate and negotiate in the early and later stages of energy development. They will conduct needed monitoring and modeling to assess impacts and develop guidance as related to energy development.

To improve the Air Quality Grants and Permitting Program, 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Cumulative percent reduction in the number of days with Air Quality Index	Avail. 2009	25	29	33	Percentage

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	(AQI) values over 100 since 2003, weighted by population and AQI value.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003 per grant dollar allocated to the States in support of the NAAQS program.	Avail. 2009	29	29	29	Percentage

- Achieve a 33 percent cumulative reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$58,628.8***	***$57,925.0***	***$62,875.0***	***$4,950.0***
Total Budget Authority / Obligations	$58,628.8	$57,925.0	$62,875.0	$4,950.0
Total Workyears	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. Some uses of GAP funds are 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 2010 Activities and Performance Plan:

In FY 2010, 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. GAP funding levels will help 45 additional tribes develop environmental programs and will sustain the ability of current recipients to maintain access to an environmental presence in Indian country. 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.

EPA continues to improve program accountability by implementing a revised database system called the Tribal Program Management System (TPMS) to help standardize, centralize, and integrate regional data, and assign accountability for data quality. In FY 2010, EPA will continue working to enhance the GAP Online workplan development and reporting system for improved data management and access to grant information. This new electronic system, in conjunction with the updated guidance, helps emphasize outcome-based results.

An independent program evaluation of the GAP program was conducted to determine GAP's effectiveness in building Tribal environmental capacity. The reports concluded that GAP is successful in building a 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. EPA will continue efforts to 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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of Tribes conducting EPA approved environmental monitoring and assessment activities in Indian country (cumulative.)	34	21	23	25	Percent of Tribes

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of Tribes with an environmental program (cumulative).	28	57	60	63	Percent of Tribes

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Efficiency	Number of environmental programs implemented in Indian Country per million dollars.	Data unavailable	14.1	14.2	12.5	Programs

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of Tribes implementing federal regulatory environmental programs in Indian country (cumulative).	11	6	7	8	Percent of 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 2010, EPA will operate at an efficiency of approximately 12.5 programs per million dollars.

- In FY 2010, all federally-recognized tribes and intertribal consortia, a universe of 572 eligible entities, will have access to an environmental presence.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- (+$4,950.0) This increase will allow 45 more tribes to have an environmental presence in Indian country to support environmental infrastructure and capacity building efforts.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$12,114.5***	***$10,891.0***	***$10,891.0***	***$0.0***
Total Budget Authority / Obligations	$12,114.5	$10,891.0	$10,891.0	$0.0
Total Workyears	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 percent 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 also may 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 2010 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 FY 2010, states and EPA (where EPA directly implements) will continue to carry out regulatory functions for all well types. In addition, states and EPA will continue to 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 following finalization of the GS regulation. Similarly, states and EPA will process UIC permits for other nontraditional injection streams such as desalination brines and treated waters injected for storage and recovered at a later time.

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 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of identified Class V motor vehicle waste disposal wells and other high priority Class V wells closed or permitted.	88	90	75	80	Percent Class V Wells

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 include effective treatment & source water protection.	92	90	90	90	Percent Population

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of deep injection wells that are used to inject industrial, municipal or hazardous wastes (Class I) that lose mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground			89	92	Percent Class I Wells

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
	sources of drinking water.					

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of deep injection wells that are used to enhance oil/natural gas recovery or for the injection of other (Class II) fluids associated with oil and natural gas production that have lost mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.				89	Percent Class II Wells

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of deep injection wells that are used for salt solution mining (Class III) that lose mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.			91	93	Percent Class III Wells

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of identified Class V motor vehicle waste disposal wells and other high priority Class V wells closed or permitted.	88	90	75	80	Percent Class V Wells

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 include effective treatment & source water protection.	92	90	90	90	Percent Population

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of deep injection wells that are used to inject industrial, municipal or hazardous wastes (Class I) that lose mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.			89	92	Percent Class I Wells

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of deep injection wells that are used to enhance oil/natural gas recovery or for the injection of other (Class II) fluids associated with oil and natural gas production that have lost mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.				89	Percent Class II Wells

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Output	Percent of deep injection wells that are used for salt solution mining (Class III) that lose mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.			91	93	Percent Class III Wells

EPA 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 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$3,600.7***	***$2,500.0***	***$2,500.0***	***$0.0***
Total Budget Authority / Obligations	$3,600.7	$2,500.0	$2,500.0	$0.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

While the Energy Policy Act of 2005 expanded the eligible use of LUST funds to include certain release prevention/detection activities, it did not authorize LUST funds for all prevention/detection activities. Thus, some states still need STAG money to fund some basic programmatic functions not otherwise authorized for LUST funding. EPA recognizes that the size and diversity of the regulated community puts state authorities in a good position to regulate Underground Storage Tanks (USTs) and to set priorities. In furtherance of that goal, EPA provides funding to states under the authority of Section 2007(f)(2) of the Solid Waste Disposal Act (SWDA), through Performance Partnership Agreements and through the UST categorical grants for release detection and release prevention activities to encourage owners and operators to properly operate and maintain their USTs. For more information, refer to http://www.epa.gov/swerust1/overview.htm.

EPA will make grants to states under Section 2007 of the Solid Waste Disposal Act to support core program activities as well as some 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.[8] EPA also will assist the states in implementing the EPAct provisions such as 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.

There are over 623,000 active USTs at approximately 235,000 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. EPA provides funding to states, tribes, and intertribal consortia, regulates these programs, develops guidelines, and provides technical assistance to develop state capacity to

[8] Refer to http://www.epa.gov/OUST/fedlaws/title42ch82-IX12-08.pdf.

encourage owners and operators to properly operate and maintain their underground storage tanks.

FY 2010 Activities and Performance Plan:

In FY 2010, 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.[9] Specifically with these UST categorical grants, states will fund such activities as:

- Approving specific technologies to detect leaks from tanks;
- Ensuring that tank owners and operators are complying with notification and other requirements;
- Ensuring equipment compatibility;
- Conducting inspections;
- Implementing operator training;
- Prohibiting delivery for non-complying facilities;
- Seeking state program approval to operate the UST program in lieu of the Federal program; and
- Requiring secondary containment or financial responsibility for tank manufacturers and installers.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Increase the percentage of UST facilities that are in significant operational compliance (SOC) with both release detection and release prevention requirements by 0.5% over the previous year's target.	66	68	65	65.5	percent

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Minimize the number of confirmed releases at UST facilities to 9,000 or fewer each year.	7,364	<10,000	<9,000	<9,000	UST releases

[9] For more information on grant guidelines under EPAct see: http://www.epa.gov/OUST/fedlaws/epact_05.htm.

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

SWDA of 1976, as amended by the Superfund Amendments and Reauthorization Act 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.

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 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$15,985.2***	***$16,830.0***	***$16,830.0***	***$0.0***
Total Budget Authority / Obligations	$15,985.2	$16,830.0	$16,830.0	$0.0
Total Workyears	1.0	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 acreage and condition of wetlands. Grants are used to develop new or refine existing state and Tribal wetland programs in one or more of the following areas: monitoring and assessment, voluntary restoration and protection, regulatory programs, and wetland water quality standards. States and tribes develop program elements based on their goals and resources. Grants support development of state and Tribal wetland programs that further the goals of the Clean Water Act (CWA) and improve water quality in watersheds throughout the country. Grants are awarded on a competitive basis under the authority of Section 104(b)(3) of the CWA. See http://www.epa.gov/owow/wetlands/initiative/#financial for more information.

FY 2010 Activities and Performance Plan:

Strong state and Tribal wetland programs are an essential complement to the Federal CWA Section 404 regulatory program. The WPDGs are EPA's primary resource for supporting state and Tribal wetland programs. Resources in FY 2010 will assist states and tribes to develop and enhance any of four core elements of a comprehensive program: monitoring and assessment, voluntary restoration and protection, regulatory programs, and wetland water quality standards. Through these program elements, states and tribes can assess wetland location and condition, document stresses or improvements to wetland condition, provide incentives for wetland restoration and protection, and develop regulatory controls to avoid, minimize, and compensate for wetland impacts. For further information on the core elements of a state/tribal wetland program please see: http://www.epa.gov/owow/wetlands/initiative/estp.html.

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 coterminous 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.

Performance Targets:

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 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 Avail 12/2009	No Net Loss	No Net Loss	No Net Loss	Acres

Measure Type	Measure	FY 2008 Actual	FY 2008 Target	FY 2009 Target	FY 2010 Target	Units
Outcome	Number of acres restored and improved, under the 5-Star, NEP, 319, and great waterbody programs (cumulative)	82,875	75,000	88,000	96,000	Acres/year

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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.

Table of Contents - Program Performance and Assessment

PERFORMANCE – 4 YEAR ARRAY 745
GOAL 1: Clean Air and Global Climate Change 745
GOAL 2: Clean and Safe Water 751
GOAL 3: Land Preservation and Restoration 756
GOAL 4: Healthy Communities and Ecosystems 760
GOAL 5: Compliance and Environmental Stewardship 771
Enabling and Support Programs 775
ASSESSMENT MEASURES SUPPLEMENTAL TABLE 777
ASSESSMENT IMPROVEMENT PLANS 787
DATA VERIFICATION AND VALIDATION 813

PERFORMANCE – 4 YEAR ARRAY

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 2014, 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Reduce Criteria Pollutants and Regional Haze	Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.	21	42	25	Data Avail 2009	29	33	Percentage
	Additional Information: Baseline was zero in 2003.							
	Tons of PM-10 Reduced since 2000 from Mobile Sources	87,026	87,026	99,458	Data Avail 2009	111,890	124,322	Tons
	Additional Information: 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.							
	Cumulative percent reduction in population- weighted ambient concentrations of ozone in monitored counties from 2003 baseline.	6	6	8	Data Avail 2009	10	11	Percentage
	Cumulative percent reduction in the average number of days during the ozone season that the ozone standard is exceeded in baseline non-attainment areas, weighted by population.	16	28	19	Data Avail 2009	23	26	Percentage
	Limit the increase of CO emissions (in tons) from mobile sources compared to a 2000 baseline.	1.18M	1.18M	1.35M	Data Avail 2009	1.52M	1.69	Tons
	Millions of Tons of Volatile Organic Compounds (VOCs) Reduced since 2000 from Mobile Sources	1.20M	1.20M	1.37M	Data Avail 2009	1.54M	1.71	Tons
	Millions of Tons of Nitrogen Oxides (NOx) Reduced since 2000 Reduced from Mobile Sources.	2.37M	2.37M	2.71M	Data Avail 2009	3.05M	3.39	Tons
	Additional Information: 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.							

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Reduce Criteria Pollutants and Regional Haze	Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM-2.5) in all monitored counties from 2003 baseline.	3	8	4	Data Avail 2009	5	6	Percentage
	Tons of PM-2.5 Reduced since 2000 from Mobile Sources	85,704	85,704	97,947	Data Avail 2009	110,190	122,434	Tons
	Additional Information: 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.							
	Percent of major NSR permits issued within one year of receiving a complete permit application.	75	83	78	Data Avail 2009	78	78	Percentage
	Additional Information: The baseline for NSR permits issued within one year of receiving a complete permit application is 61% in 2004.							
	Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application.	94	81	97	Data Avail 2009	100	100	Percentage
	Percent of significant and new Title V operating permits issued within 18 months of receiving a complete permit application.	87	51	91	Data Avail 2009	95	99	Percentage
	Additional Information: 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%.							
Reduce the Adverse Effects of Acid Deposition	Tons of sulfur dioxide emissions from electric power generation sources	7,500,000	8,450,000	8,000,000	Data Avail 2009	8,000,000	8,450,000	Tons Reduced
	Additional Information: 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.							
Reduce Air Toxics	Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	35	Data Avail 2009	35	Data Avail 2011	36	36	Percentage
	Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 baseline.	58	Data Avail 2009	59	Data Avail 2011	59	59	Percentage
	Additional Information: 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							

Group	Performance Measure	Performance Data						Unit
		FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2008 Actual	FY 2009 Target	FY 2010 Target	
	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.							

<u>Objective</u> – Healthier Indoor Air: *Through 2014, working with partners, reduce human health risks by reducing exposure to indoor air contaminants through the promotion of voluntary actions by the public.*

Group	Performance Measure	Performance Data						Unit
		FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2008 Actual	FY 2009 Target	FY 2010 Target	
Reduce Exposure to Radon	Number of additional homes (new and existing) with radon reducing features	190,000	183,000	225,000	Data Avail 2009	265,000	280,000	Homes
	Additional Information: 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.							
Reduce Exposure to Asthma Triggers	Percent of public that is aware of the asthma program's media campaign.	>20	No Data Avail	>20	Data Avail 2009	>20	>30	Percentage
	Additional Information: No tracking study was done for this measure in FY2007, therefore the percentage of public awareness is not known.							
	Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	2,000	4,582	2,000	Data Avail 2009	2,000	2,000	Number
	Additional Information: Asthma is a serious, life-threatening respiratory disease that affects more than 20 million Americans. Rates of asthma have risen sharply over the past 30 years, particularly among children aged 5 to14. Although there is no cure, asthma can be controlled by managing environmental asthma triggers and through medical treatment. EPA's goal is to reduce exposure to asthma triggers and improve the quality of life for 4.9 million people by 2008. Toward this end, EPA provides educational material about the environmental factors -- indoor and outdoor – that trigger asthma. Through 2006, 4.2 million people are estimated to be taking all essential actions to reduce exposure to indoor environmental asthma triggers and approximately 60,000 emergency room visits are avoided annually. This measure is reported in 3-year increments.							

Reduce Exposure to Indoor Air Contaminants in Schools	Estimated annual number of schools establishing indoor air quality programs based on EPA's Tools for Schools guidance.	1,100	1,346	1,100	Data Avail 2009	1,000	1,000	Number
	Additional Information: 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.							

<u>Objective</u> – Protect the Ozone Layer: *Through 2014, continue efforts to restore the earth's stratospheric ozone layer and protect the public from the harmful effects of UV radiation.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Reduce Emissions of Ozone-Depleting Substances	Remaining US Consumption of Class II ODS, measured in tons of ozone depleting potential (ODP).	<9,900	Data Avail 2009	<9,900	Data Avail 2009	<9,900	<3,811	ODP MTs
	Additional Information: 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.							

<u>Objective</u> – Radiation: *Through 2014, working with partners, minimize unnecessary releases of radiation and be prepared to minimize impacts to human health and the environment should unwanted releases occur.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Monitor the Environment for Radiation	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	92	90	95	Percentage
	Average time of availability of quality assured ambient radiation air monitoring data during an emergency.	1.3	1.3	1.0	0.8	0.8	0.7	Days
	Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP (measured as percentage reduction from a 2004 baseline).	40	43	46	50	53	53	Percentage
	Additional Information: Baseline is 55% for most populous cities. Baseline is 2.5 days for average time of availability of quality assured air monitoring data during an emergency. Time of approve is measured by percentage of days with a baseline of 150 days at 0%. (e.g., FY 2007 Target was 40% (90 days) and actual was 43% (86 days).							

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Prepare for and Respond to Radiological Emergencies	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).	80	83	85	87	90	90	Percentage
	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	37	50	60	Percentage
	Additional Information: The baseline for the emergency response program readiness was 50 percent.							

<u>Objective</u> – Greenhouse Gas Intensity: *Through 2014, continue to reduce greenhouse gas emissions through voluntary climate protection programs that accelerate the adoption of cost-effective greenhouse gas reducing technologies and practices.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Reduce Greenhouse Gas Emissions	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the buildings sector.	29.4	36.1	32.4	Data Avail 2009	35.5	39.0	MMTCE
	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	0.9	1.15	1.5	1.6	2.6	4.3	MMTCE
	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the industry sector.	62.6	72.9	67.7	Data Avail 2009	72.9	82.9	MMCTE
	Additional Information: 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.							

<u>Objective</u> – Enhance Science and Research: *By 2014, 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Clean Air Research	Percentage of NAAQS program publications rated as highly cited papers (Research)	35.7	32.9	No Target Established		33.9	No Target Established	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	100	100	100	100	100	Percent
	Additional Information: 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 performance in three ways. 1) Increase the number of planned outputs completed on time (a measure of timeliness). 2) Increase the number of its papers deemed "highly cited" in bibliometric analyses (a measure of the quality and use of ORD's research) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends. 3) Increase 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Water Safe to Drink	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.	87	87	87	83	87	87	Percent Population
	Percent of population served by community water systems that will receive drinking water that meets all applicable health-based drinking water standards through approaches incl. effective treatment & source water protection.	94	91.5	90	92	90	90	Percent Population
	Fund utilization rate for the DWSRF.	85	88	86	90	89	89	Rate
	Number of additional projects initiating operations.	430	438	440	445	445	450	Number of Projects
	Percent of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance.)	94	92	95	87	95	95	Percent CWS
	Percent of identified Class V motor vehicle waste disposal wells and other high priority Class V wells closed or permitted.	88	85	90	88	75	80	Percent Class V Wells
	Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	89	88.9	89.5	89	90	90	Percent Systems
	Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards.	N/A	96.8	95	97	95	95	Percent CWS
	Percent of deep injection wells that are used to inject industrial, municipal, or hazardous waste(Class I) that lose mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.					89	92	Percent Wells
	Percent of deep injection wells that are used to enhance oil/natural gas recovery or for the injection of other (Class II)						89	Percent Wells

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Water Safe to Drink	fluids associated with oil and natural gas production that have lost mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.							
	Percent of deep injection wells that are used for salt solution mining (Class III) that lose mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water.					91	93	Percent Wells
	Additional Information: 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.							
Fish and Shellfish Safe to Eat and Water Safe for Swimming	Percent of women of childbearing age having mercury levels in blood above the level of concern.			5.5	Data Avail 2009	5.2	5.1	Percent of Women
	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	0	2	2	Number of 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.	92.6	95.2	92.6	95	93	95	Percent Days/Season
	Additional Information: These territories have a higher percentage of beach season day closures resulting in a lower percentage of days at the regional and national levels.							

<u>Objective</u> – Protect Water Quality: *Protect the quality of rivers, lakes, and streams on a watershed basis and protect coastal and ocean waters.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Improve Water Quality on a Watershed Basis	Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained (cumulative).	1,166	1,409	1,550	2165	2,270	2,525	Number of Segments
	Fund utilization rate for the CWSRF.	93.4	96.7	93.5	98	94.5	94.5	Percent Rate
	Percent of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards.		85.8	86	86	86	86	Percent POTWs
	Estimated annual reduction in millions of pounds of phosphorus from nonpoint sources to waterbodies. (Section	4.5	7.5	4.5	Data Avail 2009	4.5	4.5	Pounds in Millions

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Improve Water Quality on a Watershed Basis	319 funded projects only)							
	Estimated additional reduction in million pounds of nitrogen from nonpoint sources to waterbodies. (Section 319 funded projects only)	8.5	19.1	8.5	Data Avail 2009	8.5	8.5	Pounds in Millions
	Estimated additional reduction in thousands of tons of sediment from nonpoint sources to waterbodies. (Section 319 funded projects only	700,000	3,900,000	700,000	Data Avail 2009	700,000	700,000	Tons
	Number of TMDLs that are established by States and approved by EPA [State TMDL] on schedule consistent with national policy (cumulative). A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.	20,232	21,685	28,527	30,658	33,540	36,495	Number of TMDLs
	Percentage of high priority state NPDES permits that are scheduled to be reissued.	95	112	95	120	95	95	Percent Permits
	Percentage of major dischargers in Significant Noncompliance (SNC) at any time during the fiscal year.	22.5	22.6	22.5	23.9	22.5	22.5	Percent Dischargers
	Percentage of submissions of new or revised water quality standards from States and Territories that are approved by EPA.	85	85.6	87	92.5	85	85	Percent State/Territories Submissions
	Number of TMDLs that are established or approved by EPA [Total TMDL] on a schedule consistent with national policy (cumulative). A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.	25,274	26,844	33,801	35,979	38,978	41,992	Number of TMDLs
	Percent of waters assessed using statistically valid surveys.	54	54	65	65	65	82	Percent Waters
	Percent of high priority EPA and state NPDES permits that are reissued on schedule.	95	110	95	119	95	95	Percent Permits
	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.	67	66.1	68	62.5	68	66	Percent State/Territories
	Remove the specific causes of waterbody impairment identified by states in 2002 (cumulative).	N/A	4,033	4,607	6,723	6,891	7,720	Number of Causes Removed
	Improve water quality conditions in impaired watersheds nationwide using the watershed approach (cumulative).	N/A	21	40	60	102	128	Number of Watersheds

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Improve Coastal and Ocean Water	Percent of active dredged material ocean dumping sites that will have achieved environmentally acceptable conditions (as reflected in each site's management plan).	N/A	84.8	95	99	98	95	Percent Sites
Alaska Native Villages	Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	87	92	94	Data Avail 2009	96	98	Percent Homes
	Additional Information: In 2003, 77% of serviceable rural Alaska homes had access to drinking water supply and wastewater disposal. A Total Maximum Daily Load (TMDL) is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.							

<u>Objective</u> – Enhance Science and Research: *By 2014, 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Drinking Water Research	Percentage of planned risk management research products delivered to support EPA's Office of Water, Regions, water utilities, and other key stakeholders to manage public health risks associated with exposure to drinking water, implement effective safeguards on the quality and availability of surface and underground sources of drinking water, improve the water infrastructure, and establish health-based measures of program effectiveness.			100	100	100	100	Percent
	Percentage of planned methodologies, data, and tools delivered in support of EPA's Office of Water and other key stakeholders needs for developing health risk assessments, producing regulatory decisions, implementing new and revised rules, and achieving simultaneous compliance under the Safe Drinking Water Act. (Research)	100	100	100	100	100	100	Percent
	Additional Information: 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).							

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Water Quality Research	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	100	100	100	100	100	Percent
	Percent of WQRP publications in high impact journals. (Research)	No Target Established		14.7	13.8	No Target Established	15.7	Percent
	Percent of WQRP publications rated as highly cited publications (Research)	No Target Established		15.7	15.2	No Target Established	16.7	Percent
	Additional Information: 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 performance in two ways. 1) Increase the number of planned outputs completed on time (a measure of timeliness). 2) Increase the number of its papers deemed "highly cited" in bibliometric analyses (a measure of the quality and use of ORD's research) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends.							

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 2014, 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Municipal Solid Waste Source Reduction	Billions of pounds of municipal solid waste reduced, reused, or recycled.					19.5	20.5	Billion lbs.
	Increase in percentage of coal combustion ash that is used instead of disposed.	1.8	-0.7	1.8	Data Avail 2009	1.8	1.8	Percentage
	Number of closed, cleaned up, or upgraded open dumps in Indian Country or on other tribal lands.	30	107	30	166	27	22	Open Dumps
	Number of tribes covered by an integrated solid waste management plan.	27	28	26	35	16	23	Tribes
	Additional Information: 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 million tons of coal combustion ash is generated annually, and in 2007, 42.7 percent was used rather than landfilled. While annual increases in use are targeted, associated increases in generation are also expected. 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	Number of hazardous waste facilities with new controls or updated controls.					100	100	Facilities
	Minimize the number of confirmed releases at UST facilities to 9,000 or fewer each year.	<10,000	7,570	<10,000	7,364	<9,000	<9,000	UST Releases
	Increase the percentage of UST facilities that are in significant operational compliance (SOC) with both release detection and release prevention requirements by 0.5% over the previous year's target.	67	63	68	66	65.0	65.5	Percent
	Additional Information: Implementing the 2005 Energy Policy Act requirements, EPA and states are inspecting infrequently inspected facilities, and are finding many out of compliance, impacting our ability to achieve compliance rate goals. As a result, the significant operational compliance targets have been adjusted to reflect a 0.5% increase each year to maintain aggressive goals. Between FY 1999 and FY 2008, confirmed UST releases averaged 10,656, and the annual number of confirmed releases in FY 2008 was 7,364. In FY 2008, there were significantly fewer releases from underground storage tanks than the goal of no more than 10,000 releases. To account for this success, the program has made its FY 2009 and future goals more challenging by lowering the goal to no more than 9,000 releases. By 2014, 600 RCRA hazardous waste facilities will have initial approved controls or upgraded controls. There are an estimated 820 facilities that will require these controls out of the universe of 2,450 facilities.							

<u>Objective</u> – Restore Land: *By 2014, 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Superfund Cost Recovery	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.	100	98	100	100	100	100	Percent
	Additional Information: 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 Participate	Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA.	95	98	95	100	95	95	Percent
	Additional Information: 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	Number of LUST cleanups completed that meet state risk-based standards for human exposure and groundwater migration.	13,000	13,862	13,000	12,768	12,250	12,250	Cleanups
	Number of LUST cleanups completed that meet risk-based standards for human exposure and groundwater migration in Indian Country.	30	54	30	40	30	30	Cleanups
	Superfund final site assessment decisions completed.	350	395	400	415	400	330	Assessments
	Annual number of Superfund sites with remedy construction completed.	24	24	30	30	20	22	Completions
	Number of Superfund sites with human exposures under control.	10	13	10	24	10	10	Sites
	Superfund sites with contaminated groundwater migration under control.	10	19	15	20	15	10	Sites
	Number of Superfund sites ready for anticipated use site-wide.	30	64	30	85	45	65	Sites
	Number of Federal Facility Superfund sites where all remedies have completed construction.	56	59	60	61	64	68	Sites
	Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined.	76	71	81	73	77	92	Remedies
	Cumulative percentage of RCRA facilities with final remedies constructed.						30	Percent
	Cumulative percentage of RCRA facilities with human						63	Percent

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Assess and Cleanup Contaminated Land	exposures to toxins under control.							
	Cumulative percentage of RCRA facilities with migration of contaminated groundwater under control.						55	Percent
	Additional Information: Through the end of FY 2008, Superfund had made a cumulative total of 40,187 final assessment decisions at potentially hazardous sites, completed construction at 1,060 final and deleted NPL sites, and ensured that 343 final and deleted NPL sites met the criteria for Siitewide Ready for Anticipated Use. Additionally, as of October 1, 2008, Superfund had controlled human exposures at 1,309 final and deleted NPL sites and controlled groundwater migration at 996 final and deleted NPL sites. The new measures for RCRA Corrective Action reflect a universe of 3,746 of the high National Corrective Action Prioritization System-ranked facilities. At the end of FY 2008, cleanup remedies had been constructed at 24 percent of the 3,746 facilities, potential human exposures to toxins were controlled at 58 percent of facilities, and migration of contaminated groundwater was controlled at 50 percent of facilities. Through FY 2008, EPA completed a cumulative total of 377,019 leaking underground storage tank cleanups.							
Prepare / Respond to Accidental / Intentional Release	Superfund-lead removal actions completed annually.	195	200	195	215	195	170	Removals
	PRP removal completions (including voluntary, AOC, and UAO actions) overseen by EPA.						170	Removals
	Percent of all SPCC inspected facilities found to be non-compliant brought into compliance.						15	Percent
	Percent of all FRP inspected facilities found to be non-compliant brought into compliance.						15	Percent
	Score on annual Core NAR.						55	Percent
	Additional Information: Between 2002 and 2008 EPA completed an average 202 Superfund-lead removal response actions. In FY 2010, EPA will begin implementing a new measure to track removals undertaken by potentially responsible parties, either voluntarily or pursuant to an enforcement instrument, where EPA has overseen the removals. Between 2004 and 2008, the Oil Program has conducted 1,439 inspections and exercises. 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. Consistent with the government-wide National Response Framework (NRF), EPA will work to fully implement the priorities under its internal NAR so that the Agency is prepared to respond to multiple nationally significant incidents. Some of these activities, e.g., building adequate laboratory capacity will take extensive coordination and resources. Specifically, by 2014, EPA will achieve and maintain at least 75 percent of the maximum score on readiness evaluation criteria.							

<u>Objective</u> – Enhance Science and Research: *Through 2014, provide and apply sound science for protecting and restoring land by conducting leading-edge research, which through collaboration, leads to preferred environmental outcomes.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Land Protection and Restoration Research	Percentage of planned outputs delivered in support of the manage material streams, conserve resources and appropriately manage waste long-term goal.	100	100	100	100	100	100	Percent

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Land Protection and Restoration Research	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	100	100	Percent
	Percentage of Land publications in nigh-impact journals	No Target Established		25.7	26.2	No Target Established	26.7	Percent
	Percentage of Land publications rated as highly cited publications	No Target Established		26.8	18	No Target Established	27.8	Percent
	Additional Information: 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) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends. .							

GOAL 4: Healthy Communities and Ecosystems
Protect, sustain, or restore the health of people, communities, and ecosystems using integrated and comprehensive approaches and partnerships.

<u>Objective</u> – Chemical And Pesticide Risks: *By 2014, prevent and reduce pesticide and industrial chemical risks to humans, communities, and ecosystems.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Protect Human Health from Pesticide Risk	Percentage of agricultural acres treated with reduced-risk pesticides.	18	20	18.5	Data Avail 10/2009	20	21	Percent Acre-Treatments
	Improve or maintain a rate of incidents per 100,000 potential risk events in population occupationally exposed to pesticides.			<= 3.5 / 100,000	<= 3.5 / 100,000	<= 3.5 / 100,000	<= 3.5 / 100,000	Incidents/ 100,000
	Percent reduction in concentrations of pesticides detected in general population.	10	5	No target Established	N/A	30	No target Established	Percent Cum. Reduction
	Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate.			20	43	30	40	Percent Cum. Reduction
	Percent of decisions completed on time (on or before PRIA or negotiated due date).						99	Percent
	Additional Information: 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 2008 is 212 registrations. Zero new chemicals (active ingredients) is registered in FY 1996; Cumulative total in FY 2008 is 125 new chemicals (AI). Zero new use actions in FY 1996; Cumulative total in FY 2008 is 4,101 new use actions. Concentration of pesticides data, which is based on the National Health & Nutrition Examination Survey (NHANES), is collected on an annual basis but released to the public in two year data sets.							
Protect the Environment from Pesticide Risk	Number of Registration Review pesticide case dockets opened.						70	Dockets
	Number of Final Work Plans for Reviewing Registered Pesticides						70	Work Plans
	Product Reregistration	545	962	1075	1194	2000	1,500	Actions
	Percent of agricultural watersheds that exceed the aquatic life benchmarks for two key pesticides of concern.						5% Azinphos-methyl 10% Chlorpyrifos	Percent

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Protect the Environment from Pesticide Risk	Percent of urban watersheds that exceeds EPA aquatic life benchmarks for three key pesticides of concern.			25% diazinon 25% chlorpyrifo; 30% malathion	40% diazinon 0% chlorpyrifos 30% malathion	20% diazinon 20% chlorpyrifos25 % malathion	20% diazinon 20% chlorpyrifos;2 5% malathion	Percent Reduction
	Additional Information: In 2008, 71 registration review pesticide case dockets were opened, 47 final work plans for registered pesticides were reviewed and 99.9% of decisions were completed on time (on or before PRIA or negotiated due date). In 2005, 501 product reregistrations were completed; a total of 8,439 product reregistrations were completed in 2008.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. Based on 1992–2001 data, 18 percent of agricultural watersheds sampled exceeded benchmarks for azinphos-methyl and chlorpyrifos.							
Reduce Chemical Risks	Cumulative number of assays that have been validated. (Research)	8/20	3/20	13/20	12/20	14/19	19/19	Assays
	Additional Information: Zero assays were validated in FY 2005.							
Realize the Benefits from Pesticide Availability	Maintain timeliness of S18 decisions.	45	36.6	45	34	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.			900 M	900 M	900 M	900 M	Dollars/loss avoided
	Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations.			$1.5 B	$1.5B	$1.5 B	$1.5 B	Loss avoided
	Additional Information: 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.							
Reduce Chemical Risks	Number of countries completing phase out of leaded gasoline. (incremental)			7	7	4	3	Countries
	Number of countries introducing low sulfur in fuels. (incremental)			2	5	3	9	Countries
	Additional Information: 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.							
	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 Established	N/A	29	Data Avail 11/2011	No target Established	28	Percent
	Number of cases of children (aged 1-5 years) with elevated blood lead levels (>10ug/dl).	No target Established	N/A	90,000	Data Avail 10/2010	No target Established	0	Children
	Additional Information: 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. Lead measure data is based on the National							

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Reduce Chemical Risks	Health & Nutrition Examination Survey (NHANES) and is collected on an annual basis, but released to the public in two year data sets.							
	Annual number of chemicals with proposed values for Acute Exposure Guidelines Levels (AEGL)	24	33	24	28	18	18	Chemicals
	Annual number of chemicals with final values for Acute Exposure Guideline Levels (AEGL).			Baseline	37	6	14	Chemicals
	Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment.	100	96	100	Data Avail 10/2009	100	100	Percent
	Reduction in the current year production-adjusted risk-based score of releases and transfers of toxic chemicals from manufacturing facilities.	4.0	Data Avail 10/2009	3.5	Data Avail 10/2010	3.2	3.0	Percent RSEI Rel Risk
	Annual number of High Production Volume (HPV) chemicals with Risk Based Prioritizations Completed through the Chemical Assessment and Management Program (ChAMP).	Baseline	0	150	150	180	230	HPV Chemicals
	Annual number of Moderate Production Volume (MPV) chemicals with Hazard Based Prioritizations Completed through the Chemical Assessment and Management Program (ChAMP).	Baseline	0	55	14	100	325	MPV chemicals
	Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities.	2.6	Data Avail 10/2009	2.5	Data Avail 10/2010	2.4	2.2	Percent Reduction
	Additional Information: 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 246 chemicals with proposed AEGL Values were reported for the AEGL Program (cumulative count). Baseline for the overall Risk Screening Environmental Indicators Model in 2001 was zero percent. 2001 was selected as the baseline year because of changing TRI reporting thresholds for persistent, bioaccumulative, toxic chemicals took effect in 2001. These changes significantly affect the RSEI model, making comparisons with years prior to 2001 inappropriate. Cumulative reduction reported through 2006 is 39.5%. The baseline for the HPV subset of the RSEI model in 1998 was zero percent. 1998 was selected because this was the kick off year for the HPV challenge program. Cumulative reduction reported through 2006 is 35.3%. The universe of ChAMP chemicals receiving risk based prioritizations is approximately 2,000 chemicals and baseline is zero as of 2007. The universe of ChAMP chemicals receiving hazard based prioritizations is approximately 4,000 chemicals and baseline is zero as of 2007.							
Reduce Chemical Risks at Facilities and in Communities	Conduct 400 risk management plan audits and inspections.	400	628	400	416	400	400	Audits
	Additional Information: 4,987 Risk Management Plan audits were completed between FY 2000 and FY 2008.							

Objective – Communities: *Sustain, clean up, and restore communities and the ecological systems that support them.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
U.S. – Mexico Border Water/Wastewater Infrastructure	Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003.	1,200	1,276	2,500	5,162	1,500	28,434	More Homes
	Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003.	70,750	73475	15,000	31,686	105,500	246,175	More Homes
	Cleanup waste sites in the United-States – Mexico border region (incremental)			1	1	1	1	Sites
	Additional Information: 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.							
Pacific Island Territories	Percent of population in the U.S. Pacific Island Territories that has access to continuous drinking water that meets all applicable health-based drinking water standards, measured on a four quarter rolling average basis.			69	Data Avail 4/2009	73	73	Percent Population
	Percent of sewage treatment plants in the U.S. Pacific Island Territories that comply with permit limits for biochemical oxygen demand (BOD) and total suspended solids (TSS).			62	Data Avail 4/2009	62	62	Percent of Time
	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.			85	80	80	80	Percent Days
	Additional Information: 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.							
Environmental Justice	Number of communities with potential environmental justice concerns that achieve significant measurable environmental or public health improvement tri-annually through the Collaborative Problem-Solving Cooperative Agreement Program or through other EPA community assistance programs utilizing collaborative problem-solving strategies.	17	17	No Target Established	N/A	No Target Established	8*	Communities
	Additional Information: This measure is in a 3 year cycle: organizations take 3 years to develop projects using collaborative problem-solving strategies; therefore, output							

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
	measures are only available at the end of the projects. For example, 17 communities awarded cooperative agreements in 2004 showed measurable results in 2007. Projects initiated in 2007 will be reported in 2010. *Measure(s) pertaining to environmental justice are under review and may be modified in the coming months.							
Assess and Clean up Brownfields	Brownfield properties assessed.	1,000	1,371	1,000	1,453	1,000	1,000	Properties
	Number of properties cleaned up using Brownfields funding.	60	77	60	78	60	60	Properties
	Acres of Brownfields properties made ready for reuse.		2,399	225	4,404	1,000	1,000	Acres
	Jobs leveraged from Brownfields activities.	5,000	5,209	5,000	5,484	5,000	5,000	Jobs
	Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields sites.	$0.9	$1.79	$0.9	$1.5	$0.9	$0.9	Billions of Dollars
	Additional Information: By the end of FY 2007, the Brownfields program assessed 1,371 properties, cleaned up 77 properties, made 2,399 acres ready for reuse, leveraged 5,209 jobs, and leveraged $1.7B in cleanup and redevelopment funding.							

<u>Objective</u> - Restore and Protect Critical Ecosystems: *Protect, sustain, and restore the health of critical natural habitats and ecosystems.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Increase Habitat Protected or Restored	Acres protected or restored in NEP study areas.	50,000	102,463	50,000	83,490	100,000	100,000	Acres
	Additional Information: 2005 Baseline: 449,242 acres of habitat protected or restored; cumulative from 2002.							
Improve the Health of the Gulf of Mexico	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	2.2	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).	32	38	64	Data Avail 4/2008	96	96	Impaired Segments
	Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats.	15,800	18,660	18,200	25,215	26,000	27,500	Acres
	Additional Information: In 2008, the Gulf of Mexico rating of fair/poor was 2.2 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. In 2008, 25,215 acres restored, enhanced, or protected; Gulf of Mexico coastal wetlands habitats include 3,769,370 acres.							
Improve the Health of the Great Lakes	Average annual percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples.	5	6	5	6	5	5	Percent Annual Decrease
	Average annual percentage decline for the long-term trend in	7	7.5	7	7	7	7	Percent Annual

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Improve the Health of the Great Lakes	concentrations of PCBs in the air in the Great Lakes Basin.							Decrease
	Cubic yards of contaminated sediment remediated (cumulative) in the Great Lakes.	4.5	4.5	5.0	5.5	5.9	6.5	Million Cubic Yards
	Number of Beneficial Use Impairments removed within Areas of Concern.	9	9	16	11	21	26	Cum. Number of BUI Removed
	Additional Information: (i) 2.1 million cubic yards of contaminated sediments were remediated from 1997 through 2001 of the 40 million requiring remediation. (ii) 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. 9 (iii) 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. (iv) In 2002, no Areas of Concern had been delisted.							
Increase Wetlands	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.	No Net Loss	Data Avail 5/2009	No Net Loss	Data Avail 12/09	No Net Loss	No Net Loss	Acres
	Number of acres restored and improved, under the 5-Star, NEP,319, and great waterbody programs (cumulative).	7,200	61,856	75,000	82,875	88,000	96,000	Acres/year
	Additional Information: 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.)							
Improve the Health of the Chesapeake Bay Ecosystem	Percent of point source nitrogen reduction goal of 49.9 million pounds achieved.	70	69	74	69	74	79	Percent Goal Achieved
	Percent of point source phosphorus reduction goal of 6.16 million pounds achieved.	84	87	85	87	87	89	Percent Goal Achieved
	Percent of forest buffer planting goal of 10,000 miles achieved.	53	53	60	57	62	65	Percent Goal Achieved
	Percent of goal achieved for implementation of nitrogen reduction practices (expressed as progress meeting the nitrogen reduction goal of 162.5 million pounds). .	47	46	50	47	50	52	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).	64	62	66	62	64	66	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 tons).	61	61	64	64	67	71	Percent Goal Achieved

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
	Additional Information: 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 33.73 million lbs of point source nitrogen reduced, 68% towards the goal. There were 5.18 million lbs of point source phosphorus reduced, 84% towards the goal. Four thousand six hundred six miles of forest buffer were planted, 46% towards the goal.							
Protect Long Island Sound	Reduce point source nitrogen discharges to Long Island Sound as measured by the Long Island Sound Nitrogen Total Maximum Daily Load (TMDL)) .		39,232	37,323	40,440	37,323		Pounds per day
	Percent of goal achieved in reducing trade-equalized (TE) point source nitrogen discharges to Long Island Sound from the 1999 baseline of 59,146 TE lbs/day.						60	Percent Goal Achieved
	Restore or protect acres of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands.		1,023	862	1,199	912		Acres
	Percent of goal achieved in restoring, protecting or enhancing 240 acres of coastal habitat from the 2008 baseline of 1,199 acres.					16	33	Percent Goal Achieved
	Reopen miles of river and stream corridor to anadromus fish passage through removal of dams and barriers or installation of by-pass structures such as fishways.		123	105.9	124.3	114		Miles
	Percent of goal achieved in reopening 50 river and stream miles to diadromous fish passage from the 2008 baseline of 124 miles.					16	33	Percent Goal Achieved
	Additional Information: The 2000 TMDL baseline is 59,146 Trade-Equalized (TE) pounds/day. The 2014 TMDL target is 26,854 TE/lbs-day.							
South Florida Ecosystem	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.			No Net Loss	Small Loss	No Net Loss	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.			Maintain	Not Maintained	Maintain	Maintain	Sea Grass Health
	Annually maintain the overall water quality of the near shore and coastal waters of the Florida Keys Nat'l Marine Sanctuary (FKNMS).			Maintain	Not Maintained	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 and the effluent limits to be established for discharges from stormwater treatment areas.			Maintain	Not Maintained	Maintain	Maintain phosphorus baseline and meet discharge	Parts per Billion

Group	Performance Measure	Performance Data						Unit
		FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2008 Actual	FY 2009 Target	FY 2010 Target	
							imits	
South Florida Ecosystem	*Additional Information*: In 2005, the mean percent of stony coral cover 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.							
Restore and Protect the Puget Sound Basin	Improve water quality and enable the lifting of harvest restrictions in acres of shellfish bed growing areas impacted by degrading or declining water quality (cumulative from FY06).	N/A	322	450	1,566	600	1,800	Acres
	Remediate acres of prioritized contaminated sediments (cumulative starting in FY09).	N/A	120	100	123	125	123	Acres
	Restore the acres of tidally and seasonally influenced estuarine wetlands (cumulative starting in FY06).	N/A	4,152	2,310	4,413	3,000	6,500	Acres
	Additional Information: 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.							
Restore and Protect the Columbia River Basin	Protect, enhance, or restore acres of wetland habitat and acres of upland habitat in the Lower Columbia River watershed.	N/A	4,204	8,000	12,986	10,000	14,250	Acres
	Clean up acres of known contaminated sediments.	N/A	N/A	0	0	5	20	Acres
	Additional Information: In 2005, 96,770 acres of wetland and upland habitat available for protection, enhancement, or restoration.							

<u>Objective</u> – Enhance Science and Research: *Through 2014, 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2008 Actual	FY 2009 Target	FY 2010 Target	
Homeland Security Research	Percentage of planned outputs delivered in support of efficient and effective clean-ups and safe disposal of contamination wastes.	100	100	100	100	100	100	Percent

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Homeland Security Research	Percentage of planned outputs delivered in support of water security initiatives.	100	100	100	100	100	100	Percent
	Additional Information: 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	Percentage of planned outputs delivered in support of public health outcomes long-term goal.	100	100	100	100	100	100	Percent
	Percentage of planned outputs delivered in support of mechanistic data long-term goal.	100	100	100	100	100	100	Percent
	Percentage of planned outputs delivered in support of aggregate and cumulative risk long-term goal.	100	100	100	100	100	100	Percent
	Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal.	100	100	100	100	100	100	Percent
	Percentage of Human Health program publications rated as highly cited papers (top 10% in field) in research journals.	No Target Established		25.5%	25.6%	No Target Established	26.5%	Percent
	Additional Information: 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 performance in two ways. 1) Increase the number of planned outputs completed on time (a measure of timeliness). 2) Increase the number of its papers deemed "highly cited" in bibliometric analyses (a measure of the quality and use of ORD's research) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends.							
Global Change Research	Percentage of planned outputs delivered.		100	100	100	100	100	Percent
	Percentage of Global publications in high impact journals.	No Target Established		No Target Established		24.6	No Target Established	Percent
	Percentage of Global publications rated as highly cited publications.	No Target Established		No Target Established		23	No Target Established	Percent
	Additional Information: 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 performance in two ways. 1) Increase the number of planned outputs completed on time (a measure of timeliness). 2) Increase the number of its papers deemed "highly cited" in bibliometric analyses (a measure of the quality and use of ORD's research) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends.							
Human Health Risk Assessment (HHRA)	Percentage of planned outputs delivered in support of HHRA Technical Support Documents.)	90	100	90	89	90	90	Percent
	Additional Information: 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							

Group	Performance Measure	Performance Data						Unit
		FY 2007 Target	FY 2007 Actual	FY 2008 Target	FY 2008 Actual	FY 2009 Target	FY 2010 Target	
	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	Percentage of planned outputs delivered in support of the SP2 program's long-term goal one.	100	86	100	100	100	100	Percent
	Percentage of planned outputs delivered in support of the SP2 program's long-term goal two.	100	100	100	100	100	100	Percent
	Percentage of planned outputs delivered in support of the SP2 program's long-term goal three.	100	80	100	100	100	100	Percent
	Percentage of SP2 publications in high impact journals.	No Target Established		36.2	Available 2010	No Target Established	37.2	Percent
	Percentage of SP2 publications rated as highly cited publications.	No Target Established		23.2	Available 2010	No Target Established	24.2	Percent
	Additional Information: 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).) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends.							
Ecosystems Research	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.	30	30	35	35	40	45	States
	Percentage of Ecological Research publications rated as highly-cited publications.	20.4	21.1	No Target Established	N/A	21.4	No Target Established	Percent
	Percentage of Ecological research publications in "high-impact" journals.	20.3	20.8	No Target Established	N/A	21.3	No Target Established	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.	100	100	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.	100	100	100	83	100	100	Percent
	Percentage of planned outputs delivered in support of State,	100	100	100	100	100	100	Percent

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
	tribe, and EPA office needs for environmental restoration and services tools and methods to protect and restore ecological condition and services.							
	Additional Information: 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 performance in three ways. 1)Increase the number of planned outputs completed on time (a measure of timeliness). 2) Increase the number of its papers deemed "highly cited" in bibliometric analyses (a measure of the quality and use of ORD's research) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends. 3) Increase 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: *Address environmental problems, promote compliance and deter violations, by achieving goals for national priorities and programs including those with potential environmental justice concerns and those in Indian country.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Air	Reduce, treat, or eliminate air pollutants through concluded enforcement actions.						480	Million Pounds
	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for air as a result of EPA enforcement and compliance actions.						127	Entities
	Additional Information: FY 2005-2008 Average Pollutant Reduction Baseline: 480 million pounds. FY 2007-2008 Average Entities Baseline: 151 entities Results reported under the measure "Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment" include: enforcement settlements, compliance incentive audits, direct compliance assistance delivered by EPA staff only, and Federal inspections that result in a direct or preventative environmental benefit. Compliance measures are under review.							
Water	Reduce, treat, or eliminate water pollutants through concluded enforcement actions.						320	Million Pounds
	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for water as a result of EPA enforcement and compliance actions.						608	Entities
	Additional Information: FY 2005-2008 Average Baseline: 320 million pounds. FY 2007-2008 Average Entities Baseline: 626 entities. Results reported under the measure "Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment" include: enforcement settlements, compliance incentive audits, direct compliance assistance delivered by EPA staff only, and Federal inspections that result in a direct or preventative environmental benefit. Compliance measures are under review.							
Waste, Toxics, Pesticides	Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.						3.8	Million Pounds
	Reduce, treat, or eliminate hazardous waste through concluded enforcement actions.						6,500	Million Pounds
	Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment for land as a result of EPA						213	Entities

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
	enforcement and compliance actions.							
	Additional Information: FY 2005-2008 Average Pollutant Reduction Baseline: 3.8 million pounds. FY 2008 Hazardous Waste Baseline: 6,500 million pounds. FY 2007-2008 Average Entities Baseline: 235 entities. Results reported under this measure "Total number of regulated entities that change behavior resulting in direct environmental benefits or the prevention of pollution into the environment" include: enforcement settlements, compliance incentive audits, direct compliance assistance delivered by EPA staff only, and Federal inspections that result in a direct or preventative environmental benefit. Compliance measures are under review.							
Criminal Enforcement	Percent of recidivism.						<1%	Percent
	Percent of closed cases with criminal enforcement consequences (indictment, conviction, fine, or penalty).						33%	Percent
	Additional Information: FY 1997-2008 Average recidivism baseline: <1%. FY 2006-2008 Average Closed Cases Baseline: 33%.							

<u>Objective</u> – Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices: *By 2014, 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Reducing PBTs in Hazardous Waste Streams	Quantity of priority chemicals reduced from all phases of the manufacturing lifecycle through source reduction and/or recycling.	0.5 M	1.3 M	1.0 M	5.7 M	1.0 M	0.75 M	Pounds
	Additional Information: The National Partnership for Environmental Priorities (NPEP) program reduced approximately 5.7 million pounds of priority chemicals during FY 2008. The performance measure reflects the fact that the NPEP now has over 215 partners, including many federal and state facilities, who have removed more than 9.2 million pounds of priority chemicals through both source reduction and recycling activities.							
Innovation Activities	75% of innovative projects completed under the SIG program will achieve, on average, 8% or greater improvement in environmental results for sectors and facilities involved, or 5% or greater improvements in cost-effectiveness & efficiency.			75	0	75	75	Percentage
	Additional Information: No State Innovation Grant projects were completed in FY 2008. Grant projects are generally 3-4 years in duration and even then, most require extension to complete because of the inherent uncertainties involved with testing innovation.							
Reduction of Industrial/ Commercial Chemicals	BTUs of energy reduced, conserved or offset by P2 program participants.	1,106.8 B	6,470.4 B	1,217.4 B	Data Avail 06/2009	8,000 B	9,000 B	BTUs
	Gallons of water reduced by P2 program participants.	1.79 B	1.619 B	1.64 B	21.602 B	1.791 B	1.795 B	Gallons
	Business, institutional and government costs reduced by P2	44.3 M	186.9 M	45.9 M	Data Avail	130 M	300 M	Dollars saved

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Reduction of Industrial/ Commercial Chemicals	program participants.				06/2009			
	Pounds of hazardous materials reduced by P2 program participants.	414	456.9 M	429 M	Data Avail 10/2009	494 M	522 M	Pounds
	Metric Tons of Carbon Dioxide Equivalent (MTCO2e) reduced, conserved, or offset by Pollution Prevention (P2) program participants.					2 M	5 M	MTCO2e
	Additional Information: The baseline for the Pollution Prevention (P2) program measure of pounds reduced is 44 million pounds in 2000. Data currently available indicate that the P2 has cumulatively reduced 2.2 billion pounds of hazardous materials since 2000. The baseline for the P2 Program measure of BTUs is 0 in FY 2002. Data currently available indicate that the P2 program has *cumulatively* reduced, conserved, or offset 15 Billion BTUs since 2002. The baseline for the P2 Program measure gallons of water was 220 millions gallons in FY 2000. Data currently available indicate that the P2 program has *cumulatively* reduced 33 billion gallons of water since 2000. In FY 08, a Green Chemistry Award winning technology (Nalco's 3-D TRASAR technology) has had a huge impact on water savings from industrial and commercial cooling systems (e.g. heating ventilating, and air conditioning). The technology reduces the need to flush and refill cooling water as well as reduces the amount of treatment chemicals needed to keep systems running efficiently. The baseline for the P2 Program measure cost savings is 0 dollar in FY 2002. Data currently available indicate that the P2 program has *cumulatively* saved $458.5 million in business, government, and institutional costs since 2002. The baseline for the P2 Program measure Metric Tons of Carbon Dioxide Equivalent (MTCO2e) reduced, conserved, or offset by Pollution Prevention (P2) program participants in 2005 is 0.187 Million. Data currently available indicate that the P2 program has cumulatively reduced 3.4 Million MTCO2e since 2005.							

<u>Objective</u> – 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.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Tribal Environmental Baseline/ Environmental Priorities	Percent of Tribes implementing federal regulatory environmental programs in Indian country (cumulative).			6	11	7	8	Percent Tribes
	Percent of Tribes conducting EPA approved environmental monitoring and assessment activities in Indian country (cumulative.)			21	34	23	25	Percent Tribes
	Percent of Tribes with an environmental program (cumulative).			57	28	60	63	Percent Tribes
	Additional Information: There are 572 tribal entities that are eligible for GAP program funding.							

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 policies and decisions and solving problems for the Agency and its partners and stakeholders.*

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Sustainability Research	Percentage of Science and Technology Sustainability (STS) publications rated as highly cited publications.	No Target Established	28.2	No Target Established		29.2	No Target Established	Percent
	Percentage of Science and Technology Sustainability (STS) publications rated as "high impact" journals.	No Target Established	34.3	No Target Established		35.3	No Target Established	Percent
	Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-identified and developed metrics to quantitatively assess environmental systems for sustainability.	No Target Established		100	100	100	100	Percent
	Percentage of planned outputs delivered in support of STS's goal that decision makers adopt innovative technologies developed or verified by ORD to solve environmental problems contributing to sustainable outcomes.	100	94	100	100	100	100	Percent
	Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-developed and developed decision support tools and methodologies to promote environmental stewardship for sustainable environmental management practices.	100	100	100	100	100	100	Percent
	Additional Information: The program aims to increase performance in three ways. 1) Increase the number of planned outputs completed on time (a measure of timeliness). 2) Increase the number of its papers deemed "highly cited" in bibliometric analyses (a measure of the quality and use of ORD's research) compiled biennially since analyses are based on a rolling 10-year period of publications. Annual analysis would be costly and not allow enough time to elapse to measure a significant shift in citation trends. 3) Increase the percentage of various outputs that decision-makers adopt.							

Enabling and Support Programs

NPM: Office of Administration and Resources Management

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Energy Consumption Reduction	Cumulative percentage reduction in energy consumption.	6	12	9	13	12	15	Percent
	Additional Information: On January 24, 2007, the President signed Executive Order: Strengthening Federal Environment, Energy, and Transportation Management, requiring all Federal Agencies to reduce its greenhouse gas emissions and energy intensity by 3% annually through FY 2015 compared to a FY2003 baseline (for a cumulative reduction). This annual energy reduction requirement was reinforced by the Energy Independence and Security Act of 2007. For the Agency's 29 reporting facilities, the FY 2003 energy intensity is 395,520 BTUs per square foot (Btu/GSF).							
Human Capital	Average time to hire non-SES positions from date vacancy closes to date offer is extended, expressed in working days.	45	28	45	26.3	45	45	Days
	Average time to hire SES positions from date vacancy closes to date offer is extended, expressed in working days.	90	66	73	66	68	68	Days
	Additional Information: Baselines for performance measures were established by using FY2008 year-end actuals. 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

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Information Exchange Network	Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	36	37	45	48	50	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	58	60	65	Users
	Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA..	55,000	88,516	100,000	120,000	130,000	140,000	Users
	Additional Information: The Central Data Exchange program began in FY 2001.							
Information Security	Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	100	100	100	100	100	100	Percent of Reportable Systems
	Additional Information: In FY 2002, the Agency started planning an effort to expand and strengthen its information security infrastructure.							

NPM: Office of the Inspector General

Group	Performance Measure	Performance Data						Unit
		FY 2007		FY 2008		FY 2009	FY 2010	
		Target	Actual	Target	Actual	Target	Target	
Fraud Detection and Deterrence	Criminal, civil, administrative, and fraud prevention actions.	80	103	80	84	80	75	Actions
	Additional Information: In FY 2009, the OIG established a baseline of 102 criminal, civil, administrative, and fraud prevention actions.							
Audit and Advisory Services	Environmental and business actions taken for improved performance or risk reduction.	318	464	334	463	318	334	Actions
	Environmental and business recommendations or risks identified for corrective action.	925	949	971	624	903	950	Recommendations
	Return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations.	150	189	150	186	120	120	Percentage
	Additional Information: In FY 2009 the OIG established a revised baseline of 444 environmental and business actions taken for improved performance or risk reduction; 865 environmental and business recommendations or risks identified for corrective action; 176% in potential dollar return on investment as a percentage of OIG Budget from identified opportunities for savings, questioned costs, fines, recoveries and settlements. The Baselines are adjusted to reflect an average of the actual reported results for the period FY 2006-2008. Baselines have generally decreased to reflect the transfer of DCAA audit oversight to the Agency, a reduction in staffing ceiling and gap between the ceiling and actual staffing levels. The Baseline in actions taken has increased as a time lag result from previous years' level of recommendations, and a concentrated effort to identify unimplemented recommendations.							

ASSESSMENT MEASURES SUPPLEMENTAL TABLE

Assessment Measures	**Year Data Available**
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
Level of total equivalent stratospheric chlorine, measured in parts per billion of air by volume.	FY 2014
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 2014
Millions of tons of volatile organic compounds (VOCs) reduced since 2000 from mobile sources.	FY 2014
Percent improvement in visibility on 20% worst days, on average for all eastern Class I areas.	FY 2018
Percent improvement in visibility on 20% worst days, on average for all western Class I areas.	FY 2018
Percent change in number of chronically acidic waterbodies in acid sensitive regions.	FY 2030
Percent change in annual average nitrogen deposition.	FY 2012
Percent change in annual average sulfur deposition.	FY 2012
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 reduction in tons toxicity-weighted (for cancer risk) emissions from 1993 baseline.	FY 2014
Total number of schools implementing an effective Indoor Air Quality plan.	FY 2012

Assessment Measures	Year Data Available
Percentage reduction in tons of toxicity-weighted (for non-cancer) risk emissions from 1993 baseline.	FY 2014
Number of people taking all essential actions to reduce exposure to indoor environmental asthmas triggers.	FY 2012
Progress in assessing the linkage between health impacts and air pollutant sources and reducing the uncertainties that impede the understanding and usefulness of these linkages. (Research)	FY 2013
Progress toward reducing uncertainty in the science that supports standard setting and air quality management decisions. (Research)	FY 2013
Utility of ORD's research for assessing the linkage between health impacts and air pollutant sources and reducing the uncertainties that impede the understanding and usefulness of these linkages.	FYs 2009, 2013
Utility of ORD's research for reducing uncertainty in the science that supports standard-setting and air quality management decisions.	FY's 2009, 2013
Percentage of U.S. population in proximity to an ambient radiation monitoring system that provides scientifically sound data for assessing public exposure resulting form radiological emergencies.	FY 2014
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).	FY 2014
Reduced incidence of melanoma skin cancers, measured by new skin cancer cases avoided per 100,000 population.	FY 2050
Tons of fine particulate matter (PM 2.5) reduced since 2000 from mobile sources.	FY 2012
Sulfur dioxide emissions from electric power generation sources.	FY 2012
Percentage of program publications rated as highly cited papers. (Research)	FY 2011
Percent progress toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health.	Under Review
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 (both EPA and private industry).	FY 2012
Population covered by Radiation Protection Program monitors per million dollars invested.	FY 2009

Assessment Measures	Year Data Available
Total federal dollars spent per school joining the SunWise program.	FY 2009
Tons of greenhouse gas emissions (MMTCE) prevented per societal dollar in the Building sector.	FY 2014
Tons of greenhouse gas emissions (MMTCE) prevented per societal dollar in the Industry sector.	FY 2014
Tons of greenhouse gas emissions (MMTCE) prevented per societal dollar in the Transportation sector.	FY 2014
Reduction in exposure to fine particulate matter (PM2.5) per total dollar spent on sulfur dioxide (SO2) emission reduction.	FY 2015
Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003 per grant dollar allocated to the States in support of the NAAQS program.	FY 2009
Cumulative percent reduction in the number of days to process State Implementation Plan revisions, weighted by complexity.	FY 2009
Total cost (public and private) per future premature lung cancer death prevented through lowered radon exposure.	FY 2012
Annual cost to EPA per person with asthma taking all essential actions to reduce exposure to indoor environmental asthma triggers.	FY 2012
Average cost to EPA per student per year in a school that is implementing an effective indoor air quality plan.	FY 2012
Tons of toxicity-weighted (for cancer and noncancer risk) emissions reduced per total cost ($).	UD
Percent variance from planned cost and schedule.	TBD
Goal 2: Clean and Safe Water	
Long-Term Performance Measure	
Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	FY 2011
CWSRF Long-Term Revolving Level ($billions/yr).	FY 2011
DWSRF Long-Term Revolving Level ($billions/yr).	FY 2018
National Coastal Condition Report (NCCR) score for overall aquatic ecosystem health of coastal waters nationally (1-5 scale).	FY 2011
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	FY 2012

Assessment Measures	Year Data Available
being primarily NPS-impaired that are partially or fully restored.	
Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained.	FY 2012
Ensure that the condition of the Nation's wadeable streams does not degrade (i.e. there is no statistically significant increase in the percent of streams rated "poor" and no statistically significant decrease in the streams rated "good."	FY 2012
100% of Alaska rural population served by public water systems in compliance with Safe Drinking Water Act regulatory requirements by 2011.	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 drinking water.	FY 2011
Reduction in the number of cases of bladder cancer attributable to the implementation of Stages 1 and Stage 2 Disinfection By-Products Rules (DBPRs).	FY 2014
Reduction in annual endemic cases of Cryptosporidiosis attributable to the implementation of the Long-Term 2 Enhanced Surface Water Treatment Rule (LT2).	FY 2014
Usefulness of ORD's risk management research products for enabling EPA's Office of Water, regions, water utilities, and other key stakeholders to manage pubic health risks associated with exposure to drinking water, implement effective safeguards on the quality and quantity of surface and underground sources of drinking water, improve the water infrastructure, and establish health-based based measures of program effectiveness.	FY 2009
Independent Expert Review 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
Independent Expert Review 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
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 (in millions of dollars) per project initiating operations.	FY 2012
Total Federal National UIC Program costs per well managed (Classes I, II, III, and V).	UD
Number of waterbodies protected per million dollars of CWSRF assistance	FY 2012

Assessment Measures	Year Data Available
provided.	
Number of waterbodies restored or improved per million dollars of CWSRF assistance provided.	FY2012
Section 319 funds ($ million) expended per partially or fully restored waterbody.	FY 2012
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.	UD
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
Percent of all SPCC inspected facilities found to be non-compliant brought into compliance.	FY 2014
Percent of all FRP inspected facilities found to be non-compliant brought into compliance.	FY 2014
Gallons of oil verified as safely stored at the time of inspection at FRP and SPCC facilities during the fiscal year.	FY 2014
Total Superfund-lead removal actions completed.	FY 2011
Total PRP-lead removal actions completed under EPA oversight.	FY 2014
Cumulative percentage of human exposure universe of sites with human exposures under control.	FY 2014
Cumulative percentage of groundwater migration universe of sites with groundwater migration under control.	FY 2014
Efficiency Performance Measure	
Billions of pounds of municipal solid waste reduced, reused or recycled per Federal dollars budgeted.	FY 2011
Cleanups complete (3-year rolling average) per total cleanup dollars.	UD
Number of annual confirmed UST releases per federal, state and territorial	UD

Assessment Measures	Year Data Available
costs.	
Human Exposure avoided per million dollars spent on fund-lead removal actions.	UD
Human Exposure avoided per million dollars spent assisting PRP-lead removal actions.	UD
Total gallons of oil capacity verified as safely stored at inspected FRP and SPCC facilities during the reporting period per one million program dollars spent annually on prevention and preparedness.	UD
Goal 4: Healthy Communities and Ecosystems	
Long-Term Performance Measure	
% of peer-reviewed EPA risk assessments where ORD methods, 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.	FY 2009, FY 2013
% 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.	FY 2009, FY 2013
Acres protected or restored in NEP study areas.	FY 2011
Assessed or cleaned Brownfields properties redeveloped.	UD
Average cost and average time to produce or update an Endangered Species Bulletin.	FY 2011
Reduce the number of currently exceeded water quality standards in impaired transboundary segments of US surface waters.	FY 2012
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 2012
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 2012
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	UD

Assessment Measures	Year Data Available
communities.	
Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic systems.	FY 2011
Number of Areas of Concern in the Great Lakes Basin which are restored and de-listed.	FY 2011
Number of Beneficial Use Impairments removed within Areas of Concern.	FY 2011
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.	FY2011
Percent of Dissolved Oxygen goal of 100% standards attainment achieved, based on annual monitoring from the previous calendar year and the preceding 2 years.	FY 2011
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.	FY 2009, FY 2011
Percentage of Global publications rated as highly cited publications.	FY 2009, FY 2011
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.	FY 2009, FY 2013
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.	FY 2012
Utility of ORD's methods and models for risk assessors and risk managers to evaluate the effectiveness of public health outcomes.	FY 2009, FY 2012
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.	FY 2009, FY 2012

Assessment Measures	Year Data Available
Utility of ORD's methods, models, and data for OPPTS and other organizations to make decisions related to products of biotechnology.	FY 2011
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.	FY 2011
Utility of ORD's methods, models, and data for risk assessors and risk managers to characterize and provide adequate protection for susceptible subpopulations.	FY 2009, FY 2012
Utility of ORD's methods, models, and data for EPA's Office of Prevention, Pesticides, and Toxic Substances and other organizations 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.	FY 2011
Utility of ORD's priority health hazard assessments for Agency, state and local risk assessors.	FY 2008, FY 2012
Utility of ORD's state-of-the-science risk assessment models, methods and guidance for EPA programs, states, and other risk assessors.	FY 2008, FY 2012
Utility of ORD Integrated Science Assessments (ISAs) for providing best available scientific information on identifiable effects resulting from exposure to criteria pollutants.	FY 2008, FY 2011
Percentage of Ecological Research publications rated as highly-cited publications.	FY 2009, FY 2011
Percentage of Ecological Research publications in high impact journals.	FY 2009, FY 2011
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.	FY 2008, FY 2011
Annual Performance Measures	
Demonstrate a reduction in mean concentration of contaminants of concern found in water and fish tissue (cumulative starting in FY 06).	FY 2011
Improved protocols for screening and testing.	UD
Assessment Milestones Met.	UD
Risk Management Milestones Met.	UD
Effects and Exposure Milestones Met.	UD
Percent progress toward completion of a framework linking global change to air quality.	TBD
Efficiency Performance Measure	

Assessment Measures	Year Data Available
Acres of brownfields made ready for reuse per million dollars.	UD
Additional people served per million dollars (US and Mexico federal expenditures).	FY 2012
Goal 5: Compliance and Environmental Stewardship	
Long-Term Performance Measure	
Pounds of pollution reduced, treated, or eliminated. Cumulative business, institutional and government costs reduced by P2 program participants.	FY2010 FY2011
Cumulative pounds of hazardous materials reduced by P2 program participants.	FY2011
Cumulative gallons of water reduced by Pollution Prevention (P2) program participants.	FY2011
Cumulative Metric Tons of Carbon Dioxide Equivalent (MTCO2e) reduced, conserved, or offset by P2 Program participants.	FY 2014
Utility of ORD-identified and developed metrics for quantitatively assessing environmental systems for sustainability.	FY 2011
Utility of ORD-developed decision support tools and methodologies for promoting environmental stewardship and sustainable environmental management practices.	FY 2011
Utility of innovative technologies developed or verified by ORD for solving environmental problems and contributing to sustainable outcomes.	FY 2011
Reduction in recidivism. (criminal enforcement)	FY 2010
Percentage of Science and Technology for Sustainability (STS) publications rated as highly cited publications.	FY 2011
Percentage of Science and Technology for Sustainability (STS) publications in "high impact" journals.	FY 2011
Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-identified and developed metrics to quantitatively assess environmental systems for sustainability.	FY 2009, FY 2011
Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-developed decision support tools and methodologies to promote environmental stewardship and sustainable environmental management practices.	FY 2009, FY 2011
Annual Performance Measure	

Assessment Measures	**Year Data Available**
Percent of all learners who gained environmental knowledge by participating in an environmental education project.	UD
Percent of all educators who gained education skills by participating in an environmental education project.	UD
Percent of compliance actions taken as a result of inspection/enforcement. (pest. enforcement)	FY 2010
Percent of violators committing subsequent violations. (pest. enforcement)	FY 2010
Reduction in recidivism (criminal enforcement).	FY 2010
Severity of the crimes investigated (as measured by the percent of open high impacts cases (criminal enforcement).	TBD
Efficiency Performance Measure	
Number of enforcement actions taken (Federal + State) per million dollars of cost (Federal + State). (pest enforcement)	FY 2010
Ratio of number of students that have improved environmental knowledge per total dollar expended, reported as dollar per student.	UD

Assessment Improvement Plans – 2008 Fall Update Report

Code	Title	Year of Assessment	Improvement Plans	Status
10000218	Drinking Water State Revolving Fund	2008 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)	2008 FALL	**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
			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
			Direct funds toward completion of the Permit Compliance System (PCS).	Action taken, but not completed
			Calculate and evaluate recidivism rates.	Completed
			Begin to transition from a tool-oriented to a problem-oriented GPRA Architecture.	Completed
10000222	EPA Tribal General	2008 FALL	**Improvement Plan**	**Action Taken**

Code	Title	Year of Assessment	Improvement Plans	Status
	Assistance Program		Implementation of the GAP Online, the GAP tracking system has been completed. Regional training continues to take place. Updated recommendations have been collected, and the third round of system updates are scheduled to be completed by April 30, 2008.	Action taken, but not completed
			It is impractical to try and distinguish between the types of activities funded under GAP and those for which that OSWER is responsible. Therefore, at this time we have determined that a GAP SW measure would not present a relevant measure.	Action taken, inactive
10000224	Nonpoint Source Pollution Control Grants	2008 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	2008 FALL	**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
			Focus on maximizing programmatic net benefits and minimizing the cost per deleterious health effect avoided.	Action taken, but not completed
			By the end of March 2008, brief OMB on proposals for implementing a toxicity-weighted efficiency measure.	Completed
			Use the newly developed efficiency measure to demonstrate efficiency improvements.	No action taken

10000228	Leaking Underground Storage Tank Cleanup Program	2008 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	2008 FALL	**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
			Implement new strategic plan architecture into FY 08 management activities and day-to-day operations.	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.	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	Completed

10000228	Leaking Underground Storage Tank Cleanup Program	2008 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
			Independent assessment of the performance measures improvement project by the Federal Consulting Group.	Completed
10000236	Pesticide Reregistration	2008 FALL	**Improvement Plan**	**Action Taken**
			The original OMB 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
			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.	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.	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	Completed

			Improvement Plan	Action Taken
10000228	Leaking Underground Storage Tank Cleanup Program	2008 SPR	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
			Independent assessment of the performance measures improvement project by the Federal Consulting Group.	Completed

10000238	Superfund Removal	2008 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	2008 FALL	**Improvement Plan**	**Action Taken**
			EPA will continue to work with OMB to finalize an interim efficiency measure, by March 2009, for the Acid Rain Program based on available data.	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.	Action taken, but not completed
10001132	Brownfields Revitalization	2008 SPR	**Improvement Plan**	**Action Taken**
			Improve grantee use of electronic reporting systems to reduce data lags in performance information.	Action taken, but not completed
			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	2008 SPR	**Improvement Plan**	**Action Taken**
			EPA will focus on improving the quality and breadth of CWSRF performance data. EPA will improve quality of CWSRF environmental/health benefits reporting system from all 51 state programs to improve program performance tracking. In particular, EPA will disseminate error-checking reports to the states to bolster their capability to perform data quality assessment and control.	Action taken, but not completed
10001134	EPA Enforcement of Environmental Laws (Criminal)	2008 FALL	**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.	Completed
			Developing baselines and targets to measure recidivism.	Completed
10001135	EPA Ecological Research	2008 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.	Completed
			Link budget resources to annual and long term performance targets by requesting and reporting Human Health Research and Ecosystem Research funding separately.	Completed
			Develop a program specific customer survey to improve the program's utility to the Agency.	Action taken, but not completed
			Increase the transparency of budget, program, and performance information in budget documents.	Action taken, but not completed
			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
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed

			Identify appropriate targets for bibliometric analysis measures by benchmarking with other agencies.	Action taken, but not completed
10001136	EPA Environmental Education	2008 FALL	**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.	Inactive
			Transition program activities to other program offices that fulfill scientific education initiatives.	No action taken
10001137	National Ambient Air Quality Standards Research	2008 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.	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
			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).	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
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
10001138	Pollution Prevention and New Technologies Research	2008 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 OMB Assessment).	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.	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.	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
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
			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	Action taken, but not completed
10001139	Resource Conservation and Recovery Act Corrective Action	2008 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	2008 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.	Completed
			Finalizing web based project reporting system to include all projects funded by EPA dollars by April 30, 2007.	Completed

			Implement stalled projects review procedures in accordance with the management control policy.	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, 2008, EPA shall provide a draft regulation to OMB for review and comment.	Inactive
			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.	Completed
			Develop an annual programmatic efficiency measure, which managers will find useful for improving operational performance of the program.	Action taken but not completed
			Develop a plan to institutionalize the management framework of the program to ensure continued program effectiveness.	Action taken but not completed
			Investigate a strategy for improving the obligation rate of program funds	No action taken

10002274	EPA Climate Change Programs	2008 FALL	**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.	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
			The Clean Automotive Technology program will annually report progress towards commercialization of its advanced technologies (2008 thru 2011).	Action taken, but not completed
10002276	Public Water System Supervision Grant Program	2008 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
10002278	Underground Injection Control Grant Program	2008 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.	Action taken but not completed

10002280	Endocrine Disruptors	2008 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.	Completed
			By end of CY, collect data for second year of contracts and compare to baseline of the efficiency measure.	Completed
			Develop a new performance measure to evaluate efficiencies associated with reviewing the testing phase of the program in 2009.	No action taken
10002282	U. S.-Mexico Border Water Infrastructure	2008 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	2008 FALL	**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
			By the end of March 2008, brief OMB on progress developing two new efficiency measures -- one long and one short-term -- to enable the program to measure further efficiency improvements.	Completed
10002286	EPA Pesticide Enforcement Grant Program	2008 FALL	**Improvement Plan**	**Action Taken**
			Work to develop appropriate outcome performance measures.	Completed
			Develop targets and baselines.	Completed
			Evaluate why cost effectiveness appears inversely proportional to amount of Federal funding.	Completed
10002288	EPA's Recycling, Waste Minimization, and Waste Management Program	2008 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	2008 FALL	**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
			Continue to monitor progress to ensure that the program is on track to meet goals.	Action taken, but not completed
			By the end of July 2008 brief OMB on progress developing 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.	Completed
			By the end of July 2008 brief OMB on progress developing a long-term performance measure and set ambitious targets for reduced incidence of non-melanoma skin cancers.	Completed
10002292	Superfund Remedial Action	2008 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
			Conduct regional program reviews to share and implement best practices among regional offices that will improve the program's overall performance and efficiency. Specific areas for study will be identified.	No action taken
			Validate the reporting method for performance data and develop a new Superfund cleanup efficiency measure.	Completed

10002426	Pesticide Field Programs	2008 FALL	**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
			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.	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.	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	Completed
			Independent assessment of the performance measures improvement project by the Federal Consulting Group.	Completed
10004301	Drinking Water Protection Program	2008 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
10004302	Chesapeake Bay Program	2008 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.	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
			Improved tracking and explanation of the current efficiency measure	Action taken but not completed
			Improved explanation of current long term and annual outcome and output measures	Action taken but not completed
10004303	Underground Storage Tank Program	2008 SPR	**Improvement Plan**	**Action Taken**
			Underground Storage Tanks Improvement Plan: collaborate with states to meet the 2005 EPAct deadlines and develop performance measures to track progress.	Action taken, but not completed
10004304	Pollution Prevention Program	2008 FALL	**Improvement Plan**	**Action Taken**
			Identifying and reducing barriers associated with core EPA activities that limit implementation of pollution prevention practices by industry.	Completed
			Developing additional P2 Program efficiency measures to expand the portion of the program's resources that are addressed.	Completed
			Fully implement Grant Trak and P2 State Reporting System. Obtain consistent 2007 results from Regions.	Completed

			Evaluate Science Advisory Board Report recommendations for improving performance measures to better demonstrate P2 results.	Action taken, but not completed
			Complete P2 Program Strategic Plan and commence implementation of targeted actions in priority focus areas.	Action taken, but not completed
			Implement recommendations emerging from Pollution Prevention Integration study and report.	No action taken
			Develop and implement new or improved data management/tracking systems in response to completed Grant Track review.	No action taken
10004305	Land Protection and Restoration Research	2008 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.	Completed
			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
			Identify appropriate targets for bibliometric analysis measures by benchmarking with other agencies.	Action taken, but not completed
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement..	Action taken, but not completed

10004306	Water Quality Research	2008 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
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
			Identify appropriate targets for bibliometric analysis measures by benchmarking with other agencies.	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.	Completed
10004307	Global Change Research	2008 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.	Completed
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
			Identify appropriate targets for bibliometric analysis measures by benchmarking with other agencies.	Action taken, but not completed
			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	2008 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.	Completed
			Investigate alternative approaches for measuring progress related to providing timely, high quality scientific assessments.	Action taken, but not completed
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
10004370	Ocean, Coastal, and Estuary Protection	2008 SPR	**Improvement Plan**	**Action Taken**
			Develop an annual performance measure for the Ocean Dumping Program.	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
			Develop treatment and management options for improving environmental management of cruise ship waste streams	Action taken but not completed

10004371	Drinking Water Research	2008 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
			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.	Completed
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
10004372	EPA Support for Cleanup of Federal Facilities	2008 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	2008 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
			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.	Action taken, but not completed
			Identify appropriate targets for bibliometric analysis measures by benchmarking with other agencies.	Action taken, but not completed
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
10004374	EPA Indoor Air Quality	2008 FALL	**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.	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

			The program shall review the existing mechanisms for tracking programmatic performance data. Based upon the findings of the review, the program shall develop and implement a database tool that will efficiently track and consolidate program outputs and outcomes by September 30, 2008.	Completed
10004375	EPA Lead-Based Paint Risk Reduction Program	2008 FALL	**Improvement Plan**	**Action Taken**
			Initiate a campaign to educate the public about a new regulation to address lead-based paint hazards created by renovation, repair and painting activities in pre-1978 housing and child occupied facilities	Completed
			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.	Completed
			Further improve results reporting from program partners.	Completed
			Develop and implement a method of measuring the impacts of the program's outreach and education efforts.	Action taken, but not completed
			Develop and implement a reporting measure to track EPA authorization of State, Tribal and Territorial Renovation, Repair and Painting Programs	Action taken, but not completed
			Initiate, track progress of and complete workgroup process designed to improve and streamline Lead Program measures.	No action taken

10004376	National Ambient Air Quality Standards and Regional Haze Programs	2008 FALL	**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	2008 FALL	**Improvement Plan**	**Action Taken**
			Develop at least one efficiency measure that adequately reflects program efficiency.	Action taken, but not completed
			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	2008 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	2008 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
			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
			Conduct scheduled periodic review of State allocation formula	Action taken but not completed
10004380	Surface Water Protection	2008 SPR	**Improvement Plan**	**Action Taken**
			Conduct permit quality reviews as part of the regional review cycle and incorporate agreed-upon action items into the NPDES program action item tracking list	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	2008 SPR	**Improvement Plan**	**Action Taken**
			Determining options for ensuring Great Lakes water quality program goals are appropriately considered by other remediation programs, such as Superfund.	Action taken but not completed
			Developing a set of recommendations that address ways the program could improve how it targets funds while coordinating more effectively with other Federal programs.	Action taken but not completed
10009011	EPA Radiation Protection Program	2008 FALL	**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.	Completed
			The Radiation Protection Program will continue work to improve the sharing of information and monitoring resources with DHS, DOE, other federal agencies, and the states. By June 30, 2008, the Program will provide a progress report and analysis of options for future efforts in this area that improve EPA's ability to contribute to interagency emergency response and environmental characterization during radiological emergencies.	Completed
10009012	EPA Pesticides and Toxics Research	2008 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.	Action taken, but not completed
			Reassess meaningfulness of current efficiency measure in light of recent National Academy of Sciences (NAS) report on efficiency measurement.	Action taken, but not completed
			Develop a system to utilize quarterly performance measurement reporting to improve program performance rather than solely revising annual and long-term plans.	Action taken, but not completed
10009064	EPA Chemical Risk Review and Reduction	2008 FALL	**Improvement Plan**	**Action Taken**
			Develop long-term and annual performance measures to reflect risk-based recommendations for HPV Chemicals.	Completed
			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.	Action taken, but not completed
			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
			Complete design of ChAMP document management system and successfully track and maintain records through second quarter FY 2009.	Action taken, but not completed

DATA VERIFICATION AND VALIDATION

The data verification and validation has been updated to reflect significant changes for FY 2010. A comprehensive review of the document will take place for FY 2011.

The complete FY 2010 data verification and validation is available at:
http://epa.gov/ocfo/budget/2010/verification-and-validation.pdf

ENVIRONMENTAL PROTECTION AGENCY
2010 Annual Performance Plan and Congressional Justification

Table of Contents - Appendix

Coordination with Other Federal Agencies……814
Environmental Programs……814
Enabling Support Programs……844
Major Management Challenges……...850
EPA User Fee Program……869
Working Capital Fund……..871
Acronyms……872
STAG Categorical Program Grants……877
Statutory Authority and Eligible Uses……877
Program Projects by Appropriation……887
Program Projects by Program Area……902
Discontinued Programs……915
Categorical Grant: Wastewater Operator Training……....916
Categorical Grant: Target Watershed……917
Categorical Grant: Water Quality Cooperative Agreements……918
Regional Geographic Initiatives……919
Expected Benefits of the President's E-Government Initiatives……...920
Bill Language: Administrative Provisions, EPA ……..……...927

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 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 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 also will 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 Department 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 also is working with the National Highway Transportation Administration and the Department of

Agriculture on the greenhouse gas transportation rules. EPA is working with DOE and DOT and other agencies, as needed, on the requirements of the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007.

To develop air pollutant emission factors and emission estimation algorithms for aircraft, ground equipment and military vehicles, EPA has partnered with the DoD. This partnership will provide for the joint undertaking of air-monitoring/emission factor research and the successful regulatory implementation of results nationwide.

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 for both toxic and criteria air pollutants. 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) and National Park Service, and the Department of Agriculture.

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 coordinate 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 including radon;
- 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

EPA leads a task force with the Department of Justice (DOJ), Department of Homeland Security (DHS), Department of Treasury, and other agencies to curb the illegal importation of ozone-depleting substances (ODS). Illegal import of ODS 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 and in developing the implementing regulations. 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, development, and adoption of alternatives to methyl bromide. EPA collaborates with these agencies to prepare U.S. requests for critical use exemptions of methyl bromide. EPA is providing input to USDA on rulemakings for methyl bromide related programs.

EPA consults with the USDA 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 UV Index and the health messages that accompany UV Index reports.

EPA coordinates with NASA and NOAA to monitor the state of the stratospheric ozone layer and to collect and analyze UV data. 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

EPA works primarily with the Nuclear Regulatory Commission (NRC), Department of Energy (DOE), and Department of Homeland Security (DHS) on multiple radiation protection issues, such as the prevention of radioactive contaminated metals and products from entering the U.S. EPA also works with NRC and DOE on the development of state-of-the-art tracking systems for radioactive sources in U.S. commerce. EPA has ongoing planning and guidance discussions with DHS on Protective Action Guidance and general emergency response activities, including exercises responding to nuclear related incidents. As the regulator of DOE's Waste Isolation Pilot Plant (WIPP) facility, EPA has to continually coordinate oversight activities with DOE to keep the facility operating in compliance with our regulations. EPA also works with the Department of Transportation (DOT) on initiatives to promote use of non-nuclear density gauges for highway paving.

For emergency preparedness purposes, EPA coordinates closely with other Federal agencies, through the Federal Radiological Preparedness Coordinating Committee, and other coordinating bodies. EPA participates in planning and implementing table-top and field exercises including radiological anti-terrorism activities, with the NRC, DOE, Department of Defense (DOD), Department of Health and Human Services (DHHS), and DHS.

With regard to international assistance, EPA serves as an expert member of the International Atomic Energy Agency (IAEA) on its Environmental Modeling for Radiation Safety, Naturally Occurring Radioactive Materials Working Group. Additionally, EPA remains an active contributor to the Organization for Economic Cooperation and Development's (OECD) Nuclear Energy Agency (NEA). EPA serves on both the NEA Radioactive Waste Management Committee (RWMC) and the Committee on Radiation Protection and Public Health (CRPPH). Through the RWMC, EPA is able to exchange information with other NEA Member Countries on the management and disposal of high-level and transuranic waste. Through participation on the CRPPH and its working groups, EPA has been successful in bringing a U.S. perspective to international radiation protection policy.

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 Department of Treasury 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 also is a charter member of NARSTO,[3]

[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/>.

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 (one notable example at the present time is the near road air toxics program coordinated with Federal Highways) where appropriate. In addition, the research program supports, in collaboration with other federal agencies such as the National Institutes of Health, air-related research at universities and nonprofit organizations through its Science to Achieve Results (STAR) research grants program.

Goal 2- Clean and Safe Water

The 1996 Safe Drinking Water Act (SDWA) amendments mandate joint EPA/CDC study of waterborne diseases in public water supplies. Through an Interagency Agreement (IA), EPA and CDC have collaborated on the completion of these studies and on improving identification and investigation of waterborne diseases from drinking water. EPA and CDC are building state capacity by directly assisting state health departments develop skills and tools to improve waterborne disease investigation and prevention. The two agencies are also investigating the health risks associated with contaminant problems in the drinking water distribution system. Additionally, EPA and CDC also share expertise and information exchange on drinking water related health effects, risk factors, and research needs on a regular basis.

Source Water Preservation and Protection for Public Water Systems (PWS)

In implementing its source water preservation and protection efforts, the Agency coordinates with other Federal agencies that own or operate public water systems (e.g., USDA, USFS, DOD, DOE, DOI/NPS).. EPA's coordination focuses 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); CDC, 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

In 2003 EPA and its Federal partners in USDA, HUD, HHS, and BOI set a very ambitious goal to reduce the number of homes without access to safe drinking water by 50% by 2015. EPA leads the Tribal Access Subgroup, which developed a strategy document that identified the goal's challenges and recommended approaches to overcome them. This goal remains ambitious due to the logistical challenges and capital and operation and maintenance costs involved in providing access. EPA is working with its Federal partners to coordinate spending and address some of the challenges to access on Tribal lands, and we are hopeful that we can make measureable progress on the access issue. Specific actions currently underway by the Tribal Access Subgroup are developing a map of homes without access to safe drinking water on the Navajo Nation and a strategy to coordinate technical assistance services to tribes.

Collaboration with USGS

EPA and USGS have established an IA to coordinate activities and information exchange in the areas of unregulated contaminants occurrence, the environmental relationships affecting contaminant occurrence, protection area delineation methodology, and analytical methods. 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 of high concern, and how to detect and respond to their presence in drinking water and wastewater systems. A close linkage with the FBI and the Intelligence Analysis Directorate in DHS, particularly with respect to ensuring the timely dissemination of threat information through existing communication networks, will be continued. The Agency is strengthening its working relationships with the Water 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.

Federal Agency Partnerships on Impaired Waters Restoration Planning

The Federal government owns about 671.8 million acres, which is about 29.6% of the 2.27 billion acres of land in the United States. Four agencies administer about 93.5% of these federal lands, including the Forest Service (28.7% of federal total), Fish and Wildlife Service (14.2%), National Park Service (11.8%), and Bureau of Land Management (38.9%). EPA has increased its coordination with these Federal land management agencies at the national level to enhance watershed protection and assess restoration needs on federal lands. Increased collaboration will mutually aid each agency's statutory programs, strategic plans, and shared mission to protect aquatic resources. As part of these coordination efforts, EPA is initially working with Federal land management agencies to determine the extent and type of impaired waters on federal lands.

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 U.S. Coast Guard 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 U.S. Coast Guard, Alaska and other states, and the International Council of Cruise Lines regarding regulatory and non-regulatory approaches to managing wastewater discharges from cruise ships. Also, EPA will continue to work with the U.S. Coast Guard in the development of Best Management Practices and discharge standards under the Clean Boating Act. Additionally, EPA will work with the U.S. Coast Guard on vessel sewage standards. 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.

EPA chairs the intergovernmental Mississippi River/Gulf of Mexico Watershed Nutrient Task Force (Gulf Hypoxia Task Force) and is responsible for overseeing implementation of the 2008 Gulf Hypoxia Hypoxia Action Plan. Also, EPA is a member o the Committee on Environment and Natural Resources (CENR) which coordinates the research activities among Federal agencies to assess the impacts of nutrients and hypoxia in the Gulf of Mexico.

Objective: Enhance Science and Research

EPA's Clean Water Research Programs are in accordance with the Administration's policy of scientific integrity.[4] 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 drinking water research program. For example, the CDC and NIEHS conduct health effects and exposure research, the USGS is actively involved in monitoring sources of drinking water for chemicals and emerging contaminants. FDA also performs research on children's health risks. The DOE and USGS are actively involved in research that relates to underground sources of drinking water, with increasing efforts focused on geologic sequestration of carbon dioxide. The Bureau of Reclamation is also involved in research on water resources and water purification with an emphasis on recovering water from saline or impaired sources.

The private sector, particularly water utilities and industries that develop and support treatment and monitoring technologies, is actively involved in research activities on analytical methods, treatment technologies, water infrastructure rehabilitation, repair, and replacement, and water resources protection. Recently there has been increasing interest in research to support water

[4] http://www.whitehouse.gov/the_press_office/Memorandum-for-the-Heads-of-Executive-Departments-and-Agencies-3-9-09/

efficiency, reduce the energy dependencies of water systems, and implementation of alternative "green" technologies for treatment and distribution of water. There has also been increasing interest in linking the quality of water with its intended use to preserve high quality water for potable purposes and substitute alternative sources for nonpotable applications (e.g. toilet flushing, irrigation, etc.). Cooperative research efforts have been ongoing with the Water Research Foundation and other stakeholders to coordinate drinking water research on emerging contaminants water infrastructure, and other topics. In 2009 EPA and the Water Research Foundation formed the Distribution System Research and Information Collection Partnership (RICP) to coordinate and collaborate on decision-relevant distribution system research.

EPA has active collaborations with several federal agencies through a variety of efforts. EPA actively participates in the interagency Committee on Environment and Natural Resources (CENR) Subcommittee on Water Availability and Quality (SWAQ). The CENR is also coordinating the research efforts among Federal agencies to assess the impacts of nutrients and hypoxia in the Gulf of Mexico. In addition, EPA is working directly with CDC in coordinating research on waterborne disease outbreaks, pathogens, algal toxins, and water distribution systems, EPA is also working with USGS on monitoring pharmaceuticals, personal care products, and other emerging contaminants, evaluating newly developed methods for microbial monitoring, and interpreting water data from the Ambient Water Quality Assessment (NAWQA) program. This effort has helped demonstrate that pesticide levels in urban watersheds can exceed levels in agricultural dominated streams and follow-on collaborations will be integrated into the Geographic Information System (GIS) database system. EPA has also 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.

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 2010, 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 2010, 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[5] 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.

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.

[5] For more information please go to: Interagency Steering Committee on Multimedia Environmental Models MOU, http://www.iscmem.org/Memorandum.htm

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

Several Federal agencies share the goal of increasing wetland acreage in the U.S. as well as better understanding and protecting wetland functions and values. EPA, USFWS, COE, NOAA, USGS, USDA, and FHWA currently coordinate on a range of wetlands activities. These activities include: studying and reporting on wetlands trends in the U.S., diagnosing causes of coastal wetland loss, updating and standardizing the digital map of the nations' wetlands, statistically surveying the condition of the Nation's wetlands, and developing methods for better protecting wetland function. In addition to that, EPA and the ACOE work very closely together in implementing the wetlands regulatory program under Clean Water Act Section 404. Under the regulatory program the agencies coordinate closely on overall implementation of the permitting decisions made annually under Section 404 of the Clean Water Act,.through the headquarters offices as well as the ten EPA Regional Offices and 38 ACOE District Offices. The agencies also coordinate closely on policy development and litigation. EPA and ACOE are committed to achieving the goal of no net loss of wetlands under the Section 404 program.

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

EPA is leading the member Federal agencies of the Interagency Task Force[6] in the development and implementation of a new Great Lakes Restoration Initiative. As the Initiative progresses, EPA will work with its partners to develop the management and coordinative structures required for this effort, including Interagency Agreements with all appropriate Federal agency participants. Participating agencies will focus their activities to support outcome-oriented performance goals and measures to direct their Great Lakes protection and restoration activities. This effort builds upon previous coordination and collaboration by the Great Lakes National Program Office (GLNPO) 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..." pursuant to which GLNPO was already 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). The Federal Interagency Task Force, created by EO 13340, is charged with increasing and improving collaboration and integration among Federal programs involved in Great Lakes environmental activities. The Great Lakes task force brings together eleven 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. The Interagency Task Force has been able to use that work to guide development of the Great Lakes Restoration Initiative. Coordination by GLNPO supports the GLWQA and other efforts to improve the Great Lakes and will now lead to implementation of priority actions for Great Lakes restoration by the Federal agencies and their partners. Coordinative activities that will continue as part of the implementation of the Initiative are expected to include: 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: sediments program work with the states and the Corps regarding dredging issues; implementation of the Binational Toxics Strategy via extensive coordination with Great Lakes States; habitat protection and restoration with states, tribes, FWS, and NRCS; and coordination 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.

[6] The Interagency Task Force includes eleven agency and cabinet organizations: EPA, State, Interior, Agriculture, Commerce, Housing and Urban Development, Transportation, Homeland Security, Army, Council on Environmental Quality, and Health and Human Services.

Chesapeake Bay

The Chesapeake Bay Program's former Federal Agencies Committee has been replaced by a higher level group of the nine principal Federal agencies involved in Chesapeake Bay restoration and protection work. This group of Federal Office Directors (FOD), chaired by EPA, meets monthly, and includes:

- U.S. Environmental Protection Agency
- National Oceanic and Atmospheric Administration
- Natural Resources Conservation Service
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- U.S. Geological Survey
- U.S. Forest Service
- National Park Service
- U.S. Navy (representing Department of Defense)

The new group has been meeting regularly and provides a forum for Federal agencies to coordinate and to devise unified Federal positions on various policy options. EPA is the lead Federal agency which represents the Federal government on the Chesapeake Executive Council, and the FOD provides the opportunity for EPA to coordinate Federal positions. In addition to the Administrator of EPA, the Chesapeake Executive Council consists of the governors of the Bay states, the mayor of the District of Columbia, the chair of the Chesapeake Bay Commission, and for the past few years, the Secretary of Agriculture.

Through the FODs and the Chesapeake Executive Council, several Federal agencies have become "champions" of specific issues:

- EPA – Funding to promote innovation and implementation; No Runoff Challenge; promoting the use of "green infrastructure", such as through the DC stormwater permit
- NRCS – Promoting and encouraging use of best conservation practices on watershed farms
- U.S. Forest Service – Working to ensure that the 2012 forest protection goals are met in the Bay watershed
- U.S. Navy – Promoting and incorporating low impact and no impact development on Navy properties throughout the Chesapeake Bay watershed.

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

Research in human health is coordinated with several Federal agencies that also sponsor research on variability and susceptibility in health risks from exposure to environmental contaminants. EPA collaborates with a number of the Institutes within the NIH and CDC. For example, the National Institute of Environmental Health Sciences (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's health. 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.[7] EPA coordinates research on identification and management of health risks of mold with the Federal Interagency Committee on Indoor Air Quality. EPA coordinates with ATSDR through a memo of understanding on the development of toxicological reviews and toxicology profiles, respectively. EPA also has strong working collaborations with CDC including 1) an MOU and projects directed at linking the CDC Public Health Tracking Network Program with EPA's environmental monitoring data and the indicators efforts tied to EPA's Report on the Environment; 2) an MOU and projects linking EPA's Community Action for Renewed Environments with CDC's community-based environmental health programs, a collaboration that already has addressed environmental public health issues along the U.S.-Mexico border under the Binational Border 2012 Program.. EPA and CDC are also collaborating in the areas of asthma, biomonitoring, and global health. EPA also works collaboratively with CDC on the development of indicators of exposure and health effects generating data included in EPA's Report on the Environment and assisting CDC in its Public health Surveillance efforts.

<u>Goal 5-Compliance and Environmental Stewardship</u>

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

[7] For more information, see <http://es.epa.gov/ncer/childrenscenters/>

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.

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 the public and private sectors. For example, the Environmental Performance through Pollution Prevention and Innovation (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 National Park Service (NPS) (to use Green Purchasing as a tool to achieve the sustainability goals of the parks), the Department of Defense (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 the Department of Commerce's National Institute of Science and Technology (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 Green Suppliers' Network (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 Department of Energy's (DOE) Industrial Technologies Program to provide energy audits and technical assistance to these supply chains.

EPA is working with DOE and the U.S. Department of Agriculture (USDA) to develop a "Biofuels Posture Plan," the first step in implementing a Biofuels Initiative to support the goals of the 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.

EPA and DOI are coordinating an Interagency Tribal Information Steering Committee that includes the Bureau of Reclamation, DOE, Housing and Urban Department, U.S. Geological Service, Federal Geographic Data Committee, Bureau of Indian Affairs, the Indian Health Service, Department of the Treasury, and the Department of Justice. This Interagency effort is aimed to coordinate the exchange of selected sets of environmental, resource, and programmatic information pertaining to Indian Country, among federal agencies in a "dynamic" information

management system that is continuously and automatically updated and refreshed, and 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 of the COE.

The Sector Strategies Program promotes optimal environmental protection, energy efficiency, and resource management in high-impact industries and fuel production sectors. The program engages with many diverse stakeholder groups, including other Federal programs, for policy dialogue and strategic planning. Engagement tends to be informal and issue-specific, as opposed to formal inter-agency partnerships. At the program-wide level, Sector Strategies works on various issues with the Council on Environmental Quality; with industry-oriented programs in the Department of Energy's Office of Energy Efficiency and Renewable Energy; with manufacturing programs at the Department of Commerce; and with the North American Commission on Environmental Cooperation on trade issues related to climate policy. Examples of sector-specific interactions include Agribusiness Sector work with USDA programs; Oil & Gas Sector work with the Bureau of Land Management at the Department of the Interior; work on Port Sector issues with the Coast Guard and the Committee on the Marine Transportation System at the Department of Transportation; work on industrial material recycling issues with the DOT's Federal Highway Administration; and work with the Department of the Navy on Shipbuilding Sector initiatives.

The Smart Growth program has a number of key Federal partnerships. Under an MOU with NOAA the program is - developing a joint publication on smart growth guidelines for coastal communities, offering introductory smart growth training through NOAA's Coastal Services Center, and providing technical support to state Sea Grant programs. Along with the Federal Highway Administration, the program is co-sponsoring a publication on Designing Walkable Urban Streets and participating in an Interagency Working Group on Land Use, Vehicle Travel and Greenhouse Gas Emissions. Through an interagency agreement with FEMA, EPA is providing recovery and redevelopment assistance to five Iowa communities impacted by recent flooding. Also through an interagency agreement, the program is working with the Centers for Disease Control to develop Active Community Design indicators for regional Metropolitan Listing Services (MLS) that will provide home buyers with information on neighborhood

walkability. Finally, the program has continued to work with the Forest Service's Urban and Community Forestry and Cooperative Forestry program to promote smart growth in both urban and rural areas.

EPA is a member of the Interagency Network of Enterprise Assistance Providers (INEAP), an interagency collaboration that also includes the departments of Commerce, Transportation working to leverage program effectiveness through partnership. The collaboration is focusing specifically on ways to promote competitiveness and work toward sustainability.

EPA is also a member and plays a leadership role in the federal Program Evaluators Network which is a cross-agency collaboration working on improving program evaluation tools and improving capacity for more effective performance management.

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.

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

EPA completed two important Tribal infrastructure Memoranda of Understanding (MOU) amongst 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 will 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, or umbrella MOU, promotes coordination between federal Tribal infrastructure programs, including financial services, while allowing federal 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. Under the umbrella MOU, for the first time, five Federal departments joined together and agreed to work across traditional program boundaries on Tribal infrastructure issues. The second MOU, addressing a specific infrastructure issue was created under the umbrella authority and addresses the issue of access to safe drinking water and wastewater facilities on Tribal lands. Currently, the five Federal agencies are working together to develop solutions for specific geographic areas of concern (Alaska, Southwest), engaging in coordination of ARAR funding, and promoting cross-agency efficiency. These activities are completed in coordination with federally recognized tribes.

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 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. In addition, in response to a Congressional request to collaborate internationally, EPA is partnering with sister agencies in the United Kingdom and will jointly fund consortia between U.S. and United Kingdom research institutions.

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).

The statutorily mandated Biomass Research and Development Board (chaired by DOE and USDA) provides overall federal coordination of biofuel research activities. EPA's Office of Research and Development (ORD) represents the Agency on this Board and co-chairs two of its seven working groups. The two working groups chaired by EPA's ORD are the Sustainability and Environment, Health and Safety workgroups. ORD works to ensure that all relevant EPA offices are aware of and involved in EPA-related Board activities.

COORDINATION WITH OTHER FEDERAL AGENCIES

Enabling Support Programs

Office of the Administrator (OA)

The Office of the Administrator (OA) supports the leadership of the Environmental Protection Agency's (EPA) programs and activities to protect human health and safeguard the air, water, and land upon which life depends. Several program responsibilities include policy, economics, and innovation; children's health protection and environmental education; homeland security; Congressional and intergovernmental relations, the Science Advisory Board, and the small business program.

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, EPA co-sponsors 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, and 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 (e.g., economic valuation of ecosystem services, adoption of market mechanisms to achieve environmental goals); and measuring health and welfare benefits (e.g., represent EPA issues in cross-agency group charged with informing USDA efforts to establish markets for ecosystem services). EPA also collaborates with the State Department and Treasury on the Strategic Economic Dialogue (SED) Joint Economic Study (JES), which includes examining the environmental, economic, and human health costs of pollution and enhancing further cooperation between the U.S. and China to analyze and address these issues.

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 Interagency Planning Committees (IPCs), briefings, and discussions with individual senior Federal officials. The Associate Administrator for Homeland Security (OHS) and staff 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 through 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 Business Programs (OSBP) works with the Small Business Administration (SBA) and other Federal agencies to increase the participation of small and disadvantaged businesses in EPA's procurements. OSBP 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 Offices of Small and Disadvantaged Business Utilization (OSDBU) throughout the Federal government. EPA's OSBP 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). OSBP, through its Minority Academic Institutions (MAI) Program, also works with the Department of Education and the White House Initiative on Historically Black Colleges and Universities to increase the institutional capacity of HBCUs, and to create opportunities for them to work with Federal agencies, especially in the area of scientific research and development. Also, through its MAI Program, OSBP works collaboratively with the Department of Energy to provide summer internship opportunities for students attending MAIs. OSBP coordinates with the Minority Business Development Agency, the Department of Veteran's Affairs, the Department of Defense, and many other federal agencies to provide outreach to small disadvantaged businesses and Minority-Serving Institutions throughout the United States and the trust territories. OSBP's Director is an active participant in the Federal OSDBU Directors' Council (www.osdbu.gov). The OSDBU Directors' Council collaborates to support major outreach efforts to small and disadvantaged businesses, SDVOSB, and minority academic institutions via conferences, business fairs, and speaking engagements. The OSBP's

Asbestos and Small Business Ombudsman partners with SBA and other federal agencies to ensure small business concerns are considered in regulatory development and compliance efforts, and to provide networks, resources, tools, and forums for education and advocacy on behalf of small businesses across the country.

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 actively participates on the Performance Improvement Council which coordinates and develops strategic plans, performance plans, and performance reports as required by law for the Agency. 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 specific initiatives and policies in all aspects of the acquisition system.

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 Administration (GSA), and Department of Commerce's National Institute of Standards and Technology to implement the 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, states, and Tribal governments on a variety of initiatives, including making government more efficient and transparent, protecting human health and the environment, and assisting in homeland security. OEI is primarily involved in the information technology (IT), information management (IM), and information security aspects of the projects it collaborates on.

The Chief Information Officer's (CIO) Council: The CIO Council is the principal interagency forum for improving practices in the design, modernization, use, sharing, and performance of Federal information resources. The Council develops recommendations for IT management policies, procedures, and standards; identifies opportunities to share information resources; and assesses and addresses the needs of the Federal IT workforce.

E-Rulemaking: EPA is the managing partner agency of the e-Rulemaking Program. E-Rulemaking's mission addresses two areas: 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, e-Rulemaking Program launched the award-winning *Regulations.gov* web site – a single web site where citizens can access and comment on all proposed Federal regulations. Since its launch, tens of millions of individuals have used the site to find, view, and comment on proposed regulations. In September 2005, the e-Rulemaking Program launched the award-winning Federal Docket Management System (FDMS - publicly accessible at www.regulations.gov). FDMS is an electronic document repository where agencies post rulemaking and non-rulemaking documents for public access and comment. As a result, the public can now access Federal Register documents, supporting technical/legal/economic analyses, and public comments, most of which were previously available only by physically visiting a Federal docket center. The e-Rulemaking Program is partnering with more than 29 Departments and Independent Agencies, comprised of 161 bureaus, boards, agencies and administrations, representing more than 90 percent of the Federal rules promulgated annually.

The National Environmental Exchange Network (EN): The EN is a partnership among states, tribes, and the U.S. Environmental Protection Agency. It is revolutionizing the exchange of environmental information by allowing these Partners to share data efficiently and securely over the Internet. This approach is providing real-time access to higher quality data while saving time, resources, and money for all of the Partners. Leadership for the EN is provided by the Exchange Network Leadership Council (ENLC), which is co-chaired by OEI and a State partner. The ENLC works with representatives from the EPA, state environmental agencies, and tribal organizations to manage the Exchange Network..

Automated Commercial Environment/International Trade Data System (ACE/ITDS): ACE is the system being built by Customs and Border Protection (CBP) to ensure that its customs agents have the information they need to decide how to handle goods and merchandise being shipped into, or out of, the US. ITDS is the organizational framework by which all government agencies with import/export responsibilities participate in the development of the ACE system. ACE will be a single, electronic point of entry for importers and exporters to

report required information to the appropriate agencies. It will also be the way those Agencies provide CBP with information about potential imports/exports. ACE eliminates the need, burden, and cost of paper reporting. It also allows importers and exporters to report the same information to multiple federal agencies with a single submission.

EPA has the responsibility and legal authority to make sure pesticides, toxic chemicals, vehicles and engines, ozone-depleting substances, and other commodities entering the country meet our environmental, human health, and safety standards. EPA's ongoing collaboration with CBP on the ACE/ITDS project will greatly improve information exchange between EPA and CBP. As a result, Customs officers at our nation's borders will have the information they need to admit products that meet our environmental regulations, and to interdict goods or products that are hazardous or illegal. EPA's work on ACE/ITDS builds on the technical leadership developed by the Central Data Exchange and Exchange Network (CDX/EN). Applying the CDX/EN technology offers all Agencies participating in ACE the opportunity to improve the quality, timeliness and accessibility of their data at lower cost. Five Agencies have expressed interest in the CDX/EN technology as a way to exchange data.

Federal Information Security Management Act (FISMA) Support: EPA's Automated Security Self-Evaluation and Reporting Tool (ASSERT) provides Federal managers with the information they need, from an enterprise perspective, to make timely and informed decisions regarding the level of security implemented on their information resources. It provides the reports and information those managers need to protect their critical cyber infrastructure and their privacy information. It helps agencies understand and assess their security risks, monitor corrective actions and provide standardized and automated FISMA reports. Federal agencies using EPA's FISMA Reporting Solution, and ASSERT, include: Environmental Protection Agency (EPA), Export-Import Bank (EXIM), General Services Administration (GSA), Housing and Urban Development (HUD), National Aeronautics and Space Administration (NASA), Nuclear Regulatory Commission (NRC), Pension Benefit Guaranty Corporation (PBGC), and the Social Security Administration (SSA)

Geospatial Information: OEI works extensively with the Department of Interior, NOAA, USGS, NASA, the Department of Agriculture, the Department of Homeland Security and many other Federal agencies through the activities of the Federal Geographic Data Committee (FGDC) and the OMB Geospatial Line of Business (GeoLoB). OEI leads several key initiatives within the FGDC and GeoLoB, and is one of only two agencies (the other being the National Geospatial Intelligence Agency) that participate in the Coordinating Committee, Steering Committee, and Executive Steering Committee of the FGDC, and the Federal Geospatial Advisory Committee. A key component of this work is developing and implementing the infrastructure to support a comprehensive array 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 supporting first responders and other homeland security situations. Through programs like the EPA National Information Exchange Network, EPA also works closely with its State and Tribal partners to ensure consistent implementation of standards and technologies supporting the efficient and cost effective sharing of geographically based data and services.

Global Earth Observation System of Systems (GEOSS): OEI works with the Office of Research and Development (ORD) to lead EPA's involvement in the GEOSS initiative. Other partners in this initiative are: The U.S. Group on Earth Observations (USGEO), and a significant number of other Federal agencies, including NASA, NOAA, USGS, HHS/CDC, DoE, DoD, USDA, Smithsonian, NSF, State, and DOT. Under a ten-year strategic plan published by the Office of Science and Technology Policy (OSTP) in 2005, OEI and ORD are leading EPA's development of the environmental component of the Integrated Earth Observation System (IEOS), which will be the U.S. Federal contribution to the international GEOSS effort. Earth observation data, models, and decision-support systems will play an increasingly important role in finding solutions for complex problems, including adaptation to climate change.

Office of the Inspector General (OIG)

The EPA Inspector General is a member of the Council of the Inspectors General on Integrity and Efficiency (CIGIE), an organization comprised of Federal Inspectors General (IG), GAO, and the Federal Bureau of Investigation (FBI). The CIGIE coordinates and improves the way IGs conduct audits, investigations and internal operations. The CIGIE 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

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. In FY 2008, EPA's Office of Inspector General revised its definition of a management challenge to distinguish it from an internal control weakness. A weakness is a deficiency in the design or operation of a program, function, or activity, which the Agency can correct. In contrast, a management challenge is a lack of capability derived from internal self-imposed or externally imposed constraints that prevent an organization from reacting effectively to a changing environment. Addressing a management challenge may require assistance from outside of EPA and take years to fully resolve. The discussion that follows summarizes each of the management challenges that EPA's Office of Inspector General (OIG) and the Government Accountability Office (GAO) have identified and presents the Agency's response.

EPA has established a mechanism for identifying and addressing its key management challenges. As part of its Federal Management Financial Integrity Act (FMFIA) process, EPA senior managers meet with representatives from EPA's OIG, 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 recognizes that management challenges, if not addressed adequately, may prevent the Agency from effectively meeting its mission. EPA remains committed to addressing all management issues in a timely manner and will address them to the fullest extent of our authority.

1. Performance Measurement*

Summary of Challenge: *EPA must focus on the logic and design of its measures for success and efficiency, along with data standards and consistent definitions, to ensure that usable, accurate, timely, and meaningful information is used to evaluate and manage EPA programs, operations, processes, and results.*

Agency Response: While measuring environmental performance is inherently challenging, EPA has made performance measurement improvement and performance management a priority and is pursuing many actions to meet this challenge. The Agency has undertaken significant work to strengthen its performance management framework and has made significant progress. EPA's on-going work to strengthen performance management contributed to the Agency's winning the President's Quality Award for Management Excellence for the second consecutive year.

EPA's Office of the Chief Financial Officer (OCFO) completed an annual performance measures review for each of the last two years and is currently conducting a third annual review. This effort has included better aligning EPA's operational measures with its annual budget measures and strategic plan measures. EPA established an Agency-wide Deputy Regional Administrator and Deputy Assistant Administrator Performance Management Council to discuss and improve EPA's performance management practices. Additionally, EPA has begun to execute the

Agency's Implementation Plan for Executive Order 13450 on Improving Government Program Performance. OMB lauded EPA's plan as a model for other agencies. The Agency's Performance Management Workgroup, comprising EPA senior staff, continues to improve performance measures and address key issues at the staff level on an ongoing basis. EPA continued implementing and improving its quarterly management report and "measures central"—a centralized database of the Agency's key performance measures. Regional priorities are included in the system; the Agency has characterized the relationships among key sets of measures; and staff have further streamlined and aligned measures.

Other EPA offices have also led significant efforts to improve performance management practices. The Office of Policy, Economics, and Innovation (OPEI) leads regular progress meetings between regional offices, Headquarters offices, and the Deputy Administrator on key measures. OPEI's National Center for Environmental Innovation (NCEI) runs regular trainings for EPA staff and managers on the logic of program design, including specific training in logic modeling and program evaluation. NCEI offers detailed courses for staff and a primer for managers.

In 2007, the Office of Research and Development initiated a study with the National Academy of Sciences (NAS) to assist EPA and other agencies in addressing the common challenge of evaluating efficiency in research. The NAS study provided precedent-setting information that will allow research programs throughout the government to reassess how they measure efficiency.

EPA's plans to continue addressing the performance measurement challenge include:

- Finalizing the annual review of FY 2010 measures, focused on further improving the links between EPA's operational measures, senior management priorities, and long-term environmental and health goals.

- Strengthening efforts to govern/oversee the overall quality of the measures and data in the measures central system.

- Implementing systems improvements to measures central to improve data quality and consistency.

- Developing an Agency-wide "Quality Standard" for performance information

- Implementing a comprehensive strategy to address barriers to program evaluation (National Center for Environmental Innovation).

- Continuing to improve the performance measures used for state grants to increase transparency and accountability of state contributions to achieving EPA's mission.

2. Meeting Homeland Security Requirements**

Summary of Challenge: *EPA needs to implement a strategy to effectively coordinate and address threats, including developing a scenario to identify resource needs, internal and external coordination points, and responsible and accountable entities.*

Agency Response: In FY 2006, EPA acknowledged homeland security as an Agency weakness in response to concerns raised by the OIG. Over the years, EPA has taken action to strengthen its responsibility for homeland security by expanding its homeland security planning and coordination efforts with other federal, state, and local agencies; recognizing a more complete range of issues and information that must be considered in the development of response plans for large-scale catastrophic incidents; developing a crisis communication plan and identifying responsible parties and roles for crisis communications; and fulfilling basic homeland security requirements.

EPA established the Homeland Security Collaborative Network to coordinate and directly address high-priority, cross-Agency technical and policy issues related to day-to-day homeland security policies and activities.

To improve its processes for identifying, obtaining, maintaining, and tracking response equipment necessary for large-scale catastrophic incidents, EPA created and convened the Homeland Security Interagency Planning Committee (IPC). This executive committee, activated after a homeland-security-related attack, brings together the Agency's senior political leadership to provide policy direction to responders.

In FY 2008, EPA revised the Homeland Security Priority Work Plan (FYs 2008–2010), the Agency's overarching planning framework for identifying and aligning cross-Agency homeland security programs with EPA's highest homeland security priorities. The Plan identifies EPA's continuing efforts to advance the Agency to the next level of preparedness.

EPA has been called on to respond to five major disasters and nationally significant incidents in the past seven years: the 9/11 terrorist attacks, the anthrax terrorist incidents, the Columbia Shuttle disaster and recovery efforts, the ricin incident on Capitol Hill, and the Gulf Coast hurricanes. These responses have reinforced the importance of a continued focus on improving the Agency's environmental homeland security focal areas: detection, prevention, and mitigation and field preparedness and response. Within these areas, EPA identified and continues to focus on four homeland security priorities: water security, decontamination, emergency response, and internal preparedness. These priority areas have been identified as the result of external entities assigning EPA specific responsibilities or through homeland security requirements and assignments.

Additionally, EPA developed three tiers of information to be responsive to its homeland security mandates. This information forms the basis for understanding EPA's highest homeland security priorities and serves as a way to assess short-, medium-, and long-term goals and results. The three tiers are:

- **Desired end states.** These describe the final outcomes of homeland security projects or efforts once EPA believes it has met its various homeland security responsibilities.

- **Desired results.** These reflect specific programmatic areas through which EPA seeks to make progress toward the desired end state.

- **Action items.** EPA's FY 2008–2010 action items reflect specific program and regional office plans (e.g., projects or efforts) to progress toward desired results and ultimately reach EPA's desired end state.

EPA will continue to use its Homeland Security Priority Work Plan as a systematic method to assess homeland security priorities and projects annually. Additionally, the Agency will rely on audits and evaluations conducted by the OIG to help ensure that it achieves its homeland security objectives and that its appropriations supporting homeland security are spent efficiently and effectively. EPA has completed all corrective actions associated with this Agency weakness.

3. Threat and Risk Assessment

Summary of Challenge: *The Agency does not comprehensively assess threats to human health and the environment across media to ensure EPA's actions are planned, coordinated, designed and budgeted to most efficiently and effectively address environment risks. The fragmentary nature of EPA's approach continues as environmental laws often focus on single media or threats.*

Agency Response: EPA appreciates the OIG's concerns and recommendation that the Agency enhance its efforts to periodically assess and prioritize threats to human health and the environment across media and use this information to inform its strategic planning and budgeting processes. As the OIG points out, nearly 20 years ago EPA's Science Advisory Board (SAB) recommended that EPA target its efforts based on opportunities for the greatest risk reduction. The Board's 1990 report, *Reducing Risk: Setting Priorities and Strategies for Environmental Protection*, described the "fragmentary nature of EPA's approach" to addressing environmental problems due to a number of underlying conditions, including environmental laws that are focused on a single medium or threat, the Agency's responsibilities for addressing separate legislative mandates, and technologies that are targeted to address specific pollutant sources.

Given these conditions and EPA programs' disparate and individual interests and responsibilities, forging a cross-media, cross-Agency approach to assessing risk and using the information to establish risk-based priorities for planning and resource allocation represents a significant challenge. In principle, however, EPA concurs with the OIG's view that, given the diminishing resources available for environmental protection, there is a critical need for EPA to focus on high-priority environmental threats to human health and the environment across media to ensure that the Agency's actions are designed to reduce total risk in the most efficient manner. Over the coming months, EPA will conduct further discussions with senior leadership and policy-makers from across the Agency to initiate the development of an integrated risk-based strategy and appropriate metrics to measure the aggregate impacts of risk reduction to human health and ecosystems. EPA will consult with the SAB as necessary in developing this integrated

risk-based approach. The Agency also will continue to consult with the OIG and to provide information on its progress.

4. EPA's Organization and Infrastructure***

***Summary of Challenge**: EPA maintains 204 offices and laboratories in 144 locations with over 18,000 staff members. With diminishing resources, the autonomous nature of regional and local offices, and the growing pressure to expand its role globally, EPA will be challenged to assess the efficiency and effectiveness of its current structure to identify opportunities for consolidating and reducing costs.*

Agency Response: EPA acknowledges the OIG's concerns and agrees that the Agency could benefit from a comprehensive review of its organizational structure as it relates to the number and location of employees needed to effectively accomplish its mission. While EPA does not have the resources or the authority to conduct such a broad review, it has conducted periodic nationwide assessments to identify cost-saving opportunities as a result of mission and personnel changes.

EPA maintains an inventory of buildings—owned and leased—that support its current mission. While some employees are located in "special use spaces," the vast majority of employees are located in Headquarters buildings, regional offices, and laboratories. The "special use spaces" are rent-free in many instances and generally used by enforcement personnel who must work in concert with and proximate to state and local enforcement offices. The Agency requires all program and regional senior management officials to provide, in writing, space requirements and any requests for additional space, facility construction, repair, and alterations.

Under the Space Consolidation and Rent Avoidance Project, the Agency has released approximately 195,000 square feet of space, resulting in an annual rent avoidance of more than $6.5 million. The Agency plans to release approximately 86,000 square feet of additional space in regional facilities for an estimated annual rent avoidance of nearly $2 million. Through its master space planning process, the Agency will continue to identify and fulfill its long-term facility requirements.

5. Water and Wastewater Infrastructure

***Summary of Challenge:** Drinking water and wastewater treatment systems are wearing out and it will take huge investments to replace, repair, and construct facilities.*

Agency Response: EPA is working to change the way the country views, values, manages, and uses its drinking water and wastewater infrastructure. The Sustainable Infrastructure initiative continues to be a top priority and has been extremely active in the past year. While ultimately long-term sustainability will occur at the local level, EPA has provided and continues to provide national leadership. For example, the Agency has partnered with six of the major water and wastewater professional associations to reach national consensus on the 10 "Attributes of an Effectively Managed Utility." This first-of-a-kind national collaboration will enable utilities to operate under a common management framework that will help the sector move toward

sustainability in a unified manner. Recently, this collaboration has resulted in a primer to help utilities assess their operations based on the "Attributes," focus on their most critical challenges, and set measurable performance goals. The primer is accompanied by an online tool kit that identifies other sources that can help utilities manage in a sustainable manner.

Recognizing that water efficiency has significant implications for infrastructure and how the Agency values water, EPA has been actively expanding the WaterSense Program, launched in 2006. The WaterSense label will help consumers find products and services that save water while ensuring performance, thereby reducing the burden on infrastructure and mitigating water availability challenges. It also helps to build a national consciousness of the value of water and water services, which will be essential to the national awareness and commitment that will be required to pay for infrastructure needs.

Additionally, EPA has reached out to other federal agencies and departments to work together on infrastructure sustainability. EPA is working with the Department of Transportation (DOT) on a set of case studies on asset management, an area of common interest for water and highway infrastructure. DOT and EPA have agreed to establish a full-time liaison position to facilitate further collaboration. Last year, EPA partnered with the Department of Agriculture on the National Paying for Sustainable Water Infrastructure conference and continues to collaborate with the Department and its funding programs. EPA has discussed water infrastructure with the Army Corps of Engineers and recently shared with them its Special Appropriations Act Project guidance, which includes a section on how to incorporate sustainable practices in earmark projects.

EPA believes it has taken and will continue to take effective steps to define and pursue its role in ensuring that the nation's drinking water and wastewater infrastructure is sustainable in the future and in increasing public awareness and appreciation of the need for sustainable water infrastructure. Expanding EPA's role will require increased authority and resources.

6. Oversight of Delegations to States*

Summary of Challenge: *Implementing EPA's programs, enforcement of laws and regulations, and reporting on program performance has to a large extent been delegated to States and tribes, with EPA retaining oversight responsibility. However, inconsistent capacity and interpretation of responsibility among State, local, and tribal entities limits accountability for and compliance with environmental programs and laws.*

Agency Response: EPA agrees with the OIG that the Agency has made progress in its oversight of delegated programs, and it intends to continue this progress through a variety of ongoing initiatives. As the OIG notes, state oversight is a very complex and changeable arena. Through federal statute, implementing regulations, and program design, states are allowed flexibility in how they manage and implement environmental programs. This flexibility is critical for individual states to meet the broad range of environmental challenges and set priorities to deal with them.

EPA is devoting significant attention to improving its performance management and accountability systems for Agency programs, including those delegated to the states. Several of these efforts are aimed at improving data and performance measures to better assess program progress nationally. Through the Environmental Council of the States (ECOS), state environmental commissioners, who are responsible for implementing delegated programs, annually participate in developing EPA's strategic plan and national program guidance. For the last three budget cycles, council officers have participated in the Agency's budget hearings with the Deputy Administrator and Chief Financial Officer. For the budget hearings, states provide information about state priorities, respond to Agency questions about program priorities and funding needs, and submit state budget proposals for the state and tribal categorical grant programs.

National program consistency and accountability depend on the work that EPA regions do with states to ensure that national program goals are met through negotiated EPA/state agreements and grants. National program managers and EPA's OCFO work closely with the states in planning, budgeting, and accountability processes to ensure better alignment of program goals, objectives, and measures of effectiveness at the state level. Each year, states, regions, and national program managers review existing program progress measures and make recommendations for improving individual measures, aligning their measures, and where appropriate, reducing/eliminating unnecessary measures. The focus is on ensuring that the measures are meaningful ways to measure program progress.

EPA program offices are responsible for state oversight of individual programs; however, the Office of Congressional and Intergovernmental Relations participates in joint workgroups, such as the State Review Framework Workgroup, to remove barriers to collaborative problem solving. The Office supports outreach and consultation with the states through national associations, particularly the Environmental Council of the States. EPA works with the Council to ensure that consultation with the states occurs early in the development of regulations, policy, and guidance, and that the consultation that takes place is timely, meaningful, appropriate, and facilitates the goal of protection of human health and the environment.

Currently, the Office of Congressional and Intergovernmental Relations (OCIR) is participating in a number of areas to improve the EPA-state relationships. Many of these areas involve improving data, performance measurement, and accountability.

- EPA is working on a uniform state grant workplan in response to OMB concerns and has developed a common set of environmental measures that it requires be included in all state grant workplans.

- EPA will continue to utilize performance measurement and accountability analyses, using information from completed Agency Government Performance and Results Act (GPRA) reviews and OMB program assessments.

- The Office of Environmental Information is working with states to have them adopt data standards for national program databases and to develop new applications for the National Environmental Information Exchange Network.

- EPA is making expanded use of business process improvement techniques and burden reduction projects to eliminate waste and duplication in EPA and state work to enable "doing the right things, the right way," reducing reporting burden for state programs, and allowing the redirection and redeployment of scarce resources to maximize program accountability.

- The Agency is enhancing its consultation with the states in developing regulations to ensure that final rules can be implemented effectively. OCIR is also participating in a special project to revise EPA's guidance governing economic analyses for the cost of rules to include better estimates of the costs to the states for implementation.

The Agency is committed to pursuing these improvements.

7. Chesapeake Bay Program

***Summary of Challenge**: EPA's Chesapeake Bay Program Office is responsible for overseeing the cleanup of the Chesapeake Bay, North America's largest and most biologically diverse estuary. Despite EPA's efforts, which include providing scientific information to its federal, state, and local partners for setting resource allocations, revising water quality standards, and establishing stricter wastewater treatment discharge limits, the Agency continues to face significant challenges in meeting water quality goals. OIG notes that the remaining challenges include: (1) managing land development, (2) increasing implementation of agricultural conservation practices, (3) monitoring and expediting the installation of nutrient removal technology at wastewater treatment plants, (4) seeking greater reduction in air emissions, and (5) identifying consistent and sustained funding sources to support tributary strategy implementation. While EPA is responsible for monitoring and assessing progress, its partners will need to implement practices to reduce loads. OIG believes EPA will need to institute management controls to ensure that the promised reductions are realistic and achievable. EPA should then use its reporting responsibilities to advise Congress and the Chesapeake Bay community on the partners' progress in meeting these commitments and identify funding shortfalls and other impediments that will affect progress for restoring the Chesapeake Bay. GAO notes that despite the hundreds of measures to assess progress of its Chesapeake Bay Program, 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 has developed 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.*

Agency Response: GAO and OIG continue to raise concerns about EPA's Chesapeake Bay and Great Lakes programs. In October 2005, GAO issued *Chesapeake Bay Program: Improved Strategies are Needed to Better Assess, Report and Manage Restoration Progress*. Between 2005 and 2008, OIG issued several evaluation reports on the Chesapeake Bay Program (CBP), the majority focusing on EPA's efforts to reduce nutrients and sediment loads from the principal

source sectors in the Chesapeake Bay. EPA believes that actions taken to date and those planned in the future adequately address the concerns GAO and OIG expressed in these reports.

In a May 2008 report to Congress, *Strengthening the Management, Coordination and Accountability of the Chesapeake Bay Program*, EPA described CBP partners' collective efforts to implement GAO recommendations. This report provides documentation and evidence demonstrating how these recommendations have been implemented and will support enhanced coordination, collaboration, and accountability among the CBP partners. In addition, it describes CBP partners' progress in developing and implementing the Chesapeake Action Plan (CAP), a critical enhancement of the CBP's management system that supports implementation of the GAO recommendations.

The CAP includes four primary components:

- A strategic framework that unifies CBP's existing planning documents and clarifies how CBP partners will pursue the restoration and protection goals for the Bay and its watershed;
- An operating plan that identifies and catalogues CBP partners' resources and actions being undertaken and planned;
- Dashboards, which are high-level summaries of key information, including clear status of progress, realistic annual targets toward certain Chesapeake 2000 goals, summaries of actions and funding, and critical analyses of the current strategy, challenges, and future emphasis; and
- An adaptive management process that begins to identify how this information and analysis will provide critical input to determine CBP partners' actions, assign emphasis, and establish future priorities.

These components enhance coordination among CBP partners; encourage them to continually review and improve their progress in protecting and restoring the Bay; increase the transparency of CBP's operations for partners and the public; and heighten the level of CBP's accountability as a whole and as individual partners for meeting their Bay health and restoration goals.

The CAP supports a management system that more closely aligns implementation responsibilities with the unique capabilities and missions of the CBP partners, thereby using the limited resources available to the CBP partners more efficiently. The CAP will significantly transform the way CBP will operate.

It is important to note that CBP partners have long been engaged in significant actions to advance the protection and restoration of the Chesapeake Bay. CBP partners are strongly committed to achieving program goals for the Bay. The CAP has placed CBP on a course to accelerate the pace at which the partners implement actions to improve the Bay.

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 responsibility for providing assistance to carry 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 (GLRC) 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. EPA's GLNPO is tracking performance in improving the Great Lakes and progress toward commitments in the Federal Near-Term Action Plan.

During FY 2008, EPA continued to support the Great Lakes Interagency Task Force. As of August 2008, 37 of 48 near-term actions had been completed, with most of the remaining on track toward completion. The completed projects include a standardized sanitary survey tool for beach managers to identify pollution sources at beaches and $525,000 in grants to state and local governments to pilot the use of 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 operation of the electric carp barrier in Illinois continued preventing the spread of these species into the Great Lakes.

EPA has been working with other federal agencies to strengthen interagency coordination and resolve a variety of problems. The National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, Forest Service, Natural Resources Conservation Service, and EPA collectively provided nearly $2 million in federal funding, and 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. Pursuant to the Great Lakes Habitat/Wetlands Initiative, EPA coordinated and leveraged resources with appropriate agencies, including the Corps of Engineers, to restore, protect, or improve approximately 65,000 acres of wetlands toward a near-term goal of 100,000 acres. Great Lakes states have committed to meet a similar 100,000 acre wetlands goal.

Since receiving its first appropriation under the Great Lakes Legacy Act in 2004, EPA has seen noteworthy success in the timely removal of contaminants from Great Lakes' Areas of Concern. For instance, EPA and its partners have remediated more than 800,000 cubic yards of contaminated sediment at five sites, and leveraged funds under the Act (utilizing federal, state, and private dollars) to remove more than 1.5 million pounds of contaminated sediments from the environment. These efforts have reduced risk to aquatic life and human health, removing more than 25,000 pounds of PCBs, more than 1 million pounds of chromium, about 400 pounds of mercury, and 171 pounds of lead.

EPA acknowledges that there is much more to be done and that many management challenges remain. The Agency will continue to work toward solving these problems in collaboration with other Great Lakes Interagency Task Force agencies, as well as its other international, state, and local level partners.

8. Voluntary Programs – Update****

***Summary of Challenge**: EPA must ensure that applying voluntary approaches and innovative or alternative practices to provide flexible, collaborative, and market-driven solutions for measurable results are managed using standards, consistent processes, and verifiable data, to*

ensure that programs are efficiently and effectively providing intended and claimed environmental benefits.

Agency Response: EPA programs support nearly 50 voluntary or partnership programs, which complement regulations, assistance, grants, and other tools to promote improved environmental performance. For example, they may function as an adjunct to regulatory programs (e.g., encouraging retrofit or replacement of older equipment where regulations apply only to new equipment) or fill in where a regulatory approach is not practicable (e.g., helping companies design products to minimize their long-term environmental impact). The wide range of these programs is attributed to their varying size, scope, environmental media, target environmental issue, and stakeholder base. These programs encompass a diverse array of activities ranging from high-profile programs such as Energy Star to smaller, more targeted programs such as Sunwise or Natural Gas STAR.

These programs are managed by of the Agency's various program offices. OPEI provides assistance and coordination to the program offices. OPEI also provides advice regarding the strategic management of the voluntary programs to EPA's senior management, through the Innovation Action Council (IAC).

In 2008, EPA took a number of significant steps to track these programs and ensure that they are well-designed, well-managed and properly evaluated. The Deputy Administrator established a Senior Leadership subgroup, under the auspices of the Innovation Action Council. The subgroup was tasked with adopting minimum program standards, creating procedures to report the establishment of new programs, and clearly defining what constitutes a "partnership program." The new minimum standards require each program to:

- Develop a "logic model" and business plan showing how the resources invested are expected to lead to environmental results;
- Establish and carry out a plan for measuring results;
- Establish and carry out a plan for periodic program evaluation; and
- Create a professional marketing plan to maximize program impact.

OPEI is also establishing a central database for a variety of program information including budgets and results data, for the benefit of the Agency's management.

Concurrent efforts are under way to achieve the greatest benefit from the resources invested in these programs. For example:

- Several regional offices are beginning to "bundle" programs for delivery to target partners, avoiding duplicative marketing efforts.
- OPEI provides technical assistance, such as the annual partnership program practitioners' workshop. The 2008 workshop attracted more participants than in the past and served as a vehicle for providing information about the new program standards.
- EPA issued a cross-agency guide to the EPA Climate Programs, which is designed to help businesses or industry sectors find the programs relevant to their needs for reducing

greenhouse gas emissions, reducing overlap and duplication in marketing efforts by programs reaching out to similar partners.

These steps constitute a significant response to the concerns identified in this management challenge, in particular, the need for Agency-wide policies on key evaluative elements, more consistent and reliable data, operational guidelines, and a systematic process to develop, test, market, and evaluate the effectiveness of voluntary programs.

9. Chemical Regulations

***Summary of Challenge**: 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. Additionally, EPA has established the Chemical Assessment and Management Program (ChAMP) to assess the harmfulness of chemicals; however, obtaining information from the chemical industry on toxicity and exposure has been difficult. Until EPA can determine the value of such programs, the Agency remains challenged in its ability to assess chemical risk to human health and the environment.*

Agency Response: The Toxic Substance Control Act (TSCA) authorizes EPA to obtain information on chemicals and regulate chemicals that pose an unreasonable risk to human health and the environment. In FY 2007, EPA initiated the chemical assessment phase, drawing on: 1) HPV Challenge Program chemical hazard and fate data; and 2) EPA's expansion of the TSCA Inventory Update Rule (IUR) provided valuable new use data for large volume chemicals that support exposure characterizations. The Agency is combining these data to produce Risk-Based Prioritizations (RBP) to guide subsequent actions for HPV chemicals. EPA will have developed and posted 330 RBPs for HPV chemicals by the end of FY 2009.

In FY 2008, EPA expanded the scope of its existing chemicals assessment and risk management program to develop Hazard-Based Prioritizations (HBPs) for the approximately 4,000 Moderate Production Volume (MPV) chemicals produced annually in quantities exceeding 25,000 pounds. HBPs differ from RBPs by focusing exclusively on chemical hazard and fate information. The expanded IUR chemical use data are only reported for large volume chemicals. Furthermore, since the HPV Challenge Program did not include MPV chemicals in its data collection efforts, EPA is drawing on existing data and sophisticated Structure/Activity Relationship (SAR) models to develop the HBPs. EPA will have developed and publically posted 155 HBPs by the end of FY 2009.

The RBPs and HBPs categorize chemicals into three priority levels (high, medium, low) for subsequent more detailed assessment or direct risk management action. Additional resources proposed by EPA for FY 2010 to support an enhanced toxics program will enable EPA to significantly accelerate its pace in developing RBPs (230 vs. 180 in FY 2009) and HBPs (350 vs. 100 in FY 2009). More importantly, a substantial portion of these proposed additional resources will be used by EPA to initiate the risk management phase of this strategy, supporting deployment of the full range of TSCA regulatory authorities and pollution prevention programs

to address high priority chemicals of concern. (More information is available at: http://www.epa.gov/chemrtk/pubs/sumresp.htm.)

Taken together, these efforts substantially enhance EPA's ability to not only assess but also act to reduce chemical risks to human health and the environment.

10. Integrated Risk Information System (IRIS) Risk Assessment

***Summary of Challenge**: GAO believes that EPA's Integrated Risk Information System (IRIS) is at risk of becoming obsolete because of the Agency's inability to: (1) complete timely and credible assessments; (2) decrease its backlog of ongoing assessments; and (3) manage recent process changes. GAO is concerned that these factors may further prevent EPA from properly managing the IRIS database. GAO recommends that EPA, in order to effectively maintain IRIS assessments, streamline its assessment process and adopt transparency practices that provide assurance that the assessments are appropriately based on the best available science and not biased by policy considerations.*

Agency Response: In its March 2008 report, *Chemical Assessments: Low Productivity and New Interagency Review Process Limit the Usefulness and Credibility of EPA's Integrated Risk Information System,* GAO states that EPA's IRIS database is at risk of becoming obsolete. EPA has been working to revise the IRIS process to help address delays in completing IRIS assessments and to provide greater transparency, objectivity, balance, rigor, and predictability in the process to produce IRIS assessments. EPA recently redesigned its IRIS process and is considering other changes that it believes will sufficiently address GAO's recommendations.

With regard to GAO concerns about the timeliness of IRIS assessments, EPA continues working to ensure that assessments are executed on a predictable schedule and in a manner that decreases the backlog of incomplete assessments. For the first time, specific timelines and major milestones are established for each step of the process. The timelines in the IRIS process must balance the need for careful consideration of science and science policy with EPA's need for timely information.

The new IRIS process enables greater public involvement. For example, the nomination process for new assessments has been expanded to include a Federal Register notice that allows the public to nominate chemicals for review. EPA is also working to improve the prioritization process to capture and document the relative priorities of EPA programs, in conjunction with various interests of the public and other stakeholders. In addition, to facilitate transparency, a public comment period and public listening session are now held for each chemical. They are announced through a Federal Register notice following the release of the external review draft of an assessment.

EPA believes that by promoting greater communication and information sharing, providing stakeholders and the public with increased access to the IRIS process in a well-defined capacity, it has ensured that IRIS assessments will be highly transparent and based on the most credible science. EPA will continue to evaluate the process over time, instituting additional improvements

as needed, to ensure that the process effectively meets the needs of EPA, the Federal government, and the American public.

11. Management of Leaking Underground Storage Tanks

***Summary of Challenge**: Under the underground storage tanks program, EPA relies on states to ensure that tank owners and operators are in compliance with federal financial responsibilities. In a 2007 report, GAO found that EPA did 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 LUST Trust Fund money to states depends on data that may be inaccurate, due to state reporting requirements. GAO recommends EPA develop national data on the extent to which releases remaining to be cleaned up are attributed to tanks without viable owners.*

Agency Response: In February 2007, GAO published its report to Congressional requestors, *Leaking Underground Storage Tanks: EPA Should Take Steps to Better Ensure the Effective Use of Public Funding for Cleanups.* GAO recommended EPA ensure that tank owners maintain adequate financial responsibility coverage and that state assurance funds provide reliable coverage. EPA believes it has taken steps to address these GAO concerns.

EPA agrees that regular verification of financial responsibility coverage is important to ensure adequate funding for future releases. EPA is now requiring state and EPA inspectors to verify compliance with the financial responsibility requirements as part of the Energy Policy Act's mandatory 3-year inspection requirement. In response to GAO's recommendation that the Agency improve its oversight of the solvency of state assurance funds to ensure that they continue to provide reliable coverage for tank owners, the Agency is developing guidance for monitoring the financial soundness of state funds and expects to complete this guidance in September 2009. The Agency is also conducting a study of backlog sites not yet cleaned up and assessing the feasibility of evaluating private UST insurance mechanisms. The backlog study will examine the pace of cleanups in 14 states and attempt to identify factors that may slow the rate of cleanup. The study is expected to be completed by the end of 2009.

To better focus on how EPA distributes program resources by states, the Agency has developed a Quality Assurance/Quality Evaluation Checklist and is working with regions and states to implement quality control measures and ensure that data is consistent with existing EPA definitions. EPA will also 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.

12. Enforcement and Compliance

***Summary of Challenge**: While EPA has improved its oversight of state enforcement programs by implementing the State Review Framework (SRF), GAO notes that the Agency needs now to use SRF reviews as a means to address issues identified. Specifically, the Agency needs to*

determine the root cause of poorly performing programs, inform the public about states' progress in implementing their enforcement responsibilities, and utilize the SRF methodology to assess performance of EPA regions. 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.

Agency Response: In a July 2007 report entitled, *EPA-State Enforcement Partnership Has Improved, but EPA's Oversight Needs Further Enhancement*, GAO recommends that EPA improve its oversight of enforcement programs by using the State Review Framework (SRF) to develop a more consistent approach. EPA has used and will continue to use the SRF as tool to assess state compliance and enforcement programs, and regional direct-implementation programs.

EPA created the SRF in FY 2004 as a pilot (one state in each of its ten regions) to address concerns about consistency in the minimum level of enforcement activity across states and the oversight of state programs by EPA regions. Between FY 2005 and FY 2007, the SRF was implemented in the remaining states and 4 territories. Using 12 core elements, the SRF assesses enforcement activities across three key programs – the Clean Air Act Stationary Sources (Title V), the Clean Water Act National Pollutant Discharge Elimination System (NPDES), and the Resource Conservation and Recovery Act (RCRA) Subtitle C. The 12 core elements include data completeness, data accuracy, timeliness of data entry, completion of work plan commitments, inspection coverage, completeness of inspection reports, identification of alleged violations, identification of significant noncompliance, ensuring return to compliance, timely and appropriate enforcement, calculation of gravity and economic benefit penalty components, and final assessed penalties and their collection.

During FYs 2007-2008, EPA evaluated the first full round of the SRF to identify ways to streamline the time and effort of the reviews and opportunities for further improvements. Based on the reviews and the evaluation, EPA identified four areas that were recurring issues across states and programs: data entry and reporting; significant non-compliance and high priority violations (SNC/HPV) identification; timely enforcement; and calculation and documentation of penalties. In September 2008, EPA made key improvements and initiated Round 2, which included additional and enhanced training for regions and states, streamlined reporting through a standard template, clarified elements, improved metrics, more explicit guidance on incorporating local agencies into reviews, better understanding of where consistency is important, a streamlined review of reports, tracking and management of the implementation of recommendations, and additional steps for communication and coordination between regions and states.

The current SRF outlines the process for uniformly addressing significant problems identified in state programs. The process consists of a series of escalating steps. First, the region and state will precisely define the state's attributes and deficiencies, and then develop a schedule for implementing needed changes. Second, the region and state will jointly develop a plan to address improved performance, using established mechanisms such as Performance Partnership Agreements, Performance Partnership Grants, or categorical grant agreements to codify the

plans. Third, the implementation of the plan will be monitored and managed to ensure progress as planned and to identify and deal with issues as they arise.

EPA is using the SRF as a means to assess compliance and enforcement programs. In early 2009, EPA reviewed the status of state progress toward addressing the problems identified in the first round of SRF reviews. At that time, states had completed 74 percent of the recommended actions to address problems. The Agency will review the status of the recommendations annually and discus progress with the regions at the senior management level twice per year. In addition, based on the reviews and the evaluation, the Agency identified four areas that were recurring issues across states and programs: data entry and reporting; significant non-compliance and high priority violations (SNC/HPV) identification; timely enforcement; and calculation and documentation of penalties. EPA has conducted an analysis of the nature and causes of these national issues and will work with the states to develop plans to improve performance in these areas on a nationwide basis.

EPA has made substantial progress in planning and priority setting with states and in using the SRF to enhance its ability to evaluate and oversee state enforcement activities. The Agency believes that the SRF will help to maintain a level of consistency across state programs, ensuring that states meet minimum standards and leading to fair and consistent enforcement of environmental laws and consistent protection of human health and the environment across the country. EPA plans to use the "SRF Tracker" to analyze trends in findings and track corrective actions to report on the results of the SRF reviews.

13. Environmental Information

***Summary of Challenge**: While noting EPA's progress in addressing critical data gaps in its environmental information, GAO believes the Agency still lacks the data it needs to manage for environmental results. The Agency continues to face challenges 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. Additionally, the Agency needs to be cautious of its use of biomonitoring as a tool for detecting chemical effects on children's health.*

Agency Response: EPA has made progress in addressing critical data gaps in its environmental information. Under the Environmental Indicators Initiative, EPA is seeking to identify and obtain the data necessary to help the Agency manage for results and to provide a coherent picture of the Nation's environment. Despite the progress being made, critical data gaps remain that need to be filled to provide better scientific understanding of environmental trends and conditions. EPA's *Report on the Environment 2008* discusses indicators and data that are currently available to answer questions concerning environmental conditions and trends and describes their limitations. Additionally, the report identifies key limitations of these indicators and gaps where reliable indicators do not yet exist. EPA points out that these gaps and limitations highlight the disparity between the current state of knowledge and the goal of information about specific environmental conditions and trends that can direct future research and monitoring efforts.

To better link and integrate the *Report on the Environment* with its strategic planning and budgeting, EPA continues to implement and refine a process for identifying and prioritizing key data gaps that limit its ability to report on and manage for environmental results. EPA agrees with GAO that it needs to continue to make progress in this process. However, EPA does not agree that environmental information supporting the indicators activities remains a management challenge. The Agency is taking steps to implement a planning approach that takes into account important environmental results and follows through to identify knowledge gaps and limitations at the program level. By introducing environmental information needs as part of the Agency's planning process and continuing Office of Research and Development and the Office of Environmental Information (OEI) work on indicators and performance management, EPA believes it has addressed the challenge. In addition, OEI's National Dialogue on Access to Environmental Information, launched in FY 2008, will result in development of a strategy to enhance public access to environmental information available both within and outside EPA. Because a significant portion of available environmental information resides outside of EPA, the Agency believes this strategy will assist the Agency in making additional progress in addressing information needs.

14. Financial Management Practices

***Summary of Challenge**: GAO continues to raise concerns about the Agency's financial management practices. While EPA has made significant progress in enhancing its deobligation efforts, GAO believes the Agency needs to improve oversight of its processes for conducting and tracking deobligation of expired contracts, grants, and interagency agreements. Additionally, GAO recommends that the Agency report deobligation and recertification of expired funds in its Congressional budget justification.*

Agency Response: EPA acknowledges GAO's concerns about its financial management practices. The Agency has already taken steps to reduce unliquidated obligations in expired contracts and grants, which have resulted in a significant decrease since FY 2006.

During FY 2006 and 2007, EPA integrated data elements between its Integrated Grants Management System (IGMS) and Integrated Financial Management System (IFMS), thereby creating a relational database that supports integrated administrative and financial reporting. Using standard reporting and baseline estimates, EPA is able to measure unliquidated obligations remaining in expired grants. During FY 2006 and 2007, EPA achieved annual reductions of 12.1 percent and 10.6 percent, respectively. In FY 2008, EPA recognized a reduction of $25.9 million (14.8 percent) for a baseline estimate of $175 million in obligations that expired through October 3, 2007. The Agency is committed to achieving unliquidated obligations as a percentage of total obligations equal to no more than 10 percent by the end of FY 2009.

Under its Proud to Be VI initiative, EPA has noted the importance of integrated reporting of contracts and financial data. Much of the Agency's decision to undertake this data integration reflects feedback provided during roundtable discussions with end-users of contracts information. During FY 2007, EPA developed a strategy to integrate reports combining data from existing systems, including IFMS and administrative contract systems, and provided these reporting tools to the end-user community. In addition, to ensure continuity of data availability

to Agency decision makers, EPA developed a suite of reports that are accessible via its Financial Data Warehouse.

To provide timely data to program managers on the status of a deobligation, EPA developed an Agency-wide "Recertification Database." This allows program offices to de-obligate no-year funds (e.g., Superfund or STAG) and initiate reprogramming requests in a timely manner. It also serves as an incentive to monitor and deobligate trailing funds.

EPA will continue to work toward its goals for reducing unliquidated obligations in expired grants and contracts.

15. Human Capital Management

***Summary of Challenge**: GAO finds that despite EPA's progress in improving the management of its human capital, the Agency needs to ensure its workforce is distributed in the most effective manner. 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.*

Agency Response: As part of ongoing resource management efforts, EPA has been exploring how to maximize the productivity of its staff and other resources. During each year's budget process, EPA reviews the staffing, funding levels, and allocation to address all activities. The OIG and GAO routinely report that EPA (and other agencies) need to increase the efficiency of resource use in functional areas. In addition, EPA and many other federal agencies have begun specializing in particular functional areas and providing these services externally to other federal agencies. For example, EPA has contracted with the Department of Defense for its payroll services, and the Department of the Interior provides accounting services to nearly 20 other agencies.

In 2006, a workload assessment and benchmarking analysis was conducted for EPA which compared EPA's workload methodology with that of nine other federal agencies. Data were used from the Office Personnel Management's (OPM) FedScope system, interviews, and past studies conducted through contract support. Two major difficulties were encountered: 1) finding strong comparables for EPA as a whole, and 2) finding appropriate qualitative information sources at other agencies to help understand the workload assessment methodologies, if any, that these agencies used.

In FY 2009, EPA is exploring ways to better assess and benchmark current staff levels against similar functions in other federal agencies, in order to better understand EPA workload, how other agencies approach the issue, and identify potential efficiencies. In 2009, we will begin to collect and analyze the data and this work will continue into FY 2010. The analysis will target certain key functions that EPA shares with other federal agencies, such as: 1) Regulatory Development, 2) Scientific Research, 3) Enforcement, 4) Financial Management, 5) Environmental Monitoring, and 6) Permitting.

Examining the Agency's workforce distribution characteristics to improve its resource planning is a broad and lengthy process. Traditional methods require extensive data collection and analysis. Benchmarking may help identify where a more targeted analysis could be effective. EPA will continue to review current processes and methodologies to determine how best to improve the management of its resources.

* FY 2004 and 2005 Working Relationships with the States and Linking Mission to Management were consolidated into Managing for Results. FY 2006 and FY 2007 Managing for Results and Data Gaps were merged into Performance Management

** FY 2006 and 2007 titled Agency Efforts in Support of Homeland Security

*** FY 2007 this topic was include in Workforce Planning and in FY 2005 and 2006 in Human Capital Management

**** FY 2006 and 2007 Voluntary Programs included Alternative and Innovative Practices and Programs

EPA USER FEE PROGRAM

In FY 2010, EPA will have several user fee programs in operation. These user fee programs and proposals are as follows:

Current Fees: Pesticides

The FY 2010 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 Registration Review program and a certain percentage supports the processing of applications involving "me-too" or inert ingredients. In FY 2010, 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 2010, 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 2010 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, and EPA estimates that $1 million will be deposited in FY 2010.

- **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. engines In 2004, EPA promulgated a rule that updated existing fees and established fees for newly-regulated vehicles and engines. The fees established 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 (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). In 2009 EPA added fees for evaporative requirements for nonroad engines. EPA intends to apply certification fees to additional industry sectors as new programs are developed. In FY 2010, EPA expects to collect $19.8 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 Renewal Act (PRIA 2) through 2012. The Administration will submit legislative language proposing to allow for the collection of $13 million in Pesticide Tolerance fees in FY 2010.

- **Enhanced Registration Services**

Legislative language will be submitted proposing to publish a new fee schedule to collect an additional $12 million in FY 2010 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**

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 Registration Review 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 2010. Legislative language will be submitted to remove the statutory cap in the Toxic Substances Control Act on Pre-Manufacturing Notification Fees. In FY 2010, EPA expects to collect an additional $4 million by removing the statutory cap.

WORKING CAPITAL FUND

In FY 2010, the Agency begins its fourteenth 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 twenty-three permanent members from the program and regional offices.

Four Agency activities, provided in FY 2009, will continue into FY 2010. 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 2010 budget request includes resources for these four activities in each National Program Manager's submission, totaling approximately $200 million. These estimated resources may be increased to incorporate program office's additional service needs during the operating year. To the extent that these increases are subject to Congressional reprogramming notifications, the Agency will comply with all applicable requirements. In FY 2010, 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

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 Act

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 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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.	$52,350.0	Goal 1, Obj. 1	$54,850.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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)	$171,730.0	Goal 1, Obj. 1	$171,730.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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	$13,300.0	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	$8,074.0	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.	$218,495.0	Goal 2, Obj. 2	$229,264.0
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	$200,857.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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.	$16,830.0	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.	$99,100.0	Goal 2, Obj. 1	$105,700.0
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.	$4,950.0	Goal 2, Obj. 1	$0.0
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.	$10,891.0	Goal 2, Obj. 1	$10,891.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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.	$9,900.0	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	$101,346.0	Goal 3, Obj. 1 Obj. 2	$106,346.0
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.	$49,495.0	Goal 4, Obj. 2	$49,495.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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	Provide funding for SEE enrollees to work on the states' underground storage tanks and to support direct UST implementation programs.	$2,500.0	Goal 3, Obj. 1	$2,500.0
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, Pesticides in Water, Tribal Program, and Pesticide Environmental Stewardship Program.	$12,970.0	Goal 4, Obj. 1	$13,520.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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.	$13,564.0	Goal 4, Obj. 1	$14,564.0
Toxic Substances Compliance	TSCA, Sections 28(a) and 404 (g); TCA in annual Appropriations Acts.	States, Territories, Federally recognized Indian Tribes, Intertribal Consortia	Assist in developing, maintaining and implementing compliance monitoring programs for PCBs, asbestos, and lead based paint, in addition to the enforcement of the lead-based paint program.	$5,099.0	Goal 5, Obj. 1	$5,099.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 President's Budget Dollars (X1000)
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	$18,711.0	Goal 5, Obj. 1	$18,711.0
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.	$10,000.0	Goal 5, Obj. 2	$10,000.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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.	$4,940.0	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.	$1,828.0	Goal 5, Obj. 1	$1,828.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2009 Enacted Budget Dollars (X1000)	FY 2010 Goal/ Objective	FY 2010 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.	$57,925.0	Goal 5, Obj. 3	$62,875.0

PROGRAM PROJECTS BY APPROPRIATION
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Acquisition Management	**$50,728.2**	**$56,398.0**	**$55,675.0**	**($723.0)**
EPM	$29,868.9	$31,872.0	$32,281.0	$409.0
LUST	$154.2	$165.0	$165.0	$0.0
Superfund	$20,705.1	$24,361.0	$23,229.0	($1,132.0)
Administrative Law	**$5,657.9**	**$5,128.0**	**$5,352.0**	**$224.0**
EPM	$5,657.9	$5,128.0	$5,352.0	$224.0
Alternative Dispute Resolution	**$1,913.7**	**$2,248.0**	**$2,318.0**	**$70.0**
EPM	$1,136.8	$1,374.0	$1,423.0	$49.0
Superfund	$776.9	$874.0	$895.0	$21.0
Audits, Evaluations, and Investigations	**$53,934.3**	**$54,766.0**	**$54,766.0**	**$0.0**
IG	$41,896.5	$44,791.0	$44,791.0	$0.0
Superfund	$12,037.8	$9,975.0	$9,975.0	$0.0
Beach / Fish Programs	**$2,307.5**	**$2,806.0**	**$2,870.0**	**$64.0**
EPM	$2,307.5	$2,806.0	$2,870.0	$64.0
Brownfields	**$25,200.3**	**$22,957.0**	**$25,254.0**	**$2,297.0**
EPM	$25,200.3	$22,957.0	$25,254.0	$2,297.0
Brownfields Projects	**$101,682.5**	**$97,000.0**	**$100,000.0**	**$3,000.0**
STAG	$94,611.8	$97,000.0	$100,000.0	$3,000.0
Superfund	$7,070.7	$0.0	$0.0	$0.0
Categorical Grant: Beaches Protection	**$10,642.2**	**$9,900.0**	**$9,900.0**	**$0.0**
STAG	$10,642.2	$9,900.0	$9,900.0	$0.0
Categorical Grant: Brownfields	**$51,070.6**	**$49,495.0**	**$49,495.0**	**$0.0**
STAG	$51,070.6	$49,495.0	$49,495.0	$0.0
Categorical Grant: Environmental Information	**$14,402.4**	**$10,000.0**	**$10,000.0**	**$0.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
STAG	$14,402.4	$10,000.0	$10,000.0	$0.0
Categorical Grant: Hazardous Waste Financial Assistance	**$101,740.4**	**$101,346.0**	**$106,346.0**	**$5,000.0**
STAG	$101,740.4	$101,346.0	$106,346.0	$5,000.0
Categorical Grant: Homeland Security	**$5,688.0**	**$4,950.0**	**$0.0**	**($4,950.0)**
STAG	$5,688.0	$4,950.0	$0.0	($4,950.0)
Categorical Grant: Lead	**$14,699.7**	**$13,564.0**	**$14,564.0**	**$1,000.0**
STAG	$14,699.7	$13,564.0	$14,564.0	$1,000.0
Categorical Grant: Nonpoint Source (Sec. 319)	**$207,166.5**	**$200,857.0**	**$200,857.0**	**$0.0**
STAG	$207,166.5	$200,857.0	$200,857.0	$0.0
Categorical Grant: Pesticides Enforcement	**$20,098.6**	**$18,711.0**	**$18,711.0**	**$0.0**
STAG	$20,098.6	$18,711.0	$18,711.0	$0.0
Categorical Grant: Pesticides Program Implementation	**$14,014.7**	**$12,970.0**	**$13,520.0**	**$550.0**
STAG	$14,014.7	$12,970.0	$13,520.0	$550.0
Categorical Grant: Pollution Control (Sec. 106)	**$243,836.1**	**$218,495.0**	**$229,264.0**	**$10,769.0**
STAG	$243,836.1	$218,495.0	$229,264.0	$10,769.0
Categorical Grant: Pollution Prevention	**$5,076.8**	**$4,940.0**	**$4,940.0**	**$0.0**
STAG	$5,076.8	$4,940.0	$4,940.0	$0.0
Categorical Grant: Public Water System Supervision (PWSS)	**$101,503.0**	**$99,100.0**	**$105,700.0**	**$6,600.0**
STAG	$101,503.0	$99,100.0	$105,700.0	$6,600.0
Categorical Grant: Radon	**$10,007.4**	**$8,074.0**	**$8,074.0**	**$0.0**
STAG	$10,007.4	$8,074.0	$8,074.0	$0.0
Categorical Grant: Sector Program	**$1,666.3**	**$1,828.0**	**$1,828.0**	**$0.0**
STAG	$1,666.3	$1,828.0	$1,828.0	$0.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Categorical Grant: State and Local Air Quality Management	**$226,155.9**	**$224,080.0**	**$226,580.0**	**$2,500.0**
STAG	$226,155.9	$224,080.0	$226,580.0	$2,500.0
Categorical Grant: Targeted Watersheds	**$21,027.7**	**$0.0**	**$0.0**	**$0.0**
STAG	$21,027.7	$0.0	$0.0	$0.0
Categorical Grant: Toxics Substances Compliance	**$5,273.6**	**$5,099.0**	**$5,099.0**	**$0.0**
STAG	$5,273.6	$5,099.0	$5,099.0	$0.0
Categorical Grant: Tribal Air Quality Management	**$12,066.9**	**$13,300.0**	**$13,300.0**	**$0.0**
STAG	$12,066.9	$13,300.0	$13,300.0	$0.0
Categorical Grant: Tribal General Assistance Program	**$58,628.8**	**$57,925.0**	**$62,875.0**	**$4,950.0**
STAG	$58,628.8	$57,925.0	$62,875.0	$4,950.0
Categorical Grant: Underground Injection Control (UIC)	**$12,114.5**	**$10,891.0**	**$10,891.0**	**$0.0**
STAG	$12,114.5	$10,891.0	$10,891.0	$0.0
Categorical Grant: Underground Storage Tanks	**$3,600.7**	**$2,500.0**	**$2,500.0**	**$0.0**
STAG	$3,600.7	$2,500.0	$2,500.0	$0.0
Categorical Grant: Wastewater Operator Training	**$670.3**	**$0.0**	**$0.0**	**$0.0**
STAG	$670.3	$0.0	$0.0	$0.0
Categorical Grant: Water Quality Cooperative Agreements	**$445.3**	**$0.0**	**$0.0**	**$0.0**
STAG	$445.3	$0.0	$0.0	$0.0
Categorical Grant: Wetlands Program Development	**$15,985.2**	**$16,830.0**	**$16,830.0**	**$0.0**
STAG	$15,985.2	$16,830.0	$16,830.0	$0.0
Categorical Grant: Local Govt Climate Change	**$0.0**	**$10,000.0**	**$0.0**	**($10,000.0)**
STAG	$0.0	$10,000.0	$0.0	($10,000.0)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Central Planning, Budgeting, and Finance	**$89,653.5**	**$99,897.0**	**$113,083.0**	**$13,186.0**
EPM	$68,083.1	$73,432.0	$85,215.0	$11,783.0
LUST	$708.9	$987.0	$1,122.0	$135.0
Superfund	$20,861.5	$25,478.0	$26,746.0	$1,268.0
Children and Other Sensitive Populations: Agency Coordination	**$7,226.7**	**$6,071.0**	**$6,515.0**	**$444.0**
EPM	$7,226.7	$6,071.0	$6,515.0	$444.0
Civil Enforcement	**$134,428.8**	**$139,299.0**	**$148,355.0**	**$9,056.0**
EPM	$131,986.8	$137,182.0	$145,949.0	$8,767.0
Oil Spills	$1,851.0	$2,117.0	$2,406.0	$289.0
Superfund	$591.0	$0.0	$0.0	$0.0
Civil Rights / Title VI Compliance	**$11,109.6**	**$11,488.0**	**$12,000.0**	**$512.0**
EPM	$11,109.6	$11,488.0	$12,000.0	$512.0
Clean Air Allowance Trading Programs	**$29,028.7**	**$29,145.0**	**$30,527.0**	**$1,382.0**
EPM	$19,774.8	$19,993.0	$20,548.0	$555.0
S&T	$9,253.9	$9,152.0	$9,979.0	$827.0
Clean School Bus Initiative	**$6,868.8**	**$0.0**	**$0.0**	**$0.0**
STAG	$6,868.8	$0.0	$0.0	$0.0
Climate Protection Program	**$114,520.6**	**$111,099.0**	**$130,609.0**	**$19,510.0**
EPM	$97,364.3	$94,271.0	$111,634.0	$17,363.0
S&T	$17,156.3	$16,828.0	$18,975.0	$2,147.0
Commission for Environmental Cooperation	**$4,289.2**	**$0.0**	**$0.0**	**$0.0**
EPM	$4,289.2	$0.0	$0.0	$0.0
Compliance Assistance and Centers	**$29,169.4**	**$24,886.0**	**$27,175.0**	**$2,289.0**
EPM	$28,063.5	$23,770.0	$26,070.0	$2,300.0
LUST	$787.5	$817.0	$788.0	($29.0)
Oil Spills	$285.3	$277.0	$317.0	$40.0
Superfund	$33.1	$22.0	$0.0	($22.0)
Compliance Incentives	**$10,309.4**	**$9,129.0**	**$10,702.0**	**$1,573.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
EPM	$10,250.7	$8,992.0	$10,702.0	$1,710.0
Superfund	$58.7	$137.0	$0.0	($137.0)
Compliance Monitoring	**$93,299.4**	**$97,256.0**	**$101,106.0**	**$3,850.0**
EPM	$92,048.1	$96,064.0	$99,859.0	$3,795.0
Superfund	$1,251.3	$1,192.0	$1,247.0	$55.0
Congressional, Intergovernmental, External Relations	**$48,923.4**	**$48,456.0**	**$50,980.0**	**$2,524.0**
EPM	$48,777.5	$48,456.0	$50,980.0	$2,524.0
Superfund	$145.9	$0.0	$0.0	$0.0
Congressionally Mandated Projects	**$89,275.3**	**$175,900.0**	**$0.0**	**($175,900.0)**
EPM	$12,403.5	$17,450.0	$0.0	($17,450.0)
S&T	$1,034.0	$5,450.0	$0.0	($5,450.0)
STAG	$75,837.8	$153,000.0	$0.0	($153,000.0)
Criminal Enforcement	**$47,815.8**	**$53,530.0**	**$57,735.0**	**$4,205.0**
EPM	$40,128.8	$45,763.0	$49,399.0	$3,636.0
Superfund	$7,687.0	$7,767.0	$8,336.0	$569.0
Diesel Emissions Reduction Grant Program	**$29,798.9**	**$75,000.0**	**$60,000.0**	**($15,000.0)**
STAG	$29,798.9	$75,000.0	$60,000.0	($15,000.0)
Drinking Water Programs	**$110,747.3**	**$102,334.0**	**$106,576.0**	**$4,242.0**
EPM	$107,454.8	$98,779.0	$102,856.0	$4,077.0
S&T	$3,292.5	$3,555.0	$3,720.0	$165.0
Endocrine Disruptors	**$7,102.4**	**$8,498.0**	**$8,659.0**	**$161.0**
EPM	$7,102.4	$8,498.0	$8,659.0	$161.0
Enforcement Training	**$3,710.0**	**$3,731.0**	**$3,948.0**	**$217.0**
EPM	$2,924.9	$2,938.0	$3,097.0	$159.0
Superfund	$785.1	$793.0	$851.0	$58.0
Environment and Trade	**$1,903.7**	**$0.0**	**$0.0**	**$0.0**
EPM	$1,903.7	$0.0	$0.0	$0.0
Environmental Education	**$9,050.3**	**$8,979.0**	**$9,038.0**	**$59.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
EPM	$9,050.3	$8,979.0	$9,038.0	$59.0
Environmental Justice	**$4,834.2**	**$7,811.0**	**$8,025.0**	**$214.0**
EPM	$4,332.1	$6,993.0	$7,203.0	$210.0
Superfund	$502.1	$818.0	$822.0	$4.0
Exchange Network	**$15,563.0**	**$18,293.0**	**$19,646.0**	**$1,353.0**
EPM	$14,133.2	$16,860.0	$18,213.0	$1,353.0
Superfund	$1,429.8	$1,433.0	$1,433.0	$0.0
Facilities Infrastructure and Operations	**$467,188.5**	**$482,398.0**	**$502,423.0**	**$20,025.0**
B&F	$28,081.5	$26,931.0	$28,931.0	$2,000.0
EPM	$296,235.0	$303,884.0	$320,612.0	$16,728.0
LUST	$890.3	$902.0	$903.0	$1.0
Oil Spills	$498.6	$596.0	$498.0	($98.0)
S&T	$69,239.2	$73,835.0	$72,882.0	($953.0)
Superfund	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Federal Stationary Source Regulations	**$27,253.7**	**$26,488.0**	**$27,179.0**	**$691.0**
EPM	$27,253.7	$26,488.0	$27,179.0	$691.0
Federal Support for Air Quality Management	**$107,232.0**	**$107,613.0**	**$112,052.0**	**$4,439.0**
EPM	$94,556.0	$96,480.0	$100,510.0	$4,030.0
S&T	$12,676.0	$11,133.0	$11,542.0	$409.0
Federal Support for Air Toxics Program	**$28,116.4**	**$25,115.0**	**$27,299.0**	**$2,184.0**
EPM	$25,208.5	$22,836.0	$24,960.0	$2,124.0
S&T	$2,907.9	$2,279.0	$2,339.0	$60.0
Federal Vehicle and Fuels Standards and Certification	**$70,463.2**	**$76,445.0**	**$91,990.0**	**$15,545.0**
S&T	$70,463.2	$76,445.0	$91,990.0	$15,545.0
Financial Assistance Grants / IAG Management	**$27,219.1**	**$29,036.0**	**$29,964.0**	**$928.0**
EPM	$24,174.4	$25,868.0	$26,681.0	$813.0
Superfund	$3,044.7	$3,168.0	$3,283.0	$115.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Forensics Support	**$16,671.8**	**$17,465.0**	**$18,417.0**	**$952.0**
S&T	$14,042.7	$15,087.0	$15,946.0	$859.0
Superfund	$2,629.1	$2,378.0	$2,471.0	$93.0
Geographic Program: Chesapeake Bay	**$36,494.1**	**$31,001.0**	**$35,139.0**	**$4,138.0**
EPM	$36,494.1	$31,001.0	$35,139.0	$4,138.0
Geographic Program: Great Lakes	**$22,968.4**	**$23,000.0**	**$0.0**	**($23,000.0)**
EPM	$22,968.4	$23,000.0	$0.0	($23,000.0)
Geographic Program: Gulf of Mexico	**$4,429.0**	**$4,578.0**	**$4,638.0**	**$60.0**
EPM	$4,429.0	$4,578.0	$4,638.0	$60.0
Geographic Program: Lake Champlain	**$2,919.9**	**$3,000.0**	**$1,434.0**	**($1,566.0)**
EPM	$2,919.9	$3,000.0	$1,434.0	($1,566.0)
Geographic Program: Long Island Sound	**$4,827.0**	**$3,000.0**	**$3,000.0**	**$0.0**
EPM	$4,827.0	$3,000.0	$3,000.0	$0.0
Geographic Program: Other	**$18,020.6**	**$31,380.0**	**$31,919.0**	**$539.0**
EPM	$18,020.6	$31,380.0	$31,919.0	$539.0
Great Lakes Legacy Act	**$27,416.2**	**$37,000.0**	**$0.0**	**($37,000.0)**
EPM	$27,416.2	$37,000.0	$0.0	($37,000.0)
Great Lakes Restoration	**$0.0**	**$0.0**	**$475,000.0**	**$475,000.0**
EPM	$0.0	$0.0	$475,000.0	$475,000.0
Homeland Security: Communication and Information	**$6,611.6**	**$6,899.0**	**$7,030.0**	**$131.0**
EPM	$6,611.6	$6,899.0	$7,030.0	$131.0
Homeland Security: Critical Infrastructure Protection	**$39,237.4**	**$28,033.0**	**$37,167.0**	**$9,134.0**
EPM	$4,814.4	$6,837.0	$7,014.0	$177.0
S&T	$32,656.7	$19,460.0	$28,329.0	$8,869.0
Superfund	$1,766.3	$1,736.0	$1,824.0	$88.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Homeland Security: Preparedness, Response, and Recovery	**$90,195.8**	**$100,690.0**	**$99,395.0**	**($1,295.0)**
EPM	$4,105.3	$3,378.0	$3,443.0	$65.0
S&T	$40,807.3	$43,671.0	$42,409.0	($1,262.0)
Superfund	$45,283.2	$53,641.0	$53,543.0	($98.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	**$15,701.5**	**$16,143.0**	**$16,272.0**	**$129.0**
B&F	$8,225.9	$8,070.0	$8,070.0	$0.0
EPM	$5,462.5	$6,292.0	$6,414.0	$122.0
S&T	$1,428.1	$587.0	$594.0	$7.0
Superfund	$585.0	$1,194.0	$1,194.0	$0.0
Human Health Risk Assessment	**$41,369.5**	**$42,727.0**	**$48,528.0**	**$5,801.0**
S&T	$34,569.9	$39,350.0	$45,133.0	$5,783.0
Superfund	$6,799.6	$3,377.0	$3,395.0	$18.0
Human Resources Management	**$45,570.8**	**$49,530.0**	**$55,174.0**	**$5,644.0**
EPM	$40,886.6	$44,141.0	$47,106.0	$2,965.0
LUST	$3.0	$3.0	$0.0	($3.0)
Superfund	$4,681.2	$5,386.0	$8,068.0	$2,682.0
IT / Data Management	**$111,813.5**	**$114,222.0**	**$124,688.0**	**$10,466.0**
EPM	$91,928.2	$93,171.0	$103,305.0	$10,134.0
LUST	$178.0	$162.0	$162.0	$0.0
Oil Spills	$15.0	$24.0	$24.0	$0.0
S&T	$3,762.6	$3,969.0	$4,073.0	$104.0
Superfund	$15,929.7	$16,896.0	$17,124.0	$228.0
Indoor Air: Radon Program	**$5,707.3**	**$5,786.0**	**$5,998.0**	**$212.0**
EPM	$5,269.5	$5,383.0	$5,576.0	$193.0
S&T	$437.8	$403.0	$422.0	$19.0
Information Security	**$6,632.2**	**$6,637.0**	**$6,814.0**	**$177.0**
EPM	$6,157.6	$5,854.0	$6,015.0	$161.0
Superfund	$474.6	$783.0	$799.0	$16.0
Infrastructure Assistance: Alaska Native Villages	**$21,193.7**	**$18,500.0**	**$10,000.0**	**($8,500.0)**
STAG	$21,193.7	$18,500.0	$10,000.0	($8,500.0)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Infrastructure Assistance: Clean Water SRF	**$836,929.7**	**$689,080.0**	**$2,400,000.0**	**$1,710,920.0**
STAG	$836,929.7	$689,080.0	$2,400,000.0	$1,710,920.0
Infrastructure Assistance: Drinking Water SRF	**$949,968.9**	**$829,029.0**	**$1,500,000.0**	**$670,971.0**
STAG	$949,968.9	$829,029.0	$1,500,000.0	$670,971.0
Infrastructure Assistance: Mexico Border	**$65,138.5**	**$20,000.0**	**$10,000.0**	**($10,000.0)**
STAG	$65,138.5	$20,000.0	$10,000.0	($10,000.0)
International Capacity Building	**$5,107.0**	**$0.0**	**$0.0**	**$0.0**
EPM	$5,107.0	$0.0	$0.0	$0.0
International Sources of Pollution	**$0.0**	**$7,830.0**	**$8,851.0**	**$1,021.0**
EPM	$0.0	$7,830.0	$8,851.0	$1,021.0
LUST / UST	**$26,409.4**	**$23,051.0**	**$24,306.0**	**$1,255.0**
EPM	$11,157.9	$11,946.0	$12,451.0	$505.0
LUST	$15,251.5	$11,105.0	$11,855.0	$750.0
LUST Cooperative Agreements	**$89,552.8**	**$62,461.0**	**$63,192.0**	**$731.0**
LUST	$89,552.8	$62,461.0	$63,192.0	$731.0
LUST Prevention	**$0.0**	**$35,500.0**	**$34,430.0**	**($1,070.0)**
LUST	$0.0	$35,500.0	$34,430.0	($1,070.0)
Legal Advice: Environmental Program	**$39,823.7**	**$40,955.0**	**$42,668.0**	**$1,713.0**
EPM	$39,021.3	$40,247.0	$41,922.0	$1,675.0
Superfund	$802.4	$708.0	$746.0	$38.0
Legal Advice: Support Program	**$13,524.9**	**$14,676.0**	**$15,611.0**	**$935.0**
EPM	$13,524.9	$14,676.0	$15,611.0	$935.0
Marine Pollution	**$13,430.4**	**$13,045.0**	**$13,399.0**	**$354.0**
EPM	$13,430.4	$13,045.0	$13,399.0	$354.0
NEPA Implementation	**$14,690.1**	**$16,281.0**	**$18,295.0**	**$2,014.0**
EPM	$14,690.1	$16,281.0	$18,295.0	$2,014.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
National Estuary Program / Coastal Waterways	**$26,046.7**	**$26,557.0**	**$26,967.0**	**$410.0**
EPM	$26,046.7	$26,557.0	$26,967.0	$410.0
Oil Spill: Prevention, Preparedness and Response	**$13,880.8**	**$13,953.0**	**$14,397.0**	**$444.0**
Oil Spills	$13,880.8	$13,953.0	$14,397.0	$444.0
POPs Implementation	**$1,811.9**	**$0.0**	**$0.0**	**$0.0**
EPM	$1,811.9	$0.0	$0.0	$0.0
Pesticides: Field Programs	**$5,764.6**	**$0.0**	**$0.0**	**$0.0**
EPM	$5,764.6	$0.0	$0.0	$0.0
Pesticides: Registration of New Pesticides	**$1,640.2**	**$0.0**	**$0.0**	**$0.0**
EPM	$1,417.6	$0.0	$0.0	$0.0
S&T	$222.6	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	**$4,087.5**	**$0.0**	**$0.0**	**$0.0**
EPM	$3,918.4	$0.0	$0.0	$0.0
S&T	$169.1	$0.0	$0.0	$0.0
Pesticides: Protect Human Health from Pesticide Risk	**$62,883.0**	**$63,318.0**	**$65,410.0**	**$2,092.0**
EPM	$59,536.1	$60,103.0	$61,747.0	$1,644.0
S&T	$3,346.9	$3,215.0	$3,663.0	$448.0
Pesticides: Protect the Environment from Pesticide Risk	**$39,441.5**	**$43,247.0**	**$44,610.0**	**$1,363.0**
EPM	$37,443.3	$41,236.0	$42,318.0	$1,082.0
S&T	$1,998.2	$2,011.0	$2,292.0	$281.0
Pesticides: Realize the Value of Pesticide Availability	**$11,972.0**	**$13,429.0**	**$13,880.0**	**$451.0**
EPM	$11,529.6	$12,984.0	$13,372.0	$388.0
S&T	$442.4	$445.0	$508.0	$63.0
Pollution Prevention Program	**$15,538.0**	**$18,334.0**	**$18,874.0**	**$540.0**
EPM	$15,538.0	$18,334.0	$18,874.0	$540.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
RCRA: Corrective Action	**$39,960.6**	**$38,909.0**	**$40,459.0**	**$1,550.0**
EPM	$39,960.6	$38,909.0	$40,459.0	$1,550.0
RCRA: Waste Management	**$66,432.8**	**$64,511.0**	**$67,550.0**	**$3,039.0**
EPM	$66,432.8	$64,511.0	$67,550.0	$3,039.0
RCRA: Waste Minimization & Recycling	**$14,731.9**	**$13,471.0**	**$14,122.0**	**$651.0**
EPM	$14,731.9	$13,471.0	$14,122.0	$651.0
Radiation: Protection	**$15,054.9**	**$15,408.0**	**$16,110.0**	**$702.0**
EPM	$10,820.8	$10,957.0	$11,272.0	$315.0
S&T	$2,069.1	$2,156.0	$2,242.0	$86.0
Superfund	$2,165.0	$2,295.0	$2,596.0	$301.0
Radiation: Response Preparedness	**$6,679.7**	**$6,964.0**	**$7,251.0**	**$287.0**
EPM	$2,899.4	$2,997.0	$3,087.0	$90.0
S&T	$3,780.3	$3,967.0	$4,164.0	$197.0
Reduce Risks from Indoor Air	**$24,712.7**	**$21,229.0**	**$21,808.0**	**$579.0**
EPM	$24,009.8	$20,512.0	$21,073.0	$561.0
S&T	$702.9	$717.0	$735.0	$18.0
Regional Geographic Initiatives	**$5,515.8**	**$0.0**	**$0.0**	**$0.0**
EPM	$5,515.8	$0.0	$0.0	$0.0
Regional Science and Technology	**$3,293.3**	**$3,219.0**	**$3,283.0**	**$64.0**
EPM	$3,293.3	$3,219.0	$3,283.0	$64.0
Regulatory Innovation	**$23,392.1**	**$19,811.0**	**$20,606.0**	**$795.0**
EPM	$23,392.1	$19,811.0	$20,606.0	$795.0
Regulatory/Economic-Management and Analysis	**$17,379.6**	**$16,729.0**	**$22,403.0**	**$5,674.0**
EPM	$17,379.6	$16,729.0	$22,403.0	$5,674.0
Research: Air Toxics	**$1,192.3**	**$0.0**	**$0.0**	**$0.0**
S&T	$1,192.3	$0.0	$0.0	$0.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Research: Computational Toxicology	**$13,987.1**	**$15,156.0**	**$19,602.0**	**$4,446.0**
S&T	$13,987.1	$15,156.0	$19,602.0	$4,446.0
Research: Drinking Water	**$48,228.2**	**$46,873.0**	**$47,909.0**	**$1,036.0**
S&T	$48,228.2	$46,873.0	$47,909.0	$1,036.0
Research: Endocrine Disruptor	**$11,158.9**	**$11,486.0**	**$11,442.0**	**($44.0)**
S&T	$11,158.9	$11,486.0	$11,442.0	($44.0)
Research: Fellowships	**$9,721.8**	**$9,651.0**	**$10,894.0**	**$1,243.0**
S&T	$9,721.8	$9,651.0	$10,894.0	$1,243.0
Research: Global Change	**$17,423.9**	**$17,886.0**	**$20,909.0**	**$3,023.0**
S&T	$17,423.9	$17,886.0	$20,909.0	$3,023.0
Research: Human Health and Ecosystems	**$146,871.2**	**$153,760.0**	**$158,310.0**	**$4,550.0**
S&T	$146,871.2	$153,760.0	$158,310.0	$4,550.0
Research: Land Protection and Restoration	**$31,967.7**	**$35,686.0**	**$36,404.0**	**$718.0**
LUST	$567.7	$475.0	$484.0	$9.0
Oil Spills	$794.6	$720.0	$737.0	$17.0
S&T	$11,212.5	$13,586.0	$13,782.0	$196.0
Superfund	$19,392.9	$20,905.0	$21,401.0	$496.0
Research: Pesticides and Toxics	**$24,616.7**	**$26,949.0**	**$27,839.0**	**$890.0**
S&T	$24,616.7	$26,949.0	$27,839.0	$890.0
Research: Water Quality	**$53,343.0**	**$59,291.0**	**$62,454.0**	**$3,163.0**
S&T	$53,343.0	$59,291.0	$62,454.0	$3,163.0
Research: Clean Air	**$57,575.5**	**$80,541.0**	**$83,164.0**	**$2,623.0**
S&T	$57,575.5	$80,541.0	$83,164.0	$2,623.0
Research: Economics and Decision Science(EDS)	**$1,877.3**	**$0.0**	**$0.0**	**$0.0**
S&T	$1,877.3	$0.0	$0.0	$0.0
Research: NAAQS	**$17,428.3**	**$0.0**	**$0.0**	**$0.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
S&T	$17,428.3	$0.0	$0.0	$0.0
Research: Sustainability	**$22,445.7**	**$21,236.0**	**$24,107.0**	**$2,871.0**
S&T	$22,346.0	$21,157.0	$24,107.0	$2,950.0
Superfund	$99.7	$79.0	$0.0	($79.0)
Science Advisory Board	**$5,653.4**	**$5,451.0**	**$5,631.0**	**$180.0**
EPM	$5,653.4	$5,451.0	$5,631.0	$180.0
Science Policy and Biotechnology	**$2,105.9**	**$1,738.0**	**$1,750.0**	**$12.0**
EPM	$2,105.9	$1,738.0	$1,750.0	$12.0
Small Business Ombudsman	**$3,778.4**	**$2,981.0**	**$3,065.0**	**$84.0**
EPM	$3,778.4	$2,981.0	$3,065.0	$84.0
Small Minority Business Assistance	**$2,995.6**	**$2,296.0**	**$2,364.0**	**$68.0**
EPM	$2,995.6	$2,296.0	$2,364.0	$68.0
State and Local Prevention and Preparedness	**$12,518.5**	**$13,008.0**	**$13,555.0**	**$547.0**
EPM	$12,518.5	$13,008.0	$13,555.0	$547.0
Stratospheric Ozone: Domestic Programs	**$4,939.0**	**$5,703.0**	**$5,844.0**	**$141.0**
EPM	$4,939.0	$5,703.0	$5,844.0	$141.0
Stratospheric Ozone: Multilateral Fund	**$9,683.0**	**$9,697.0**	**$9,865.0**	**$168.0**
EPM	$9,683.0	$9,697.0	$9,865.0	$168.0
Superfund: EPA Emergency Preparedness	**$9,608.7**	**$9,442.0**	**$9,791.0**	**$349.0**
Superfund	$9,608.7	$9,442.0	$9,791.0	$349.0
Superfund: Emergency Response and Removal	**$223,136.3**	**$195,043.0**	**$202,843.0**	**$7,800.0**
Superfund	$223,136.3	$195,043.0	$202,843.0	$7,800.0
Superfund: Enforcement	**$168,674.1**	**$166,148.0**	**$173,176.0**	**$7,028.0**
Superfund	$168,674.1	$166,148.0	$173,176.0	$7,028.0
Superfund: Federal Facilities	**$33,558.3**	**$31,306.0**	**$32,203.0**	**$897.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Superfund	$33,558.3	$31,306.0	$32,203.0	$897.0
Superfund: Remedial	**$726,765.3**	**$604,992.0**	**$605,000.0**	**$8.0**
Superfund	$726,765.3	$604,992.0	$605,000.0	$8.0
Superfund: Support to Other Federal Agencies	**$4,888.0**	**$6,575.0**	**$6,575.0**	**$0.0**
Superfund	$4,888.0	$6,575.0	$6,575.0	$0.0
Superfund: Federal Facilities Enforcement	**$9,124.8**	**$9,872.0**	**$10,378.0**	**$506.0**
Superfund	$9,124.8	$9,872.0	$10,378.0	$506.0
Surface Water Protection	**$197,780.0**	**$197,772.0**	**$210,437.0**	**$12,665.0**
EPM	$197,780.0	$197,772.0	$210,437.0	$12,665.0
TRI / Right to Know	**$15,213.2**	**$15,719.0**	**$15,656.0**	**($63.0)**
EPM	$15,213.2	$15,719.0	$15,656.0	($63.0)
Toxic Substances: Chemical Risk Management	**$6,518.9**	**$5,422.0**	**$5,923.0**	**$501.0**
EPM	$6,518.9	$5,422.0	$5,923.0	$501.0
Toxic Substances: Chemical Risk Review and Reduction	**$48,399.3**	**$47,078.0**	**$55,005.0**	**$7,927.0**
EPM	$48,399.3	$47,078.0	$55,005.0	$7,927.0
Toxic Substances: Lead Risk Reduction Program	**$12,083.7**	**$13,927.0**	**$14,442.0**	**$515.0**
EPM	$12,083.7	$13,927.0	$14,442.0	$515.0
Trade and Governance	**$0.0**	**$6,273.0**	**$6,451.0**	**$178.0**
EPM	$0.0	$6,273.0	$6,451.0	$178.0
Tribal - Capacity Building	**$12,152.4**	**$11,973.0**	**$12,439.0**	**$466.0**
EPM	$12,152.4	$11,973.0	$12,439.0	$466.0
US Mexico Border	**$6,110.1**	**$5,561.0**	**$5,047.0**	**($514.0)**
EPM	$6,110.1	$5,561.0	$5,047.0	($514.0)
Wetlands	**$21,868.0**	**$22,539.0**	**$23,336.0**	**$797.0**
EPM	$21,868.0	$22,539.0	$23,336.0	$797.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Not Specified	**($5,000.0)**	**($10,000.0)**	**($10,000.0)**	**$0.0**
Rescissions	($5,000.0)	($10,000.0)	($10,000.0)	$0.0
TOTAL, EPA	**$7,993,075.1**	**$7,643,674.0**	**$10,486,000.0**	**$2,842,326.0**

Environmental Protection Agency
FY 2010 Annual Performance Plan and Congressional Justification

PROGRAM PROJECTS BY PROGRAM AREA
(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Science & Technology				
Air Toxics and Quality				
Clean Air Allowance Trading Programs	$9,253.9	$9,152.0	$9,979.0	$827.0
Federal Support for Air Quality Management	$12,676.0	$11,133.0	$11,542.0	$409.0
Federal Support for Air Toxics Program	$2,907.9	$2,279.0	$2,339.0	$60.0
Federal Vehicle and Fuels Standards and Certification	$70,463.2	$76,445.0	$91,990.0	$15,545.0
Radiation: Protection	$2,069.1	$2,156.0	$2,242.0	$86.0
Radiation: Response Preparedness	$3,780.3	$3,967.0	$4,164.0	$197.0
Subtotal, Air Toxics and Quality	**$101,150.4**	**$105,132.0**	**$122,256.0**	**$17,124.0**
Climate Protection Program				
Climate Protection Program	$17,156.3	$16,828.0	$18,975.0	$2,147.0
Enforcement				
Forensics Support	$14,042.7	$15,087.0	$15,946.0	$859.0
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
Water Sentinel	$26,547.5	$14,982.0	$23,726.0	$8,744.0
Homeland Security: Critical Infrastructure Protection (other activities)	$6,109.2	$4,478.0	$4,603.0	$125.0
Subtotal, Homeland Security: Critical Infrastructure Protection	$32,656.7	$19,460.0	$28,329.0	$8,869.0
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	$19,964.2	$26,407.0	$25,430.0	($977.0)
Laboratory Preparedness and Response	$507.9	$494.0	$500.0	$6.0
Safe Building	$2,794.4	$1,976.0	$2,000.0	$24.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$17,540.8	$14,794.0	$14,479.0	($315.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$40,807.3	$43,671.0	$42,409.0	($1,262.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	$1,428.1	$587.0	$594.0	$7.0
Subtotal, Homeland Security	**$74,892.1**	**$63,718.0**	**$71,332.0**	**$7,614.0**
Indoor Air				
Indoor Air: Radon Program	$437.8	$403.0	$422.0	$19.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Reduce Risks from Indoor Air	$702.9	$717.0	$735.0	$18.0
Subtotal, Indoor Air	**$1,140.7**	**$1,120.0**	**$1,157.0**	**$37.0**
IT / Data Management / Security				
IT / Data Management	$3,762.6	$3,969.0	$4,073.0	$104.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$35,398.9	$34,521.0	$33,947.0	($574.0)
Utilities	$17,894.3	$18,547.0	$19,177.0	$630.0
Security	$9,609.6	$11,989.0	$10,260.0	($1,729.0)
Facilities Infrastructure and Operations (other activities)	$6,336.4	$8,778.0	$9,498.0	$720.0
Subtotal, Facilities Infrastructure and Operations	$69,239.2	$73,835.0	$72,882.0	($953.0)
Subtotal, Operations and Administration	**$69,239.2**	**$73,835.0**	**$72,882.0**	**($953.0)**
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide Risk	$3,346.9	$3,215.0	$3,663.0	$448.0
Pesticides: Protect the Environment from Pesticide Risk	$1,998.2	$2,011.0	$2,292.0	$281.0
Pesticides: Realize the Value of Pesticide Availability	$442.4	$445.0	$508.0	$63.0
Pesticides: Registration of New Pesticides	$222.6	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$169.1	$0.0	$0.0	$0.0
Subtotal, Pesticides Licensing	**$6,179.2**	**$5,671.0**	**$6,463.0**	**$792.0**
Research: Clean Air				
Research: Air Toxics	$1,192.3	$0.0	$0.0	$0.0
Research: Clean Air	$57,575.5	$80,541.0	$83,164.0	$2,623.0
Research: Global Change	$17,423.9	$17,886.0	$20,909.0	$3,023.0
Research: NAAQS	$17,428.3	$0.0	$0.0	$0.0
Subtotal, Research: Clean Air	**$93,620.0**	**$98,427.0**	**$104,073.0**	**$5,646.0**
Research: Clean Water				
Research: Drinking Water	$48,228.2	$46,873.0	$47,909.0	$1,036.0
Research: Water Quality	$53,343.0	$59,291.0	$62,454.0	$3,163.0
Subtotal, Research: Clean Water	**$101,571.2**	**$106,164.0**	**$110,363.0**	**$4,199.0**
Research / Congressional Priorities				
Congressionally Mandated Projects	$1,034.0	$5,450.0	$0.0	($5,450.0)
Research: Human Health and Ecosystems				
Human Health Risk Assessment	$34,569.9	$39,350.0	$45,133.0	$5,783.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Research: Computational Toxicology	$13,987.1	$15,156.0	$19,602.0	$4,446.0
Research: Endocrine Disruptor	$11,158.9	$11,486.0	$11,442.0	($44.0)
Research: Fellowships	$9,721.8	$9,651.0	$10,894.0	$1,243.0
Research: Human Health and Ecosystems				
Human Health	$45,199.1	$77,942.0	$82,071.0	$4,129.0
Ecosystems	$57,965.6	$75,818.0	$76,239.0	$421.0
Research: Human Health and Ecosystems (other activities)	$43,706.5	$0.0	$0.0	$0.0
Subtotal, Research: Human Health and Ecosystems	$146,871.2	$153,760.0	$158,310.0	$4,550.0
Subtotal, Research: Human Health and Ecosystems	**$216,308.9**	**$229,403.0**	**$245,381.0**	**$15,978.0**
Research: Land Protection				
Research: Land Protection and Restoration	$11,212.5	$13,586.0	$13,782.0	$196.0
Research: Sustainability				
Research: Economics and Decision Science(EDS)	$1,877.3	$0.0	$0.0	$0.0
Research: Sustainability	$22,346.0	$21,157.0	$24,107.0	$2,950.0
Subtotal, Research: Sustainability	**$24,223.3**	**$21,157.0**	**$24,107.0**	**$2,950.0**
Toxic Research and Prevention				
Research: Pesticides and Toxics	$24,616.7	$26,949.0	$27,839.0	$890.0
Water: Human Health Protection				
Drinking Water Programs	$3,292.5	$3,555.0	$3,720.0	$165.0
Total, Science & Technology	**$763,442.3**	**$790,051.0**	**$842,349.0**	**$52,298.0**
Environmental Program & Management				
Air Toxics and Quality				
Clean Air Allowance Trading Programs	$19,774.8	$19,993.0	$20,548.0	$555.0
Federal Stationary Source Regulations	$27,253.7	$26,488.0	$27,179.0	$691.0
Federal Support for Air Quality Management				
Clean Diesel Initiative	$349.5	$0.0	$0.0	$0.0
Federal Support for Air Quality Management (other activities)	$94,206.5	$96,480.0	$100,510.0	$4,030.0
Subtotal, Federal Support for Air Quality Management	$94,556.0	$96,480.0	$100,510.0	$4,030.0
Federal Support for Air Toxics Program	$25,208.5	$22,836.0	$24,960.0	$2,124.0
Radiation: Protection	$10,820.8	$10,957.0	$11,272.0	$315.0
Radiation: Response Preparedness	$2,899.4	$2,997.0	$3,087.0	$90.0
Stratospheric Ozone: Domestic Programs	$4,939.0	$5,703.0	$5,844.0	$141.0
Stratospheric Ozone: Multilateral Fund	$9,683.0	$9,697.0	$9,865.0	$168.0
Subtotal, Air Toxics and Quality	**$195,135.2**	**$195,151.0**	**$203,265.0**	**$8,114.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Brownfields				
Brownfields	$25,200.3	$22,957.0	$25,254.0	$2,297.0
Climate Protection Program				
Climate Protection Program				
Energy STAR	$38,713.6	$49,735.0	$50,748.0	$1,013.0
Methane to markets	$6,348.1	$4,497.6	$4,582.0	$84.4
Asian Pacific Partnership	$1,567.0	$0.0	$0.0	$0.0
Greenhouse Gas Reporting Registry	$3,205.7	$6,388.0	$17,005.0	$10,617.0
Climate Protection Program (other activities)	$47,529.9	$33,650.4	$39,299.0	$5,648.6
Subtotal, Climate Protection Program	$97,364.3	$94,271.0	$111,634.0	$17,363.0
Subtotal, Climate Protection Program	**$97,364.3**	**$94,271.0**	**$111,634.0**	**$17,363.0**
Compliance				
Compliance Assistance and Centers	$28,063.5	$23,770.0	$26,070.0	$2,300.0
Compliance Incentives	$10,250.7	$8,992.0	$10,702.0	$1,710.0
Compliance Monitoring	$92,048.1	$96,064.0	$99,859.0	$3,795.0
Subtotal, Compliance	**$130,362.3**	**$128,826.0**	**$136,631.0**	**$7,805.0**
Enforcement				
Civil Enforcement	$131,986.8	$137,182.0	$145,949.0	$8,767.0
Criminal Enforcement	$40,128.8	$45,763.0	$49,399.0	$3,636.0
Enforcement Training	$2,924.9	$2,938.0	$3,097.0	$159.0
Environmental Justice	$4,332.1	$6,993.0	$7,203.0	$210.0
NEPA Implementation	$14,690.1	$16,281.0	$18,295.0	$2,014.0
Subtotal, Enforcement	**$194,062.7**	**$209,157.0**	**$223,943.0**	**$14,786.0**
Environmental Protection / Congressional Priorities				
Congressionally Mandated Projects	$12,403.5	$17,450.0	$0.0	($17,450.0)
Geographic Programs				
Geographic Program: Chesapeake Bay	$36,494.1	$31,001.0	$35,139.0	$4,138.0
Geographic Program: Great Lakes	$22,968.4	$23,000.0	$0.0	($23,000.0)
Geographic Program: Long Island Sound	$4,827.0	$3,000.0	$3,000.0	$0.0
Geographic Program: Gulf of Mexico	$4,429.0	$4,578.0	$4,638.0	$60.0
Geographic Program: Lake Champlain	$2,919.9	$3,000.0	$1,434.0	($1,566.0)
Geographic Program: Other				
San Francisco Bay	$0.0	$5,000.0	$5,000.0	$0.0
Puget Sound	$8,696.1	$20,000.0	$20,000.0	$0.0
Lake Pontchartrain	$1,490.0	$978.0	$978.0	$0.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Community Action for a Renewed Environment (CARE)	$3,360.1	$2,000.0	$2,448.0	$448.0
Geographic Program: Other (other activities)	$4,474.4	$3,402.0	$3,493.0	$91.0
Subtotal, Geographic Program: Other	$18,020.6	$31,380.0	$31,919.0	$539.0
Great Lakes Restoration	$0.0	$0.0	$475,000.0	$475,000.0
Regional Geographic Initiatives	$5,515.8	$0.0	$0.0	$0.0
Subtotal, Geographic Programs	**$95,174.8**	**$95,959.0**	**$551,130.0**	**$455,171.0**
Homeland Security				
Homeland Security: Communication and Information	$6,611.6	$6,899.0	$7,030.0	$131.0
Homeland Security: Critical Infrastructure Protection				
Decontamination	$124.7	$98.0	$99.0	$1.0
Homeland Security: Critical Infrastructure Protection (other activities)	$4,689.7	$6,739.0	$6,915.0	$176.0
Subtotal, Homeland Security: Critical Infrastructure Protection	$4,814.4	$6,837.0	$7,014.0	$177.0
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	$592.6	$3,378.0	$3,443.0	$65.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$3,512.7	$0.0	$0.0	$0.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$4,105.3	$3,378.0	$3,443.0	$65.0
Homeland Security: Protection of EPA Personnel and Infrastructure	$5,462.5	$6,292.0	$6,414.0	$122.0
Subtotal, Homeland Security	**$20,993.8**	**$23,406.0**	**$23,901.0**	**$495.0**
Indoor Air				
Indoor Air: Radon Program	$5,269.5	$5,383.0	$5,576.0	$193.0
Reduce Risks from Indoor Air	$24,009.8	$20,512.0	$21,073.0	$561.0
Subtotal, Indoor Air	**$29,279.3**	**$25,895.0**	**$26,649.0**	**$754.0**
Information Exchange / Outreach				
Children and Other Sensitive Populations: Agency Coordination	$7,226.7	$6,071.0	$6,515.0	$444.0
Environmental Education	$9,050.3	$8,979.0	$9,038.0	$59.0
Congressional, Intergovernmental, External Relations	$48,777.5	$48,456.0	$50,980.0	$2,524.0
Exchange Network	$14,133.2	$16,860.0	$18,213.0	$1,353.0
Small Business Ombudsman	$3,778.4	$2,981.0	$3,065.0	$84.0
Small Minority Business Assistance	$2,995.6	$2,296.0	$2,364.0	$68.0
State and Local Prevention and Preparedness	$12,518.5	$13,008.0	$13,555.0	$547.0
TRI / Right to Know	$15,213.2	$15,719.0	$15,656.0	($63.0)
Tribal - Capacity Building	$12,152.4	$11,973.0	$12,439.0	$466.0
Subtotal, Information Exchange / Outreach	**$125,845.8**	**$126,343.0**	**$131,825.0**	**$5,482.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
International Programs				
US Mexico Border	$6,110.1	$5,561.0	$5,047.0	($514.0)
Commission for Environmental Cooperation	$4,289.2	$0.0	$0.0	$0.0
Environment and Trade	$1,903.7	$0.0	$0.0	$0.0
International Capacity Building	$5,107.0	$0.0	$0.0	$0.0
POPs Implementation	$1,811.9	$0.0	$0.0	$0.0
International Sources of Pollution	$0.0	$7,830.0	$8,851.0	$1,021.0
Trade and Governance	$0.0	$6,273.0	$6,451.0	$178.0
Subtotal, International Programs	**$19,221.9**	**$19,664.0**	**$20,349.0**	**$685.0**
IT / Data Management / Security				
Information Security	$6,157.6	$5,854.0	$6,015.0	$161.0
IT / Data Management	$91,928.2	$93,171.0	$103,305.0	$10,134.0
Subtotal, IT / Data Management / Security	**$98,085.8**	**$99,025.0**	**$109,320.0**	**$10,295.0**
Legal / Science / Regulatory / Economic Review				
Administrative Law	$5,657.9	$5,128.0	$5,352.0	$224.0
Alternative Dispute Resolution	$1,136.8	$1,374.0	$1,423.0	$49.0
Civil Rights / Title VI Compliance	$11,109.6	$11,488.0	$12,000.0	$512.0
Legal Advice: Environmental Program	$39,021.3	$40,247.0	$41,922.0	$1,675.0
Legal Advice: Support Program	$13,524.9	$14,676.0	$15,611.0	$935.0
Regional Science and Technology	$3,293.3	$3,219.0	$3,283.0	$64.0
Regulatory Innovation	$23,392.1	$19,811.0	$20,606.0	$795.0
Regulatory/Economic-Management and Analysis	$17,379.6	$16,729.0	$22,403.0	$5,674.0
Science Advisory Board	$5,653.4	$5,451.0	$5,631.0	$180.0
Subtotal, Legal / Science / Regulatory / Economic Review	**$120,168.9**	**$118,123.0**	**$128,231.0**	**$10,108.0**
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$157,406.5	$160,366.0	$162,040.0	$1,674.0
Utilities	$7,019.4	$10,973.0	$13,514.0	$2,541.0
Security	$24,194.9	$25,676.0	$27,997.0	$2,321.0
Facilities Infrastructure and Operations (other activities)	$107,614.2	$106,869.0	$117,061.0	$10,192.0
Subtotal, Facilities Infrastructure and Operations	$296,235.0	$303,884.0	$320,612.0	$16,728.0
Central Planning, Budgeting, and Finance	$68,083.1	$73,432.0	$85,215.0	$11,783.0
Acquisition Management	$29,868.9	$31,872.0	$32,281.0	$409.0
Financial Assistance Grants / IAG Management	$24,174.4	$25,868.0	$26,681.0	$813.0
Human Resources Management	$40,886.6	$44,141.0	$47,106.0	$2,965.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Subtotal, Operations and Administration	**$459,248.0**	**$479,197.0**	**$511,895.0**	**$32,698.0**
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide Risk	$59,536.1	$60,103.0	$61,747.0	$1,644.0
Pesticides: Protect the Environment from Pesticide Risk	$37,443.3	$41,236.0	$42,318.0	$1,082.0
Pesticides: Realize the Value of Pesticide Availability	$11,529.6	$12,984.0	$13,372.0	$388.0
Pesticides: Field Programs	$5,764.6	$0.0	$0.0	$0.0
Pesticides: Registration of New Pesticides	$1,417.6	$0.0	$0.0	$0.0
Pesticides: Review / Reregistration of Existing Pesticides	$3,918.4	$0.0	$0.0	$0.0
Science Policy and Biotechnology	$2,105.9	$1,738.0	$1,750.0	$12.0
Subtotal, Pesticides Licensing	**$121,715.5**	**$116,061.0**	**$119,187.0**	**$3,126.0**
Resource Conservation and Recovery Act (RCRA)				
RCRA: Waste Management	$66,432.8	$64,511.0	$67,550.0	$3,039.0
RCRA: Corrective Action	$39,960.6	$38,909.0	$40,459.0	$1,550.0
RCRA: Waste Minimization & Recycling	$14,731.9	$13,471.0	$14,122.0	$651.0
Subtotal, Resource Conservation and Recovery Act (RCRA)	**$121,125.3**	**$116,891.0**	**$122,131.0**	**$5,240.0**
Toxics Risk Review and Prevention				
Endocrine Disruptors	$7,102.4	$8,498.0	$8,659.0	$161.0
Toxic Substances: Chemical Risk Review and Reduction	$48,399.3	$47,078.0	$55,005.0	$7,927.0
Pollution Prevention Program	$15,538.0	$18,334.0	$18,874.0	$540.0
Toxic Substances: Chemical Risk Management	$6,518.9	$5,422.0	$5,923.0	$501.0
Toxic Substances: Lead Risk Reduction Program	$12,083.7	$13,927.0	$14,442.0	$515.0
Subtotal, Toxics Risk Review and Prevention	**$89,642.3**	**$93,259.0**	**$102,903.0**	**$9,644.0**
Underground Storage Tanks (LUST / UST)				
LUST / UST	$11,157.9	$11,946.0	$12,451.0	$505.0
Water: Ecosystems				
Great Lakes Legacy Act	$27,416.2	$37,000.0	$0.0	($37,000.0)
National Estuary Program / Coastal Waterways	$26,046.7	$26,557.0	$26,967.0	$410.0
Wetlands	$21,868.0	$22,539.0	$23,336.0	$797.0
Subtotal, Water: Ecosystems	**$75,330.9**	**$86,096.0**	**$50,303.0**	**($35,793.0)**
Water: Human Health Protection				
Beach / Fish Programs	$2,307.5	$2,806.0	$2,870.0	$64.0
Drinking Water Programs	$107,454.8	$98,779.0	$102,856.0	$4,077.0
Subtotal, Water: Human Health Protection	**$109,762.3**	**$101,585.0**	**$105,726.0**	**$4,141.0**

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Water Quality Protection				
Marine Pollution	$13,430.4	$13,045.0	$13,399.0	$354.0
Surface Water Protection	$197,780.0	$197,772.0	$210,437.0	$12,665.0
Subtotal, Water Quality Protection	**$211,210.4**	**$210,817.0**	**$223,836.0**	**$13,019.0**
Total, Environmental Program & Management	**$2,362,491.2**	**$2,392,079.0**	**$2,940,564.0**	**$548,485.0**
Inspector General				
Audits, Evaluations, and Investigations				
Audits, Evaluations, and Investigations	$41,896.5	$44,791.0	$44,791.0	$0.0
Total, Inspector General	**$41,896.5**	**$44,791.0**	**$44,791.0**	**$0.0**
Building and Facilities				
Homeland Security				
Homeland Security: Protection of EPA Personnel and Infrastructure	$8,225.9	$8,070.0	$8,070.0	$0.0
Operations and Administration				
Facilities Infrastructure and Operations	$28,081.5	$26,931.0	$28,931.0	$2,000.0
Total, Building and Facilities	**$36,307.4**	**$35,001.0**	**$37,001.0**	**$2,000.0**
Hazardous Substance Superfund				
Air Toxics and Quality				
Radiation: Protection	$2,165.0	$2,295.0	$2,596.0	$301.0
Audits, Evaluations, and Investigations				
Audits, Evaluations, and Investigations	$12,037.8	$9,975.0	$9,975.0	$0.0
Compliance				
Compliance Assistance and Centers	$33.1	$22.0	$0.0	($22.0)
Compliance Incentives	$58.7	$137.0	$0.0	($137.0)
Compliance Monitoring	$1,251.3	$1,192.0	$1,247.0	$55.0
Subtotal, Compliance	**$1,343.1**	**$1,351.0**	**$1,247.0**	**($104.0)**
Enforcement				
Environmental Justice	$502.1	$818.0	$822.0	$4.0
Superfund: Enforcement	$168,674.1	$166,148.0	$173,176.0	$7,028.0
Superfund: Federal Facilities Enforcement	$9,124.8	$9,872.0	$10,378.0	$506.0
Civil Enforcement	$591.0	$0.0	$0.0	$0.0
Criminal Enforcement	$7,687.0	$7,767.0	$8,336.0	$569.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Enforcement Training	$785.1	$793.0	$851.0	$58.0
Forensics Support	$2,629.1	$2,378.0	$2,471.0	$93.0
Subtotal, Enforcement	**$189,993.2**	**$187,776.0**	**$196,034.0**	**$8,258.0**
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
Decontamination	$181.4	$198.0	$198.0	$0.0
Homeland Security: Critical Infrastructure Protection (other activities)	$1,584.9	$1,538.0	$1,626.0	$88.0
Subtotal, Homeland Security: Critical Infrastructure Protection	$1,766.3	$1,736.0	$1,824.0	$88.0
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	$8,153.4	$10,613.0	$10,774.0	$161.0
Laboratory Preparedness and Response	$3,792.6	$9,588.0	$9,621.0	$33.0
Homeland Security: Preparedness, Response, and Recovery (other activities)	$33,337.2	$33,440.0	$33,148.0	($292.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	$45,283.2	$53,641.0	$53,543.0	($98.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	$585.0	$1,194.0	$1,194.0	$0.0
Subtotal, Homeland Security	**$47,634.5**	**$56,571.0**	**$56,561.0**	**($10.0)**
Information Exchange / Outreach				
Congressional, Intergovernmental, External Relations	$145.9	$0.0	$0.0	$0.0
Exchange Network	$1,429.8	$1,433.0	$1,433.0	$0.0
Subtotal, Information Exchange / Outreach	**$1,575.7**	**$1,433.0**	**$1,433.0**	**$0.0**
IT / Data Management / Security				
Information Security	$474.6	$783.0	$799.0	$16.0
IT / Data Management	$15,929.7	$16,896.0	$17,124.0	$228.0
Subtotal, IT / Data Management / Security	**$16,404.3**	**$17,679.0**	**$17,923.0**	**$244.0**
Legal / Science / Regulatory / Economic Review				
Alternative Dispute Resolution	$776.9	$874.0	$895.0	$21.0
Legal Advice: Environmental Program	$802.4	$708.0	$746.0	$38.0
Subtotal, Legal / Science / Regulatory / Economic Review	**$1,579.3**	**$1,582.0**	**$1,641.0**	**$59.0**
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$44,867.0	$45,353.0	$44,300.0	($1,053.0)
Utilities	$1,176.7	$3,042.0	$3,397.0	$355.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Security	$6,392.7	$6,524.0	$8,299.0	$1,775.0
Facilities Infrastructure and Operations (other activities)	$19,807.5	$21,331.0	$22,601.0	$1,270.0
Subtotal, Facilities Infrastructure and Operations	$72,243.9	$76,250.0	$78,597.0	$2,347.0
Financial Assistance Grants / IAG Management	$3,044.7	$3,168.0	$3,283.0	$115.0
Acquisition Management	$20,705.1	$24,361.0	$23,229.0	($1,132.0)
Human Resources Management	$4,681.2	$5,386.0	$8,068.0	$2,682.0
Central Planning, Budgeting, and Finance	$20,861.5	$25,478.0	$26,746.0	$1,268.0
Subtotal, Operations and Administration	**$121,536.4**	**$134,643.0**	**$139,923.0**	**$5,280.0**
Research: Human Health and Ecosystems				
Human Health Risk Assessment	$6,799.6	$3,377.0	$3,395.0	$18.0
Research: Land Protection				
Research: Land Protection and Restoration	$19,392.9	$20,905.0	$21,401.0	$496.0
Research: Sustainability				
Research: Sustainability	$99.7	$79.0	$0.0	($79.0)
Superfund Cleanup				
Superfund: Emergency Response and Removal	$223,136.3	$195,043.0	$202,843.0	$7,800.0
Superfund: EPA Emergency Preparedness	$9,608.7	$9,442.0	$9,791.0	$349.0
Superfund: Federal Facilities	$33,558.3	$31,306.0	$32,203.0	$897.0
Superfund: Remedial	$726,765.3	$604,992.0	$605,000.0	$8.0
Superfund: Support to Other Federal Agencies	$4,888.0	$6,575.0	$6,575.0	$0.0
Brownfields Projects	$7,070.7	$0.0	$0.0	$0.0
Subtotal, Superfund Cleanup	**$1,005,027.3**	**$847,358.0**	**$856,412.0**	**$9,054.0**
Total, Hazardous Substance Superfund	**$1,425,588.8**	**$1,285,024.0**	**$1,308,541.0**	**$23,517.0**
Leaking Underground Storage Tanks				
Compliance				
Compliance Assistance and Centers	$787.5	$817.0	$788.0	($29.0)
IT / Data Management / Security				
IT / Data Management	$178.0	$162.0	$162.0	$0.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$685.0	$696.0	$696.0	$0.0
Facilities Infrastructure and Operations (other activities)	$205.3	$206.0	$207.0	$1.0
Subtotal, Facilities Infrastructure and Operations	$890.3	$902.0	$903.0	$1.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Acquisition Management	$154.2	$165.0	$165.0	$0.0
Central Planning, Budgeting, and Finance	$708.9	$987.0	$1,122.0	$135.0
Human Resources Management	$3.0	$3.0	$0.0	($3.0)
Subtotal, Operations and Administration	**$1,756.4**	**$2,057.0**	**$2,190.0**	**$133.0**
Research: Land Protection				
Research: Land Protection and Restoration	$567.7	$475.0	$484.0	$9.0
Underground Storage Tanks (LUST / UST)				
LUST / UST				
EPAct & Related Authorities Implemention	$1,058.5	$0.0	$0.0	$0.0
LUST / UST (other activities)	$14,193.0	$11,105.0	$11,855.0	$750.0
Subtotal, LUST / UST	$15,251.5	$11,105.0	$11,855.0	$750.0
LUST Cooperative Agreements				
EPAct & Related Authorities Implemention	$26,496.8	$0.0	$0.0	$0.0
LUST Cooperative Agreements (other activities)	$63,056.0	$62,461.0	$63,192.0	$731.0
Subtotal, LUST Cooperative Agreements	$89,552.8	$62,461.0	$63,192.0	$731.0
LUST Prevention				
EPAct & Related Authorities Implemention	$0.0	$35,500.0	$34,430.0	($1,070.0)
Subtotal, LUST Prevention	$0.0	$35,500.0	$34,430.0	($1,070.0)
Subtotal, Underground Storage Tanks (LUST / UST)	**$104,804.3**	**$109,066.0**	**$109,477.0**	**$411.0**
Total, Leaking Underground Storage Tanks	**$108,093.9**	**$112,577.0**	**$113,101.0**	**$524.0**
Oil Spill Response				
Compliance				
Compliance Assistance and Centers	$285.3	$277.0	$317.0	$40.0
Enforcement				
Civil Enforcement	$1,851.0	$2,117.0	$2,406.0	$289.0
IT / Data Management / Security				
IT / Data Management	$15.0	$24.0	$24.0	$0.0
Oil				
Oil Spill: Prevention, Preparedness and Response	$13,880.8	$13,953.0	$14,397.0	$444.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	$431.0	$538.0	$438.0	($100.0)
Facilities Infrastructure and Operations (other activities)	$67.6	$58.0	$60.0	$2.0
Subtotal, Facilities Infrastructure and Operations	$498.6	$596.0	$498.0	($98.0)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Subtotal, Operations and Administration	**$498.6**	**$596.0**	**$498.0**	**($98.0)**
Research: Land Protection				
Research: Land Protection and Restoration	$794.6	$720.0	$737.0	$17.0
Total, Oil Spill Response	**$17,325.3**	**$17,687.0**	**$18,379.0**	**$692.0**
State and Tribal Assistance Grants				
State and Tribal Assistance Grants (STAG)				
Infrastructure Assistance: Clean Water SRF	$836,929.7	$689,080.0	$2,400,000.0	$1,710,920.0
Infrastructure Assistance: Drinking Water SRF	$949,968.9	$829,029.0	$1,500,000.0	$670,971.0
Congressionally Mandated Projects	$75,837.8	$153,000.0	$0.0	($153,000.0)
Infrastructure Assistance: Alaska Native Villages	$21,193.7	$18,500.0	$10,000.0	($8,500.0)
Brownfields Projects	$94,611.8	$97,000.0	$100,000.0	$3,000.0
Clean School Bus Initiative	$6,868.8	$0.0	$0.0	$0.0
Diesel Emissions Reduction Grant Program				
EPAct & Related Authorities Implemention	$0.0	$60,000.0	$60,000.0	$0.0
CA Emission Reduction Project Grants	$9,844.0	$15,000.0	$0.0	($15,000.0)
Diesel Emissions Reduction Grant Program (other activities)	$19,954.9	$0.0	$0.0	$0.0
Subtotal, Diesel Emissions Reduction Grant Program	$29,798.9	$75,000.0	$60,000.0	($15,000.0)
Infrastructure Assistance: Mexico Border	$65,138.5	$20,000.0	$10,000.0	($10,000.0)
Subtotal, State and Tribal Assistance Grants (STAG)	**$2,080,348.1**	**$1,881,609.0**	**$4,080,000.0**	**$2,198,391.0**
Categorical Grants				
Categorical Grant: Beaches Protection	$10,642.2	$9,900.0	$9,900.0	$0.0
Categorical Grant: Brownfields	$51,070.6	$49,495.0	$49,495.0	$0.0
Categorical Grant: Environmental Information	$14,402.4	$10,000.0	$10,000.0	$0.0
Categorical Grant: Hazardous Waste Financial Assistance	$101,740.4	$101,346.0	$106,346.0	$5,000.0
Categorical Grant: Homeland Security	$5,688.0	$4,950.0	$0.0	($4,950.0)
Categorical Grant: Lead	$14,699.7	$13,564.0	$14,564.0	$1,000.0
Categorical Grant: Local Govt Climate Change	$0.0	$10,000.0	$0.0	($10,000.0)
Categorical Grant: Nonpoint Source (Sec. 319)	$207,166.5	$200,857.0	$200,857.0	$0.0
Categorical Grant: Pesticides Enforcement	$20,098.6	$18,711.0	$18,711.0	$0.0
Categorical Grant: Pesticides Program Implementation	$14,014.7	$12,970.0	$13,520.0	$550.0
Categorical Grant: Pollution Control (Sec. 106)				
Monitoring Grants	$26,737.7	$18,500.0	$18,500.0	$0.0
Categorical Grant: Pollution Control (Sec. 106) (other activities)	$217,098.4	$199,995.0	$210,764.0	$10,769.0
Subtotal, Categorical Grant: Pollution Control (Sec. 106)	$243,836.1	$218,495.0	$229,264.0	$10,769.0
Categorical Grant: Pollution Prevention	$5,076.8	$4,940.0	$4,940.0	$0.0

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	Pres Bud vs. Enacted
Categorical Grant: Public Water System Supervision (PWSS)	$101,503.0	$99,100.0	$105,700.0	$6,600.0
Categorical Grant: Radon	$10,007.4	$8,074.0	$8,074.0	$0.0
Categorical Grant: Sector Program	$1,666.3	$1,828.0	$1,828.0	$0.0
Categorical Grant: State and Local Air Quality Management	$226,155.9	$224,080.0	$226,580.0	$2,500.0
Categorical Grant: Targeted Watersheds	$21,027.7	$0.0	$0.0	$0.0
Categorical Grant: Toxics Substances Compliance	$5,273.6	$5,099.0	$5,099.0	$0.0
Categorical Grant: Tribal Air Quality Management	$12,066.9	$13,300.0	$13,300.0	$0.0
Categorical Grant: Tribal General Assistance Program	$58,628.8	$57,925.0	$62,875.0	$4,950.0
Categorical Grant: Underground Injection Control (UIC)	$12,114.5	$10,891.0	$10,891.0	$0.0
Categorical Grant: Underground Storage Tanks	$3,600.7	$2,500.0	$2,500.0	$0.0
Categorical Grant: Wastewater Operator Training	$670.3	$0.0	$0.0	$0.0
Categorical Grant: Water Quality Cooperative Agreements	$445.3	$0.0	$0.0	$0.0
Categorical Grant: Wetlands Program Development	$15,985.2	$16,830.0	$16,830.0	$0.0
Subtotal, Categorical Grants	**$1,157,581.6**	**$1,094,855.0**	**$1,111,274.0**	**$16,419.0**
Total, State and Tribal Assistance Grants	**$3,237,929.7**	**$2,976,464.0**	**$5,191,274.0**	**$2,214,810.0**
Not Specified				
Rescission of Prior Year Funds	($5,000.0)	($10,000.0)	($10,000.0)	$0.0
Total, Rescission of Prior Year Funds	**($5,000.0)**	**($10,000.0)**	**($10,000.0)**	**$0.0**
TOTAL, EPA	**$7,993,075.1**	**$7,643,674.0**	**$10,486,000.0**	**$2,842,326.0**

DISCONTINUED PROGRAMS

Categorical Grant: Wastewater Operator Training

Program Area: Categorical Grants
Goal: Clean and Safe Water
Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$670.3***	***$0.0***	***$0.0***	***($0.0)***
Total Budget Authority / Obligations	$670.3	$0.0	$0.0	($0.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Section 104(g)(1) of the Clean Water Act authorized funding for the Wastewater Treatment Plant Operator On-site Assistance Training program. This program targeted small publicly-owned wastewater treatment plants, with a discharge of less than 5 million gallons per day. Federal funding for this program was administered through grants to states, often in cooperation with educational institutions or non-profit agencies. In most cases, assistance was administered through an environmental training center.

FY 2010 Activities and Performance Plan:

There is no request for this program in FY 2010. There are no current performance measures for this program (previously under EPA's Protect Water Quality Objective).

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CWA.

Categorical Grant: Targeted Watersheds
Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$21,027.7***	***$0.0***	***$0.0***	***($0.0)***
Total Budget Authority / Obligations	$21,027.7	$0.0	$0.0	($0.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Targeted Watersheds Grant Program focused on community-based approaches and management techniques to protect and restore the nation's waters.

FY 2010 Activities and Performance Plan:

There is no request for this program in FY 2010. There are no current performance measures for this program (previously under EPA's Protect Water Quality objective).

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

Department of the Interior, Environment, and Related Agencies Appropriations Act, 2006; Public Law 109-54.

Categorical Grant: Water Quality Cooperative Agreements

Program Area: Categorical Grants
Goal: Healthy Communities and Ecosystems
Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
State and Tribal Assistance Grants	***$21,027.7***	***$0.0***	***$0.0***	***($0.0)***
Total Budget Authority / Obligations	$21,027.7	$0.0	$0.0	($0.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Under authority of Section 104(b)(3) of the Clean Water Act, EPA made 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 was used by EPA's partners to further the Agency's goals of providing clean and safe water. The program was 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 2010 Activities and Performance Plan:

There is no request for this program in FY 2010. There are no current performance measures for this program (previously under EPA's Protect Water Quality objective).

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CWA.

Regional Geographic Initiatives
Program Area: Geographic Programs
Goal: Healthy Communities and Ecosystems
Objective(s): Communities

(Dollars in Thousands)

	FY 2008 Actuals	FY 2009 Enacted	FY 2010 Pres Bud	FY 2010 Pres Bud v. FY 2009 Enacted
Environmental Program Management	***$5,515.8***	***$0.0***	***$0.0***	***($0.0)***
Total Budget Authority / Obligations	$5,515.8	$0.0	$0.0	($0.0)
Total Workyears	4.9	0.0	0.0	0.0

Program Project Description:

EPA's Regional Geographic Initiative (RGI) supported innovative and geographically based projects. These funds were available to EPA Regional offices to support priority local and Regional environmental projects, which have included protecting children's health, restoring watersheds, providing for clean air, preventing pollution and fostering environmental stewardship. RGI provided a tool to facilitate holistic and innovative resolutions to complex environmental problems.

FY 2010 Activities and Performance Plan

There is no request for this program in FY 2010. There are no current performance measures for this program (previously under EPA's Objective 4.2: Communities).

FY 2010 Change from FY 2009 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CWA; CAA; TSCA; CERLA; SDWA; PPA; RCRA.

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 the Agency extend usage to mandatory programs to streamline their application process.

EPA received 2,885 applications through Grants.gov in 2008.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2009	020-00-04-00-04-0160-24	$517.763
2010	020-00-04-00-04-0160-24	$486.450

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)
2009	020-00-01-16-04-0230-24	$151.282
2010	020-00-01-16-04-0230-24	$124.454

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 Contribution (in thousands)
2009	020-00-01-16-02-4300-24	$89.973
2010	020-00-01-16-02-4300-24	$89.973*

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 will migrate from a manual Official Personnel File (OPF) process to the federal eOPF system. The Agency used a phased deployment approach in calendar year 2008. This initiative will benefit the Agency by reducing file room maintenance costs and improve customer service for employees and productivity for HR specialists. 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.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2009	020-00-01-16-03-1219-24	$474.230
2010	020-00-01-16-03-1219-24	$406.120

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.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2009	020-00-01-16-04-1218-24	$106.293
2010	020-00-01-16-04-1218-24	$106.293*

eTraining

This initiative 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.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2009	020-00-01-16-03-1217-24	$80.000
2010	020-00-01-16-03-1217-24	$80.000*

Human Resources LoB

The Human Resources Line of Business (HR LoB) provides the 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 FY 2009 and beyond.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2009	020-00-01-16-04-1200-24	$65.217
2010	020-00-01-16-04-1200-24	$65.217

Grants Management LoB

In FY 2008, EPA managed 7,960 grant awards equaling approximately $3.8 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 as 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 also will 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)
2009	020-00-04-00-04-1300-24	$59.316
2010	020-00-04-00-04-1300-24	$40.757

Business Gateway

By creating a single entry-point 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. This initiative also benefits EPA by centralizing OMB reporting requirements under the Small Business Paperwork Relief Act of 2002. Finally, EPA has over 100 initiatives, activities, and services directed at small business needs. Many of those initiatives are highlighted to small businesses through periodic features in Business.gov. This allows special focus to be brought to bear at critical times to the intended audiences for those initiatives. Business.gov also 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:

- a single point of access for electronic regulatory forms;
- "plain English" compliance guidance, fact sheets and links to checklists for small businesses; and
- an extensive Web site with numerous links to other internal and external assistance sources.

EPA anticipates similar benefits from Business Gateway in FYs 2009 and 2010.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2009	020-00-01-16-04-0100-24	$209.308
2010	020-00-01-16-04-0100-24	$52.758

Geospatial LoB

The Geospatial Line of Business (GeoLoB) is an intergovernmental project to improve the ability of the public and government to use geospatial information to support the business of government and facilitate decision-making. This initiative will reduce EPA costs and improve our operations in several areas. The investment in FY 2009 and FY 2010 will provide the necessary planning and coordination to begin providing significant benefits to EPA in the following ways:

EPA's geospatial program has achieved a cost avoidance of approximately $2 million per year by internally consolidating procurements for data and tools into multi-year enterprise licenses. The Agency is currently applying these lessons learned for the benefit of our partners in the GeoLoB as well as colleagues in State, Local and Tribal government organizations. 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. Throughout FY 2008, EPA has played a key leadership role in a GeoLoB Workgroup to explore opportunities for Federal-wide acquisition of key geospatial software and data. During FY 2009, we anticipate the first of these acquisitions will be released to the vendor community through our GeoLoB partners at GSA.

EPA benefits from Geospatial LoB in FY 2010 are anticipated to be the same as those described for FY 2009.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2009	020-00-01-16-04-3100-24	$42.000
2010	020-00-01-16-04-3100-24	$42.000

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 eRulemaking Program's Federal Docket Management System (FDMS) supports and services all 15 Cabinet Departments and 14 of the largest independent rulemaking agencies which collectively promulgate more than 90 percent of Federal regulations each year. FDMS 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, bookmarking, email notification, and commenting. During the first six months of

FY 2009, EPA posted 307 rules and proposed rules, 604 Federal Register notices, and 31,800 public submissions in *Regulations.gov*. In FY 2009, the public is submitting comments at a rate 250 percent higher than the rate for the prior year. EPA also posted 7.9 thousand supporting and related materials. Overall, EPA provides public access to more than 387,000 documents organized into 8,100 dockets in *Regulations.gov*.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2009	020-00-01016-04-0060-24	$1,531.123
2010	020-00-01016-04-0060-24	$1,057.931

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 implemented the goal of the ETravel initiative by fully deploying GovTrip in FY 2008.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2009	020-00-01-01-03-0221-24	$1,327.924
2010	020-00-01-01-03-0220-24	$1,145.224

Financial Management Line of Business (FMLoB)

The FMLoB is a multi-agency effort whose goals include: achieving process improvements and cost savings in the acquisition, development, implementation, and operation of financial management systems. 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 FY 2006, 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. By incorporating the same FM LoB-standard processes as those used by central agency systems, interfaces among the systems will be streamlined and the quality of information available for decision-making will be improved. In addition, EPA 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)
2009	020-00-01-01-04-1100-24	$44.444
2010	020-00-01-01-04-1100-24	$44.444

Budget Formulation and Execution (BFE) LoB

The Budget Formulation and Execution Lines of Business (BFE LoB) allow EPA and other agencies to access budget-related benefits and services. The Agency has the option to implement LoB sponsored tools and services.

EPA has benefited from the BFE LoB by sharing valuable information on what has or hasn't worked on the use of different budget systems and software. This effort has created a government only capability for electronic collaboration *(Wiki)* in which the Budget Community website allows EPA to share budget information with OMB (and other Federal agencies). 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 budget-related training to EPA budget employees on OMB's MAX budget system, and on Treasury's FACTS II statements explaining how it ties to the budget process.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2009	010-00-01-01-04-3200-24	$95.000
2010	010-00-01-01-04-3200-24	$95.000

IT LoB

The Information Technology Line of Business (ITLoB), utilizing Gartner's benchmarking tools and research services, will benefit EPA by providing an understanding of improved IT performance, greater efficiencies in IT infrastructure investments, and consistency and standardization of infrastructure platforms. This process is critical to our forward planning for improved service offerings at competitive prices. The sharing of best practices, industry standards, and pricing will help EPA drive towards efficiencies and best practices, such as standardization of desktop, computer rooms, server, and storage management systems.

The planning of EPA's next generation telecommunication's network, Wide Area Network (WAN) 2010, will be facilitated by the information on standards, metrics, best practices, and sourcing options that the ITLoB brings to the Federal community.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2009	020-00-02-00-04-3300-24	$0.0
2010	020-00-02-00-04-3300-24	$40.000

[*] The FY 2010 allocation of the Agency's contribution is still pending. The Agency has assumed the same level as FY 2009.

Bill Language: Administrative Provisions, Environmental Protection Agency (including [rescission] cancellation of funds)

For fiscal year [2009] 2010, notwithstanding 31 U.S.C. 6303(1) and 6305(1), the Administrator of the Environmental Protection Agency, in carrying out the Agency's function to implement directly Federal environmental programs required or authorized by law in the absence of an acceptable tribal program, may award cooperative agreements to federally recognized Indian Tribes or Intertribal consortia, if authorized by their member Tribes, to assist the Administrator in implementing Federal environmental programs for Indian Tribes required or authorized by law, except that no such cooperative agreements may be awarded from funds designated for State financial assistance agreements.

The Administrator of the Environmental Protection Agency is authorized to collect and obligate pesticide registration service fees in accordance with section 33 of the Federal Insecticide, Fungicide, and Rodenticide Act, as amended by Public Law 110-94, the Pesticide Registration Improvement Renewal Act.

For fiscal year [2009] 2010 and thereafter, the Science and Technology and Environmental Programs and Management Accounts are available for uniforms, or allowances therefore, as authorized by 5 U.S.C. 5901-02 and for services as authorized by 5 U.S.C. 3109, but at rates for individuals not to exceed the daily equivalent of the rate paid for level IV of the Executive Schedule. Unless specifically authorized by law, for fiscal year [2009] 2010 and thereafter, none of the funds available under this title for grants may be used to pay for the salaries of individual consultants at more than the daily equivalent of the rate paid for level IV of the Executive Schedule.

[None of the funds made available by this Act may be used in contravention of, or to delay the implementation of, Executive Order No. 12898 of February 11, 1994 (59 Fed. Reg. 7629; relating to Federal actions to address environmental justice in minority populations and low-income populations).]

[Title II of Public Law 109-54, under the heading Administrative Provisions, is amended: in the fourth paragraph, strike ``make not to exceed five appointments in any fiscal year under the authority provided in 42 U.S.C. 209 for the Office of Research and Development'' and insert ``employ up to thirty persons at any one time in the Office of Research and Development under the authority provided in 42 U.S.C. 209''.]

From unobligated balances to carry out projects and activities funded through the State and Tribal Assistance Grants Account, $10,000,000 are hereby permanently [rescinded] cancelled: Provided, That no amounts may be cancelled from amounts that were designated by the Congress as an emergency requirement pursuant to the Concurrent Resolution on the Budget or the Balanced Budget and Emergency Deficit Control Act of 1985, as amended.

[Of the funds provided in the Environmental Programs and Management Account, not less than $6,500,000 shall be used for activities to develop and publish a final rule not later than June 26, 2009, and to begin implementation, to require mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy of the United States, as required by Public Law 110-161.]

[For fiscal year 2009 and thereafter, the Science and Technology, Environmental Programs and Management, Office of Inspector General, Hazardous Substance Superfund, and Leaking Underground Storage Tank Trust Fund Program Accounts, are available for the construction, alteration, repair, rehabilitation, and renovation of facilities provided that the cost does not exceed $85,000 per project.]

The Administrator is authorized to transfer up to $475,000,000 from the "Environmental Programs and Management" account to the head of any other federal department or agency (including but not limited to the Departments of Agriculture, Army, Commerce, Health and Human Services, Homeland Security, the Interior, State, and Transportation), with the concurrence of such head, to carry out activities that would support the Great Lakes Restoration Initiative and Great Lakes Water Quality Agreement programs, projects, or activities; to enter into an interagency agreement with the head of such federal department or agency to carry out these activities; and to make grants to governmental entities, nonprofit organizations, institutions, and individuals for planning, research, monitoring, outreach, and implementation in furtherance of the Great Lakes Restoration Initiative and the Great Lakes Water Quality Agreement.

AMERICAN RECOVERY AND REINVESTMENT ACT
SUMMARY OF EPA PROGRAM PLANS

The American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act) provided EPA with $7.22B for programs and projects. The purpose of the Recovery Act is to create and save jobs, jumpstart the U.S. economy, and build the foundation for long-term economic growth. EPA's programs and projects will help achieve these goals, and administer the environmental laws that will govern Recovery activities. This funding was directed to activities in the: Clean Water State Revolving Fund, Drinking Water State Revolving Fund, Superfund Hazardous Waste Fund, Diesel Emissions Reduction, Leaking Underground Storage Tanks and Brownfields. Links and further details can be found at EPA's Recovery Act website (http://www.epa.gov/recovery/).

The Office of Management and Budget (OMB) issued guidance on February 18 and April 3, 2009, which provides information needed for drafting Agency-wide and program-specific plans to meet the accountability and transparency requirements of the Recovery Act (http://www.recovery.gov/sites/default/files/m09-15.pdf). This includes the requirement for EPA to provide information on the environmental benefits of the ARRA funds. Funding increases in existing projects will result in additional environmental benefits measured both directly and indirectly by EPA's existing performance framework in Tab 11. The timing and scale of this additional increment of performance is project and program-dependant and the performance measurement framework for specific programs using ARRA funding is under development. The information provided below is based on Program Plans submitted in accordance with ARRA and is included to provide context only. The plans and associated performance reporting details are available on EPA's webpage and Recovery.gov.

1. Clean Water State Revolving Fund ($4B)

Many communities across the country are faced with water quality problems but lack the funding needed to fix the problems. In many locations, the aging network of pipes that convey drinking water and wastewater are old, leaking, overwhelmed, and breaking down. There are cities, small towns, and valuable watersheds where water quality is degraded by contaminated runoff from urban, industrial, or agricultural activities. States will have the flexibility to target resources to their particular environmental needs by basing project priorities on public health and environmental factors, in addition to readiness to proceed to construction. Twenty percent of the funding will be targeted toward green infrastructure, water and energy efficiency, and environmentally innovative projects.

The Clean Water State Revolving Fund (CWSRF) provides funds to states to establish state loan revolving funds that finance infrastructure improvements for public wastewater systems and other water quality projects. The CWSRF is comprised of 51 state financing programs (including Puerto Rico) which are run in accordance with the federal statute and regulations. For the District of Columbia and the territories, these funds are used for direct grants to the District or territory for similar purposes. The CWSRF includes a set-aside of 1.5 percent for wastewater infrastructure improvements on tribal lands. Each State receives 1 percent of their allotment, or $100,000 (whichever is greater) to support

water quality management planning. Remaining funds to states and territories are allocated based on percentages established in the Clean Water Act.

The objectives that have been established for the CWSRF funding under ARRA will ensure program focus on beneficial, cost effective project development and implementation that creates jobs quickly. The Recovery Act objectives supplement established CWSRF objectives and will be integrated into CWSRF management and operations. CWSRF projects are selected based on statutory principles and carried out through State-established priority systems. Objectives developed for ARRA funding through the CWSRF program are guided by the overarching goal of the National Water Program to protect aquatic systems throughout the country, including rivers, lakes, coastal waters, and wetlands.

Linkage to EPA Strategic Plan:

The Clean Water SRF planned activities for states, territories, and Indian country will support progress toward Goal 2: Clean and Safe Water of the *2006-2011 EPA Strategic Plan*.

Performance Measures and Reporting

As the nation's largest water quality finance program, the CWSRF program supports the overarching goal of the National Water Program to protect aquatic systems throughout the country, including rivers, lakes, coastal waters, and wetlands. Existing water program outcome measures, reported annually in the Agency's Performance and Accountability Report (PAR) include:

Existing Long-term Measure:

Number of waterbodies identified in 2002 as not attaining water quality standards where standards are now fully attained (cumulative).

Existing Annual Measures:

Number, and national percent, of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards (i.e., POTWs that are not in significant non-compliance).

Fund Utilization Rate for CWSRF - Maintain a high fund utilization rate (cumulative loan agreement dollars to the cumulative funds available for projects) for the Clean Water State Revolving Fund (CWSRF).

Management and Oversight Activities

Management and Oversight resources will be used to: provide guidance and assistance to states to implement all Recovery Act provisions including those which are new (e.g., Buy

American provision, Davis-Bacon prevailing wage requirements); ensure review and approval of state-specific waiver requests submitted are performed in a timely manner; and to manage and conduct on-site inspections of CWSRF projects, including 604(b) grants performance, to ensure compliance with Recovery Act requirements and deadlines

2. Drinking Water State Revolving Fund ($2B)

The Drinking Water State Revolving Fund (DWSRF) provides funds to states to establish state loan revolving funds that finance infrastructure improvements for publicly and privately owned Community Water Systems and not-for-profit Non-Community Water Systems. The DWSRF is comprised of 51 state financing programs (including Puerto Rico) which are run in accordance with the federal statute and regulations. Each State receives an allocation of funds based upon its proportionate share of the total national need reported in the Drinking Water Infrastructure Needs Survey; with each State being guaranteed a minimum allocation of 1 percent. For the District of Columbia (which receives an allocation of 1 percent), and the territories (which receive an allocation of 0.33 percent), these State and Tribal Assistance Grants (STAG) funds are used for direct grants to the District or territory for similar purposes. STAG funds set-aside 1.5 percent for drinking water infrastructure improvement grants on tribal lands and in Alaska Native Systems.

The objectives that have been established for the DWSRF funding under ARRA will ensure program focus on beneficial, cost effective project development and implementation that creates jobs quickly. The Recovery Act objectives supplement established DWSRF objectives and will be integrated into DWSRF management and operations. DWSRF projects are selected based on statutory principles, carried out through State-established priority systems. Under ARRA, additional priority is given to projects that are ready to proceed. Objectives developed for ARRA funding through the DWSRF program are guided by the overarching goal of the National Water Program to protect public health by improving the quality of drinking water.

Linkage to EPA Strategic Plan:

The Drinking Water SRF planned activities for states, territories, and Indian country will support progress toward Goal 2: Clean and Safe Water of the *2006-2011 EPA Strategic Plan*.

<u>Performance Measures and Reporting</u>

As the nation's largest drinking water finance program, the DWSRF program supports the overarching goal of the National Water Program to protect public health through safe drinking water. Existing drinking water program outcome measures, reported annually in the Agency's Performance and Accountability Report (PAR) include:

Existing Long-term Measure:

Percent of population served by community water systems that receive drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection.

Existing Annual Measure**:**

Fund utilization rate for the DWSRF - - Cumulative loan agreement dollars to the cumulative funds available for projects for the Drinking Water State Revolving Fund (DWSRF).

Management and Oversight Activities

Management and Oversight resources will be used to: provide guidance and assistance to states to implement all Recovery Act provisions, including those programs which are new (i.e., Buy American provision, Davis-Bacon prevailing wage requirements); review and approve state-specific waiver requests; manage and conduct on-site inspections of DWSRF projects to ensure compliance with Recovery Act requirements and deadlines.

3. Superfund ($600M)

EPA's Superfund Program funds the cleanup of abandoned hazardous waste sites. Work includes assessment of site contamination and likely risks to human health and the environment, establishment of cleanup plans to protect surrounding communities and the environment from toxic waste, and implementation of cleanup plans, including safe removal of immediate threats and site remediation for long-term protection. To speed cleanup conducted through the Recovery Act, EPA will target sites on the Superfund National Priority List and use in-place, competitively awarded contracts for emergency response and cleanup activity.

The overall objectives for the Recovery Act funding for Superfund are to further cleanup at National Priority List (NPL) sites, maximize job creation and retention, and provide environmental and economic benefits. These objectives will be achieved by starting new cleanup projects, expanding cleanups at projects already underway, increasing the number of workers and activities at cleanup projects, and returning affected sites to more productive use.

The Recovery Act funding will provide immediate short and longer-term health, environmental, and economic benefits at both new start and ongoing Superfund remedial projects. Clean-up activities at Superfund sites receiving Recovery Act funds may also yield significant site-specific, non-environmental economic benefits, including improved site property values and job opportunities. Environmental justice issues will be considered at sites that suffer disproportionate environmental impact to ensure that activities conducted with Recovery Act funds are implemented in a manner that protects environmentally and economically distressed communities.

Linkage to EPA Strategic Plan

These remediation activities directly support progress toward implementing Goal 3: Land Preservation and Restoration, Objective 3.2 (Restore Land) of the *2006-2011 EPA Strategic Plan*.

Performance Measures and Reporting

Existing Annual Measures:
Number of Sites Achieving Construction Completed with Recovery Act Funding

Management and Oversight Activities

Management and Oversight Resources will be used to coordinate, monitor, and evaluate analytical, technical, and financial aspects of Recovery Act funded Superfund remedial cleanups. This includes making site visits, overseeing contracts, contract modifications, Interagency Agreements (IAs), and cooperative agreements. The Agency will also use these resources to provide liaison to states and communities affected by Recovery Act funded Superfund remedial cleanups and manage Superfund State Contracts [SSCs] or cooperative agreements.

4. Diesel Emissions Reduction Program (DERA) Grants ($300M)

Pollution from diesel-powered vehicles and non-road diesel engines contribute to serious public health problems in the United States. These problems include premature mortality, aggravation of respiratory and cardiovascular disease, and decreased lung function. Numerous studies also link diesel exhaust to increased incidence of lung cancer. Through development of these technologies, EPA will help maintain and create jobs in the manufacturing and service sectors across the country. The clean air impact of reducing diesel emissions will result in significant human health benefits as well as increased worker productivity with fewer work days lost.

More than 11 million diesel engines in operation today do not meet EPA's new clean diesel standards, yet these engines can continue to operate for 20 to 30 years. Diesel engines emit large amounts of nitrogen oxides, particulate matter and air toxics, which contribute to serious public health problems, including asthma, lung cancer and various other cardiac and respiratory diseases.

To meet the challenge of reducing exhaust from diesel engines, EPA established the National Clean Diesel Campaign (NCDC). The NCDC's goal is to accelerate emission reductions from older diesel engines to provide more immediate air quality benefits and improve public health. Diesel retrofit technologies reduce pollution from the existing diesel engine fleet by up to 90 percent for particulate matter (PM), up to 50 percent for nitrogen oxides, and up to 90 percent for volatile organic compounds. EPA will use Recovery Act funding to support the goals of the Recovery Act and NCDC.

The NCDC program is authorized by the Diesel Emissions Reduction Program in the Energy Policy Act of 2005, or "DERA." DERA directs EPA to implement the program through two different components: a National competition and a State allocation program. The National Program, with 70 percent of the funding available, consists of three separate competitions: 1) the National Clean Diesel Funding Assistance Program; 2) the National Clean Diesel Emerging Technologies Program; and 3) the SmartWay Clean Diesel Finance Program. The State Clean Diesel Grant Program utilizes the remaining 30 percent of the funding.

Linkage to EPA Strategic Plan:

The DERA projects support Goal 1: Clean Air and Global Climate Change, Objective 1.1 (Healthier Outdoor Air) of the *2006-2011 Strategic Plan.*

Performance Measures and Reporting

The DERA Program does not have specific performance measures included in Tab 11 of the FY 2010 President's Budget. The program will estimate lifetime emission reductions for criteria pollutants to support EPA's broader performance measures to reduce criteria pollutants from the transportation sector. Emissions reduction estimates will be calculated when the grants are awarded.

Management and Oversight Activities

Management and Oversight resources will be used to conduct competitive selection processes. This will include a thorough review to select high-quality grant proposals that meet the goals of the Diesel Emission Reductions Program, the Recovery Act, and Regional priorities. The Agency will oversee project progress, job creation, and diesel emission reductions and post results in national databases and tracking systems. Field inspections will be conducted as necessary to monitor project progress and compliance with grant terms and conditions.

5. Leaking Underground Storage Tank Trust Fund ($200M)

EPA is responsible for cleaning up sites contaminated by leaking underground storage tank systems. Nearly all underground storage tanks regulated by EPA contain petroleum. Most of these tanks are found at service stations and convenience stores that sell gasoline to the public, while others are found at businesses and local governments that maintain their own fleets of vehicles. The greatest potential hazard from a leaking underground storage tank is that the petroleum or other hazardous substance can seep into the soil and contaminate groundwater, which is the source of drinking water for one-third of all Americans. Other possible health and environmental risks are fire and explosion. EPA will create jobs and improve neighborhood health and workplaces by awarding grants to states, territories, and tribes to perform site assessments and ensure that sites with the greatest potential health and environmental risks are cleaned up.

ARRA appropriations for the Leaking Underground Storage Tank (LUST) Trust Fund are for clean-up of contamination releases from federally-regulated underground storage tanks (USTs), as authorized by section 9003 (h) of the Solid Waste Disposal Act. The overall purposes for the LUST Recovery Act money are to clean-up contaminated LUST sites effectively, while maximizing job creation and retention, and to provide economic and environmental benefits (such as protecting groundwater and cleaning and reusing contaminated land) to the citizens of the U. S. and its territories. These objectives will be achieved by overseeing assessments and clean-ups at shovel-ready sites or directly paying for clean-up activities at sites where the responsible party is unknown, unwilling or unable to provide payment, or the clean-up is an emergency response.

Examples of specific LUST eligible cleanup activities include: emergency response and initial site hazard mitigation; site investigations and assessments; cleaning up petroleum contamination releases; monitoring soil and groundwater; equipment needs; enforcement actions and recovery of costs from liable tank owners and operators; state management and oversight costs; and public or community involvement activities.

Linkage to EPA Strategic Plan:

The LUST planned activities for states, territories, and Indian country will support progress toward Goal 3: Land Preservation and Restoration, Objective 3.2 (Restore Land) of the *2006-2011 EPA Strategic Plan*.

Performance Measures and Reporting

EPA has used and will continue to use the information collected from recipients through established reporting mechanisms to oversee activities carried out using LUST money; to evaluate program implementation and effectiveness; and to meet the Agency's responsibilities under the Government Performance and Results Act (GPRA). EPA will use three methods to measure performance and better reflect the impact of the Recovery Act money on accomplishments: (1) existing performance measures; (2) new performance measures; and (3) quarterly reporting.

Existing Annual Measure:

Number of clean-ups completed that meet state risk-based standards for human exposure and groundwater migration. Confirmed releases where clean-up has been initiated and where a state or territory has determined that no further actions are currently necessary to protect human health and the environment. For a complete definition see (http://www.epa.gov/OUST/cat/pm032603.pdf).

Management and Oversight Activities

Management & Oversight resources will be used to: conduct site meetings with grantees to determine project progress, ensure compliance, and resolve issues.

Provide support to state non-profit association to facilitate state coordination, share best practices and lessons learned, and conduct joint planning and evaluation of state Recovery Act efforts.

Provide technical assistance, support, and direction to states and other recipients in order to compile and report progress on the implementation of the Recovery Act.

6. Brownfields Grants ($100M)

Brownfields are former industrial and commercial sites left abandoned and contaminated by hazardous waste. Many are potentially valuable properties lying near the heart of commercial districts or beside scenic urban waterways. Through the Recovery Act, EPA will issue competitive grants to evaluate and clean up a portion of these brownfields, which will in turn encourage redevelopment. Because the goal of EPA's Brownfields Program is to revitalize and restore neighborhoods through environmental cleanup, it has a proven history of attracting private investment, producing trained environmental technicians, creating jobs, and spurring local economic development.

It is estimated that there are more than 450,000 brownfields in the U.S. Passage of the Small Business Liability Relief and Brownfields Revitalization Act in 2002 expanded EPA's assistance to brownfields-impacted communities by providing new tools for the public and private sectors to promote sustainable brownfields clean-up and re-use. The EPA Brownfields Program has been instrumental in furthering the Agency's land revitalization goals. The Program's cooperative agreements and technical assistance provides communities, states, tribes, and other stakeholders with the resources they need to address brownfield sites. Specifically, these cooperative agreements will facilitate the leveraging, creation and retention of jobs, and the leveraging of economic investment, while helping to prevent, assess, safely clean-up, and sustainably re-use brownfields.

Under the Recovery Act, EPA will award brownfields assessment, clean-up, new and supplemental Revolving Loan Fund (RLF) and job training cooperative agreements through a competitive process. EPA will also provide technical assistance, research, and training to brownfields communities via regional contracts and Interagency Agreements (IA).

Linkage to EPA Strategic Plan:

Brownfields cooperative agreements will support progress toward Goal 4: Healthy Communities and Ecosystems, Objective 4.2 (Communities), and Sub-objective 4.2.3 (Assess and Clean-Up Brownfields) of the 2006-2011 EPA Strategic Plan.

These objectives will be achieved by providing funds to: (1) assess and clean-up brownfield sites through assessment, clean-up and RLF cooperative agreements; and (2) train and place persons in environmental careers through job training cooperative agreements. EPA and Recovery Act fund recipients will work together to collect

information about the expected outputs and outcomes of brownfields cooperative agreements.

Performance Measures and Reporting

The Brownfields Program has used and will continue to use the information collected from cooperative agreement recipients to oversee the activities carried out using brownfields funds; to evaluate program implementation and effectiveness; and to meet the Agency's responsibilities under GPRA. The Brownfields program will follow established Agency processes for notifying the public of Recovery Act cooperative agreement recipient accomplishments. Recipients of assessment, cleanup, RLF, and job training cooperative agreements will submit Property Profile Form and/or Job Training Reporting Form data electronically using the EPA Assessment, Clean-up, and Redevelopment Exchange System (ACRES). The Program will provide a summary of these reports on a quarterly basis once the recipients begin entering accomplishment data.

Existing Annual Measures:

Brownfield Properties Assessed -- Number of properties that have been environmentally assessed for the first time using EPA Brownfields funding, as reported by cooperative agreement recipients.

Properties Cleaned-up -- Number of properties that have been cleaned-up to a regulatory risk-based standard using EPA Brownfields funding, as reported by cooperative agreement recipients.

Jobs Leveraged from Brownfields Activities -- Number of clean-up and redevelopment jobs leveraged by assessment or clean-up activities conducted with EPA Brownfields funding, as reported by cooperative agreement recipients at a specific property.

Billions of Dollars and Redevelopment Funds Leveraged at Brownfield Sites -- Number of additional dollars leveraged by assessment or clean-up activities conducted with EPA Brownfields funding, as reported by cooperative agreement recipients at a specific property.

Acres of Brownfield Properties Made Ready for Reuse -- Acres associated with properties benefiting from EPA Brownfields funding that have been assessed and determined not to require clean-up, or where clean-up has been completed and institutional controls are in place if required, as reported by cooperative agreement recipients.

Management and Oversight Activities

Management and Oversight resources will be used to review and rank Brownfields proposals; select high scored proposals for funding directly related to the Recovery Act, and negotiate work plans for selected proposals with selected entities to include project

VERIFICATION AND VALIDATION

The measures in this document have not been reviewed or approved as measures that are part of this Administration's management program.

GOAL 1 OBJECTIVE 1

FY 2010 Performance Measures:

- **Tons of SO_2 emissions from electric power generation sources (tons/yr from 1980 baseline) (program assessment measure)**
- **Percent change in average sulfur deposition (% from baseline) (program assessment measure)**
- **Percent change in average nitrogen deposition (% from baseline) (program assessment 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 2010 Performance Measures:

- **Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM 2.5) in all monitored counties from 2003 baseline (program assessment measure)**
- **Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline (program assessment 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 2010 Performance Measure:

- **Cumulative percent reduction in the number of days to process SIP revisions weighted by complexity [program assessment 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.

<u>FY 2010 Performance Measure:</u>

- **Cumulative percent reduction in the average number of days during the ozone season that the ozone standard is exceeded in baseline non-attainment areas, weighted by population. (program assessment 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. (program assessment measure)**
- **Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, per grant dollar allocated to the States in support of the NAAQS program. (program assessment efficiency 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). Program dollars are based on the grant dollars allocated to the States in support of the NAAQS program, which will be retrieved from the EPA Financial Data Warehouse.

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 2010 Performance Measures:

- **Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application. (program assessment measure)**
- **Percent of new Title V operating permits issued within 18 months of receiving a complete permit application. (program assessment 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 program assessment measures.

References: For additional information about criteria pollutant data, non-attainment areas, and other related information, see: http://www.epa.gov/airtrends/.

FY 2010 Performance Measure:

- **Percent of major NSR permits issued within one year of receiving a complete permit application. (program assessment 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) ~~t~~ 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 2010 Performance Measures:

- **Millions of tons of volatile organic compounds (VOCs) reduced since 2000 from mobile sources. (program assessment measure)**
- **Millions of tons of nitrogen oxide (NOx) reduced since 2000 from mobile sources. (program assessment measure)**
- **Tons of particular matter (PM 10) reduced since 2000 from mobile sources (program assessment measure)**
- **Tons of particular matter (PM 2.5) reduced since 2000 from mobile sources (program assessment measure)**
- **Limit the increase of CO Emissions (in tons) from mobile sources (program assessment 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.)

Major 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 2010 Performance Measures:

- **Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 2003 baseline (program assessment measure)**
- **Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 2003 baseline (program assessment 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 2002 NEI and a slightly modified/updated 2005 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 2010 Performance Measures:

- **Number of additional homes (new and existing) with radon reducing features (program assessment 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**.**

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.

Methods, Assumptions, and Suitability: EPA collects data annually on the number of new homes built with radon-resistant features based on annual surveys of homebuilding practices conducted by the NAHB Research Center. EPA collects data annually on the number of existing homes mitigated for elevated radon levels based on radon mitigation fan sales data obtained through voluntary reporting by the fan manufacturers. Radon mitigation fans have an estimated life of ten years. When estimating the number of new radon mitigations annually in existing homes, the data from fan manufacturers is adjusted based on an assumption that previously-installed radon mitigation systems will have their fans replaced once every ten years. The data are suitable for year-to-year comparisons.

This annual 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: 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. Also, a quality review of each year's draft report 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. To augment the survey sample size, the 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.

The survey typically has 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.

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: The statistical estimates of the NAHB survey are typically reported with a 95 percent confidence interval.

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 2010 Performance Measure:

- **Additional health care professionals trained annually by EPA and its partners on the environmental management of asthma triggers (program assessment measure)**

Performance Database: The performance database consists of quarterly Partner status reports used to document the outcomes of individual projects as well as EPA staff reports of healthcare professionals directly educated by EPA.

Data Source: Partner status reports are generated by those organizations receiving funding from EPA and are maintained by individual EPA Project Officers. For those healthcare professionals directly trained by EPA, results are stored in project files.

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: The Indoors Environments Division has developed a centralized tracking system, known as IAQ Impact, to capture results from headquarters and regional actions, as well as from grantees.

References: N/A

FY 2010 Performance Measure:

- **Percent of public that is aware of the asthma program's media campaign (program assessment measure)**

Performance Database: In partnership with the Advertising Council, EPA conducts a national public awareness campaign designed to raise awareness and promote action on asthma trigger management. Data on this campaign, including target audience impressions, demographics, campaign recall, attitudes and behaviors are collected by the Ad Council through continuous tracking and point in time surveys.

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 2010 Performance Measures:

- **Estimated annual number of schools establishing Indoor Air Quality programs based on EPA's Tools for Schools guidance (program assessment measure)**

Performance Database: To measure annual progress, EPA estimates the number of schools which 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: Partner status reports are generated by those organizations receiving funding from EPA and are maintained by individual EPA Project Officers. For those organizations directly trained by EPA, results are stored in project files.

Methods, Assumptions and Suitability: To measure annual progress, EPA estimates the number of schools which establish IAQ Tools for Schools programs each year from reports from partner organizations and regional recruiters, supplemented by tracking the volume of guidance distributed, and number of people trained by EPA and its partners.

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: The Indoor Environments Division has developed a centralized tracking system, known as IAQ Impact, to capture results from headquarters and regional actions, as well as from partners.

References: See the Indoor Air Quality Tools for Schools Kit (EPA 402-K-07-008)

GOAL 1 OBJECTIVE 3

FY 2010 Performance Measure:

- **Remaining US consumption of HCFCs, measured in tons of ozone depleting potential (ODP) (program assessment 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 2010 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. (program assessment 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 2010 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). (program assessment 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 complement 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 program Program Assessment (Draft: 7/25/2007)

<u>FY 2010 Performance Measure</u>:

- **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). (program assessment 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 program Program Assessment (Draft: 7/25/2007)

<u>FY 2010 Performance Measure</u>:

- **Average time of availability of quality assured ambient radiation air monitoring data during an emergency. (program assessment 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.

<u>FY 2010 Performance Measure</u>:

- **Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP (measured as percentage reduction from a 2004 baseline) (program assessment measure)**

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 2010 Performance Measure:

- **Population covered by Radiation Protection Program monitors per million dollars invested. (program assessment 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 2010 Performance Measures:

- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the buildings sector (program assessment measure)**
- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the industry sector (program assessment measure)**
- **Million metric tons of carbon equivalent (mmtce) of greenhouse gas emissions reduced in the transportation sector (program assessment 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 "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 2010 Performance Measures:

- **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 (program assessment measure)**

Performance Database: Integrated Resources Management System (internal database)

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.

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 Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001137.2005.html (last accessed August 16, 2007)

FY 2010 Performance Measure:

- **Percent variance from planned cost and schedule (program assessment 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 Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001137.2005.html (last accessed August 16, 2007)

FY 2010 Performance Measure:

- **Percentage of program outputs appearing in the Office of Air and Radiation's National Ambient Air Quality Standard Staff Paper (program assessment measure).**

Performance Database: No internal tracking system.

Data Source: N/A

Methods, Assumptions and Suitability: A list of the research program's publications from the past ten years are searched against EPA's NAAQS staff paper to determine if any regulatory decisions and other key agency documents have referenced EPA's research products.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Not all EPA's regulations and key decisions are posted in the NAAQS staff paper and, therefore, the impact and influence of the program's publications would not be captured in this measure. Additionally, the publication citations within the regulations can be inconsistent and often do not reflect the research models, tools or personal scientific support that informed the regulatory decision.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References:
National Ambient Air Quality Standards (NAAQS) Research Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001137.2005.html (last accessed August 16, 2007)

GOAL 2 OBJECTIVE 1

FY 2010 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 [program assessment 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 [program assessment measure]**
- **Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards [program assessment measure]**
- **Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection [program assessment measure]**
- **The percentage of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance). [program assessment 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 percent of the population served by community water systems, or the percent of community water systems, that did not report any violations designated as "health based." Exceedances of a maximum contaminant level (MCL) and violations of a treatment technique are health-based violations.

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 to 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 percent of people affected by health-based violations, 2) target enforcement oversight, 3) target program assistance to primacy agencies, and 4) provide information to the public on the safety of their drinking water facilities. As described in the Data Quality Review section above, EPA has recently changed the data verification protocol to enhance the results of data audits and better understand the limitations of the data, and target assistance.

Error Estimate: EPA analyzes data, derived from a recently improved data audit protocol, with a robust statistical basis from which to extrapolate national results. This process is better aligned

[1] *2006 Drinking Water Data Reliability Analysis and Action Plan, EPA-816-R-07-010 March 2008*

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.

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 August 2008, 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, in 2006 EPA 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. Data are stored in a data warehouse system that is optimized for analysis, data retrieval, and data integration from other data sources. It has improved 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 a data system to manage information for the Underground Injection Control Program (UIC). This database will provide a more comprehensive data set with which to assess the nation's drinking water supplies, a key component of the goal. The UIC database began receiving data in 2007.

References:

Plans

- SDWIS/FED does not have a Quality Assurance Project Plan. The SDWIS/FED equivalent is the Data Reliability Action Plan
- Office of Water Quality Management Plan, available at http://www.epa.gov/water/info.html

Reports

[2] SDWIS/STATE is an optional 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

- 2006 Drinking Water Data Reliability Analysis and Action Plan, EPA-816-R-07-010 March 2008

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 2010 Performance Measures:

- **Fund Utilization Rate for the DWSRF [program assessment measure]**
- **Number of additional projects initiating operations [program assessment 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 2010 Performance Measures:

- **Percentage of identified Class V motor vehicle waste disposal wells and other high priority Class V wells closed or permitted.**
- **Percent of deep injection wells that are used to inject industrial, municipal, or hazardous waste (Class I) that have lost mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water**
- **Percent of deep injection wells that are used to enhance oil recovery or that are used for the disposal of storage of other oil production related activities (Class II) that**

have lost mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water

- **Percent of deep injection wells that are used for salt solution mining (Class III) that have lost mechanical integrity and are returned to compliance within 180 days thereby reducing the potential to endanger underground sources of drinking water**

Performance Database: The Underground Injection Control (UIC) program is authorized under Part C Sections 1421, 1422, 1423, 1425, 1431 and 1445 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 began collecting program information in a UIC national database in 2007; this system electronically transfers 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. FY 2008 is a transition year to test efficacy of the new data system and the quality of the submitted data. Planned implementation is 2008 through 2012.

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. States and DI programs began transition to the UIC national data system for reporting of UIC data in 2007. - 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:

<u>Guidance, Regulations and Data Forms</u>

- 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 Web Data Entry System

- 7520 Federal Reporting Forms (OGWDW Homepage-UIC Program)
  Form 7520-1 Permit Review and Issuance/Wells in Area of Review
  Form 7520-2A (Compliance Evaluation)
  Form 7520- 2B (Compliance Evaluation/ Significant Noncompliance)
  Form 7520-3(Inspections/Mechanical Integrity Testing)
  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 2010 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 late 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 periodic reports from NHANES provide 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 2010 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 still in place to transform the outbreak reporting system in future years to incorporate electronic data reporting. It is anticipated that the implementation of such 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.

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FY 2010 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., 2009 calendar year data are used to report against FY 2010 commitments). For the 2007 swimming season, States and Territories monitored for pathogens at 3,602 coastal and Great

Lakes beaches. In re-evaluating their beach programs, some states combined small beaches into larger beaches during 2007, reducing the total number of beaches monitored (from 3,771 in 2006 to 3,602 in 2007), 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 3,602 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.

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GOAL 2 OBJECTIVE 2

FY 2010 Performance Measure:

- **Percentage of waters assessed using statistically valid surveys [program assessment 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), these data will be submitted to the warehouse via WQX.

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 waterbody 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 waterbody type utilizing a similar sample design will show condition trends for the resource on a broad geographic scale.

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GOAL 2 OBJECTIVE 2

FY 2010 Performance Measures*:*

- **Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained [program assessment 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 now fully attaining standards [program assessment 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 information compiled from states' listings of impaired waters as required by Clean Water Act Section 303(d), which are recorded in the Assessment, TMDL Tracking, and ImplementatioN System (ATTAINS). This information (found at

http://iaspub.epa.gov/waters10/attains_nation_cy.control?p_report_type=T) 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. ATTAINS also includes information on other impaired waters for which TMDLs have been completed. See "New and Improved Data Systems" for more information on the ATTAINS database.

There are several reasons why EPA or states may determine that specific waterbodies listed as impaired in 2002, the baseline year, are no longer impaired in the current 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 an impaired water may no longer exceed water quality standards. Any such removals of waterbody 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 2009 boundaries and data on 12-digit HUC code watersheds were 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). 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/pamsfy08/def_wq08.html).

Data Source: The primary data source for these measures is state 303(d) lists of their impaired waterbodies needing development of TMDLs, and required submittals of monitoring information pursuant to section 305(b) of the Clean Water Act. These lists/reports are submitted each biennial reporting cycle. Most states have provided this information in Integrated Reports, pursuant to EPA guidance (see "New/Improved Data Systems" below). The baseline for this measure is the derived from the 2002 reporting cycle. 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 waterbody impairments. Once EPA approves a state's 303(d) list, the information is entered into ATTAINS, 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 cumulative 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 waterbody segments now fully attaining standards.

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 http://www.epa.gov/waterscience/models/. 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 303(d) lists and 305(b) 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. While continuing to strive for 100% on-time list submittals, there was a significant improvement in timely list submissions for the 2008 Integrated Reporting Cycle. EPA will continue to work with states to facilitate accurate, comprehensive, and georeferenced data submissions. Also, EPA is heightening efforts to ensure expeditious review of the 303(d) list submissions with national consistency, and EPA saw dramatic improvements in the average number of days it takes to review State's 303(d) lists for the 2008 Integrated Reporting Cycle.

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 March 15, 2000 Government Accounting Office report *Water Quality: Key Decisions Limited by Inconsistent and Incomplete Data, EPA's Draft Report on the Environment*, and the 2007, Office of the Inspector General report, Total Maximum Daily Load Program Needs Better Data and Measures to Demonstrate Environmental Results.

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, ATTAINS, and a 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) 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) 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 ATTAINS available via WATERS) and/or compatible data management systems.

Also, the *Consolidated Assessment and Listing Methodology – Toward a Compendium of Best Practices* (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~~ March 2008). 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 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 waterbodies. 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. In 2005 EPA issued listing guidance entitled *Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act.* This document provided a comprehensive compilation of relevant guidance EPA had issued to date regarding the Integrated Report. It included some specific changes from the 2004 guidance. For example, the 2006 Integrated Report Guidance provided 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 gave additional clarity and flexibility on reporting alternatives to TMDLs for attaining water quality standards (e.g., utilization of reporting Category 4b).

In October 2006 EPA released *Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions*, 18 months in advance of the April 2008 Integrated Report due date. More than three times the number of states submitted their Integrated Report lists to EPA by the April 1, 2008, deadline compared to 2006. Timely submittal and EPA review of integrated reports is important to demonstrate state and EPA success in accomplishing Strategic Plan goals for water quality. The timelier reporting may be attributed in part to our early issuance of the 2008 Integrated Report Memorandum. EPA is currently working to complete its 2010 Integrated Report Memorandum to promote 100 percent timely 2010 submissions from all 56 states and territories.

EPA has combined the former National TMDL Tracking System and the former National Assessment Database into one integrated system, ATTAINS, which became operational in May 2008. ATTAINS tracks the status of all assessed waters and waterbody impairments, including impaired waterbodies. Also, EPA released the Water Quality Exchange (WQX) which provides data exchange capability to any organization that generates data of documented quality and would like to contribute that data to the national STORET 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 Exchange Network node. ~~In 2008~~, EPA ~~plans to make~~ is currently rolling out a web data entry tool called WQXweb ~~available~~ for users who have not invested in the node technology.

References:

USEPA, 2008, *EPA's 2008 Report on the Environment (Final Report)* http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=190806

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~~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 www.epa.gov/owow/monitoring/elements/.

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.

FY 2010 Performance Measures*:*

- **Number of TMDLs that are established or approved by EPA [Total TMDLs] on a schedule consistent with national policy (cumulative) [program assessment annual measure]**
- **Number of TMDLs that are established by States and approved by EPA [State TMDLs] on schedule consistent with national policy (cumulative) [program assessment annual measure]**

Note: A TMDL is a technical plan for reducing pollutants in order to attain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.

Performance Database: The Assessment and Total Maximum Daily Load (TMDL) Tracking And ImplementatioN System (ATTAINS) is the database which captures water quality information related to these measures. ATTAINS is 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 holds information about assessment decisions and restoration actions across reporting cycles and over time until water quality standards are attained. TMDL information (found at http://iaspub.epa.gov/waters10/attains_nation_cy.control?p_report_type=T) 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, waterbodies which were once impaired will meet water quality standards. Thus these TMDL measures are closely tied to the program assessment measure, "Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained." Newly attaining waterbodies 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, the Watershed Assessment, Tracking, and Environmental ResultS system 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 ATTAINS 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 program assessment 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. Data quality has been improving and will continue to improve as existing data entry requirements and procedures are being reevaluated and communicated with data entry practitioners.

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 2010 Performance Measures:

- **Percentage of major dischargers in Significant Noncompliance at any time during the fiscal year (program assessment measure)**
- **Percentage of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards (program assessment 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 current QMP, effective for 5 years, was approved July 29, 2003 by the Office of Environmental Information (OEI). The required re-approval of OECA's QMP has been prepared and is in the management approval process at this time.

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 2010 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. [program assessment measure]**
- **Percentage of submissions of new or revised water quality standards from States and Territories that are approved by EPA [program assessment 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 EPA Regional Offices at least five months to reach and document a valid approval decision. EPA management believes this is an adequate time for processing most 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/wqctable, 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 2010 any qualifying submissions from May 1, 2007, through April 30, 2010, that were approved by September 30, 2010, 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 2008, could be counted in FYs 2008, FY 2009, and FY 2010 but not in FY 2011.

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 to 60 submissions per year in recent years, which is within the range than can be adequately reviewed with available resources.

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 continuing 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 2010 Performance Measure:

- **Estimated annual reduction of nitrogen (millions of pounds), phosphorous (millions of pounds), and sediment (tons) from nonpoint sources to waterbodies. (Section 319 funded projects only.) [program assessment 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 Assessment TMDL Tracking and ImplementatioN System (ATTAINS), 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 program assessment 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 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 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. 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 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 2010 Performance Measures:

- **Percentage of high priority EPA and State NPDES permits that are reissued on schedule (program assessment measure)**
- **Percentage of high priority state NPDES permits reissued on schedule (program assessment 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]
- Permit Management Oversight System (PMOS). [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 Permit Management Oversight System (PMOS) database to track the current or expired status of facilities covered under non-storm water general permits as well as to track issuance of priority permits. Prior to PMOS, the Electronic Permit Issuance Forecasting Tool (E-PIFT) was 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 PMOS 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 States and EPA's Regional offices are responsible for entering data into the PMOS. 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. Beginning in FY 2008, States and Regions were permitted to add to this list additional high-priority permits that were expired less than two years or those that would expire within the fiscal year of reporting. 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 PMOS. 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); PMOS is a web-based system that is 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 "key data" fields, lat/long, and compliance and enforcement data, and provides these lists to NPDES states and Regions for review and cleanup. 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. PMOS (and its precursor, 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 2008, OWM is planning to improve PMOS 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 2010 Performance Measure:

- **Loading (pounds) of pollutants removed per program dollar expended (program assessment 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.[3]

To calculate the program assessment efficiency measure, the annual[4] 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.

[3] Beginning in 2008, the values for Phase I municipal stromwater and construction stormwater were added and back-filled to 2002. POTW values were updated and back-filled based on the 2004 CWNS.
[4] The method of calculating the denominator was changed in 2008 to reflect total annual dollars, rather than cumulative dollars.

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.

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.[5]

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." As EPA develops the new Construction and Development Rulemaking, new and better sources of data may be developed that may help to refine this calculation.

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.

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[5] 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/pkeyword.cfm?keywords=economic+analysis&program_id=0

Data for the program assessment denominator, i.e. the total number of dollars devoted to the EPA Surface Water Program (SWP), are assembled and updated as new data become 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 for review during the program assessment 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].

"Economic Analysis of the Final Phase II Storm Water Rule." (1999). Washington, D.C. U.S. Environmental Protection Agency [Office of Wastewater Management]. Available at: http://cfpub.epa.gov/npdes/pkeyword.cfm?keywords=economic+analysis&program_id=0

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 program assessment Efficiency Measure Spreadsheet [Excel Spreadsheet]. Washington, D.C. U.S. Environmental Protection Agency [Office of Wastewater Management].

FY 2010 Performance Measure:

- **Fund utilization rate for the CWSRF [program assessment 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' "NIMS 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 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 2010 Performance Measures:

- **Number of waterbodies restored or improved per million dollars of CWSRF assistance provided. (program assessment efficiency measure)**
- **Number of waterbodies protected per million dollars of CWSRF assistance provided. (program assessment 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 2008, the environmental benefits of $15.8 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 2010 Performance Measures:

- **Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal. [program assessment annual measure]**
- **Number of homes that received improved service per $1,000,000 of State and Federal funding. [program assessment efficiency measure]**
- **Percent of project federal funds expended on time within the anticipated project construction schedule set forth in the Management Control Policy [program assessment 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). This modified database is utilized to establish funding priorities for all federal funds identified for water and wastewater infrastructure in rural Alaska including the ANV program.

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 2009 the STARS application will undergo standard ongoing support and updates to maintain database integrity, efficiency, and accuracy.

References:

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

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 2010 Performance Measure:

- **Percent of active dredged material ocean dumping sites that will have achieved environmentally acceptable conditions (as reflected in each site's management plan and measured through on-site monitoring programs.)**

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 and proposed to be a strategic target in the

2009-2014 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 site, a consideration of anticipated use, a monitoring program, and site management conditions or practices that are necessary for protection of the aquatic environment. Each SMMP is unique to the dump site and is developed with the opportunity for stakeholder imput. 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: The required monitoring and environmentally acceptable conditions are reflected in the SMMP for each ocean dumping site, as a result the 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: Reporting in FY 2007 and FY 2008 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 2010 Performance Measures:

- **Percentage of planned risk management research products delivered to support EPA's Office of Water, Regions, water utilities, and other key stakeholders to manage public health risks associated with exposure to drinking water, implement effective safeguards on the quality and availability of surface and underground sources of drinking water, improve the water infrastructure, and establish health-based measures of program effectiveness. (program assessment measure)**
- **Percentage of planned methodologies, data, and tools delivered in support of EPA's Office of Water and other key stakeholders needs for developing health risk assessments, producing regulatory decisions, implementing new and revised rules, and achieving simultaneous compliance under the Safe Drinking Water Act. (program assessment measure)**
- **Percentage of planned outputs delivered in support of the protection of human health and ecosystems as related to designated uses for aquatic systems and the beneficial use of biosolid long-term goal (program assessment measure)**
- **Percentage of planned outputs delivered in support of the 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 (program assessment measure)**
- **Percentage of planned outputs delivered in support of the 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 (program assessment 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 Assessment, available at:
http://www.whitehouse.gov/omb/expectmore/summary/10004371.2005.html (last accessed August 16, 2007)
Water Quality Research Program Assessment, available at:
http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html
(last accessed August 16, 2007)

FY 2010 Performance Measure:

- **Number of 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 Assessment, available at:
http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html
(last accessed August 16, 2007)

FY 2010 Performance Measure:

- **Percent variance from planned cost and schedule (program assessment 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 program Assessment, available at:
http://www.whitehouse.gov/omb/expectmore/summary/10004306.2006.html
(last accessed August 16, 2007)
Drinking Water Research Program Assessment, available
at:http://www.whitehouse.gov/omb/expectmore/detail/10004371.2005.html
(last accessed August 21, 2008)

FY 2010 Performance Measures:

- **Percentage of WQRP program publications rated as highly cited papers (program assessment measure).**
- **Percentage of WQRP publications in high impact journals. (program assessment 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 Water Quality Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/wq_bibliometric_2005_021308.html (last accessed on Aug 21, 2008)

GOAL 3 OBJECTIVE 1

FY 2010 Performance Measure:

- **Billions of pounds of municipal solid waste reduced, reused, or recycled [program performance assessment]**

- **Billions of pounds of municipal solid waste reduced, reused or recycled per Federal dollars budgeted [program assessment efficiency]**

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 and Assumptions: 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 2010 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.

EPA influences national recycling based on its investment, over many years, in the development and implementation of voluntary programs, as well as information tools, to motivate State and local government, business, manufacturers, and citizens to reduce the municipal solid waste generated and increase recycling. The level of national recycling is published biennially in the report "Municipal Solid Waste in the United States." The current report describes the municipal solid waste stream based on data collected yearly from 1960 through 2006.

Many State and local governments, industry and citizen groups use EPA materials to develop their recycling programs. The Agency also has a significant impact on national recycling rates through its participation in major conferences, national and trade press efforts, and convening summits and focus groups. Additionally, EPA meets with national organizations such as the Association of State and Territorial Solid Waste Management Officials, National Recycling Coalition, and Solid Waste Association of North America to promote recycling.

The second component of the 2010 measure is comprised of EPA's annual commitments as tracked in the ACS database. In addition to efforts in support of the national recycling measure, the Agency will track and report accomplishments based on results achieved from grants, FTE-only opportunities, work assignments (if applicable), and EPA Region-specific partners.

The final component of the 2010 measure is partnership attribution. EPA's WasteWise program provides program design assistance, implementation assistance, networking opportunities, helpline and listserve support, and recognition opportunities to partners enrolled in the program. The cumulative effect and investment in voluntary partnerships contribute to the increase in the national recycling rate. EPA currently claims 25% of recycling and source reduction achievement reported by partners. As part of their enrollment in the WasteWise program, partners submit a baseline waste reduction to use as a point of comparison to measure EPA's influence.

The 2010 MSW 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.

Suitability: The report, including the baseline numbers, annual rates of recycling and per capita municipal solid waste generation, is widely accepted by solid waste management practitioners.

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 Reviews: N/A

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 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 Resource Conversation and Recovery (ORCR) does not collect data on estimated error rates.

New/Improved Data or Systems: The measure represents EPA's accomplishments in promoting recycling.

References:

U.S. Environmental Protection Agency. "Municipal Solid Waste Generation, Recycling and Disposal in the United States: Facts and Figures for 2006," Office of Solid Waste and Emergency Response. http://www.epa.gov/epaoswer/non-hw/muncpl/pubs/msw06.pdf (accessed August 14, 2008).

Waste News. "Municipal Recycling Survey". Crain Communications, Inc. 2008. Available annually from Waste News.com. http://www.wastenews.com (accessed August 15, 2008)..

U.S. Environmental Protection Agency. "Cutting the Waste Stream in Half: Community Record-Setters Show How". Office of Solid Waste and Emergency Response. EPA-530-R-99-013, June 1999. http://www.epa.gov/epaoswer/non-hw/reduce/r99013.pdf (accessed August 15, 2008).

U.S. Environmental Protection Agency. "Evaluation of Diversion and Costs for Select Drop-Off Recycling Programs". Office of Research and Development. EPA-600-R-95-109, June 1995. http://www.epa.gov/nscep (accessed August 15, 2008).

FY 2010 Performance Measure:

- **Number of hazardous waste facilities with new controls or updated controls. [program assessment 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 and Assumptions: 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.

Suitability: 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 https://rcrainfo.epa.gov/, provides guidance to facilitate the generation and interpretation of data.

QA/QC Procedures: 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 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 and other related codes. We have discussed the need for correct entry with the Regions. The next version of RCRAInfo is scheduled to be available in December 2008. This version, Version 4 (V4), has many added components that will help the user identify errors in the system (Example: data gap report).

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 information on RCRA-regulated hazardous waste sites. This non-sensitive information is supplied from RCRAInfo to Envirofacts.

Data Quality Reviews: 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. Those recommendations coincided with ongoing internal efforts to improve the definitions of data collected, and 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. The "Permitting and Corrective Action Program Area Analysis" was the primary vehicle for the improvements. Changes will be implemented in V4.

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 data may become out-of-date because RCRA does not

mandate the notification of all information changes. Nevertheless, EPA tracks the facilities by their ID numbers and those should not change even during ownership changes (*RCRA Subtitle C EPA Identification Number, Site Status, and Site Tracking Guidance*, March 21, 2005). 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 a static baseline for the total facilities tracked for GPRA, but there may be occasions where we would need to make minor baseline modifications. The larger permitting universe is carried over from one Strategic Plan to the next with minor changes (for instance, facilities referred to Superfund are removed, or facilities never regulated are removed; facilities that applied for a permit within the last strategic cycle are added). This universe is composed of facilities that were subject to permits as of 10-1-1997 and subsequent years. EPA plans to update the list of units that need "updated controls" after the end of each Strategic Plan cycle. Those facilities that need updated controls are a smaller set within the larger GPRA permitting universe tracked for strategic and annual goals.

Error Estimate: N/A. Currently ORCR does not collect data on estimated error rates.

New/Improved Data or Systems: New data quality tools, tracking, and reporting capabilities will be added with V4 of RCRAInfo, scheduled for deployment in December 2008. 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 states have the option to use commercial off-the-shelf software to develop reports from database tables.

References:

U.S. Environmental Protection Agency. Office of Solid Waste and Emergency Response. RCRAInfo website with documentation and data http://www.epa.gov/epaoswer/hazwaste/data/#rcra-info (accessed August 15, 2008).

U.S. Government Accountability Office. "Hazardous Waste: Benefits of EPA's Information System Are Limited". AIMD-95-167, August 22, 1995. http://www.gao.gov/archive/1995/ai95167.pdf (accessed August 15, 2008).

U.S. Environmental Protection Agency. "Permitting and Corrective Action Program Area Analysis". WIN/INFORMED Executive Steering Committee, July 28, 2005.

U.S. Environmental Protection Agency. "RCRA Subtitle C EPA Identification Number, Site Status, and Site Tracking Guidance". March 21, 2005

FY 2010 Performance Measures:

- **Minimize the number of confirmed releases at UST facilities to 9,000 or fewer each year**

- **Increase the percentage of UST facilities that are in significant operational compliance (SOC) with both release detection and release prevention requirements by 0.5% over the previous year's target**
- **Number of annual confirmed UST releases per Federal, state, and territorial costs [program assessment 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 program Assessment 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 program Assessment 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 2010 Performance Measure:

- **Percentage of coal combustion product ash that is used instead of 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, who represent 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 and Assumptions: 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.

Suitability: The coal combustion product (CCP) recycling rate is defined as tons of coal ash recycled divided by tons 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 Reviews: N/A

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 Resource Conversation and Recovery (ORCR) 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: American Coal Ash Association. "ACAA 2007 CCP Survey 2007." http://www.acaa-usa.org/ (accessed August 15, 2008).

FY 2010 Performance Measure:

- **Number of facilities with new or updated controls per million dollars of program cost [program assessment efficiency]**

Performance 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 Resource Conversation and Recovery (ORCR) 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 and Assumptions:

Numerator – Facilities with approved or updated controls as described above; 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. Examples include sites cleaned up to a protective level; any groundwater releases controlled so no further attenuation is occurring; any remaining waste safely removed or capped (isolated); and long term controls in place to protect people and the environment at the site, if any contamination remains. An updated control, such as a permit renewal, indicates that the facility has upgraded its operations to ensure continued safe operation, minimizing the potential for releases and accidents.

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.

Suitability: EPA's Budget Automation System is the primary source for budget formulation data and is considered definitive for all Agency users. RCRAInfo is also considered to be a definitive source of RCRA facility information, and much of the data contained in RCRAInfo is available nowhere else. The data are considered accurate at the regional and national levels.

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 Reviews: N/A.

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 ORCR 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: U.S. Environmental Protection Agency. Office of Environmental Information. Federal Docket Management System (FDMS). http://www.regulations.gov (accessed August 15, 2008).

U.S. Environmental Protection Agency. Office of the Chief Financial Officer. Budget Automation System. Internal agency operating system on EPA intranet, (accessed August 13, 2008).

FY 2010 Performance Measure:

- **Number of tribes covered by an integrated solid waste management plan**

Performance Database: EPA Regions have internal data systems which are appropriate for the size of the data set. As of April 2008, a nationwide total of 40 tribal integrated waste management plans have been counted in EPA's Annual Commitment System.

Data Source: EPA Regional offices enter data into their internal data systems.

Methods and Assumptions: Regional data systems reflect EPA Regional offices' evaluations of tribal integrated waste management plans and do not require any other data elements or sources.

The data systems are considered to be appropriate for the minimal complexity and small size of the data set.

Suitability: The data are reviewed by EPA for data quality and periodic adjustments are made during these reviews. The data are considered to be accurate on a regional and national scale.

QA/QC: The internal EPA data set housing the specific solid waste management plans for each tribe is managed by each regional office and is under the control of each region. Also, because the data are very small in size on a region by region basis, it can be managed efficiently by each regional office and is considered to be accurate.

Data Quality Reviews: N/A.

Data Limitations: EPA Regions have ownership of this data. There are no other limitations.

Error Estimate: N/A.

New/Improved Data or Systems: During FY 2008, EPA will be compiling the regional data into a spreadsheet for national tracking purposes.

References: U.S. Environmental Protection Agency. "Five Elements of a Tribal Integrated Waste Management Plan". Memorandum from Matt Hale, Director, Office of Solid Waste. http://yosemite.epa.gov/osw/rcra.nsf/0c994248c239947e85256d090071175f/E7661F353791AD71852573780050876E/$file/14776.pdf (accessed August 14, 2008).

FY 2010 Performance Measure:

- **Number of closed, cleaned up or upgraded dumps in Indian Country or other tribal lands**

Performance Database: Indian Health Service's Web Sanitation Tracking and Reporting System (w/STARS) database. This database is a subset of the Operation and Maintenance Data System (OMDS).

Data Source: EPA's Regional offices, in collaboration with IHS, report the performance data continually to the w/STARS database. The database is restricted to personnel who have specific passwords.

Methods and Assumptions: The w/STARS database contains information regarding the location, composition, use status, proximity to population, and other related dump data. Reports generated for EPA from the database focus on the status of the open dumps.

Suitability: The data are reviewed by the EPA and IHS for data quality. The data are considered to be accurate on a national scale.

QA/QC Procedures: Quality assurance and quality control relate to internal procedures for the IHS w/STARS reporting process. Access to the data system is restricted to password holders. Data generated by tribal government staff is verified and then entered by EPA or IHS staff.

Data Quality Review: N/A.

Data Limitations: The w/STARS database contains data pertaining to the open dumps located on the lands of the 572 federal recognized tribes. EPA is aware that new open dumps may be created on these lands. While EPA has access to the database, IHS has ownership of the database.

Error Estimate: N/A. Currently, the Office of Resource Conversation and Recovery (ORCR) does not collect data on estimated error rates.

New/Improved Data or Systems: EPA Regional offices and IHS staff are in the process of a significant data collection effort to update the universe of known open dumps. This effort is expected to be largely completed by Fall 2009. During the past several years, IHS, in collaboration with EPA, customized the w/STARS database to better meet EPA needs and requirements. While this effort is largely complete, it is currently ongoing.

References: U.S. Department of Health and Human Services. Indian Health Service. w/STARS data are available from the IHS website, http://www.ihs.gov (accessed August 15, 2008).

GOAL 3 OBJECTIVE 2

FY 2010 Performance Measures:

- **Gallons of oil spilled to navigable waters per million program dollars spent annually on prevention and preparedness at Facility Response Plan (FRP) facilities [program assessment efficiency]**
- **Total gallons of oil capacity verified as safely stored at inspected FRP and SPCC facilities during the reporting period per one million program dollars spent annually on prevention and preparedness [program assessment efficiency]**
- **Percent of all SPCC facilities found to be non-compliant will be brought into compliance [program assessment measure]**
- **Percent of all FRP facilities found to be non-compliant will be brought into compliance [program assessment measure]**

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 Agency's financial database. EPA

will also be using its in-house SPCC/FRP Database to pull data related to inspected facilities to assist measurement tracking.

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 the Agency's financial database.

Methods and Assumptions: 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. The assumption for the oil program's compliance measures is that the universe will consist of all facilities that were found to be non-compliant during the course of the year. Each year thereafter, this number and the number of facilities that were brought into compliance will be determined on a cumulative basis, and the percentage calculated accordingly. The baseline for these new measures will be established during FY 2009.

Suitability: For the new Strategic Plan, EPA is proposing a focus on bringing SPCC and FRP facilities into compliance. This will necessitate national consistency in targeting inspections as well as the process to bring non-compliant facilities into compliance.

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

<u>FY 2010 Performance Measure</u>:

- **Score on Core NAR evaluation**

Performance Database: No specific database has been developed. Data from evaluations from

each of the 10 Regions, Special Teams, and Headquarters are tabulated and stored using standard software (e.g., Word, Excel).

Data Source: The Core National Approach to Response (NAR) assessment will be a new evaluation tool that will assess EPA's readiness for multiple significant events. Data are collected through detailed surveys of all Regional programs, as well as HQ offices. The process will include interviews with personnel and managers in each program office.

While EPA is currently prepared to respond to chemical, biological, and radiological incidents, improvement in the homeland security readiness measure will demonstrate an increased ability to respond quickly and effectively to national-scale events. The FY 2010 Core NAR target is to improve homeland security readiness by 5 points from the FY 2009 baseline performance.

Methods, Assumptions and Suitability: To ensure that the goals of the NAR are being met, EPA will be developing a Core NAR evaluation. (The National Approach to Response is an Agency wide mechanism to address effective evaluation of resources.) The Core NAR evaluation criteria will be used to measure the Agency's readiness to respond to multiple, nationally significant events. EPA Headquarters, Regions, and Special Teams will be evaluated during this process. The evaluation team will consist of managers and staff from Headquarters, including contractor support. Once all of the evaluations are complete, a national score will be calculated based on average scores..

QA/QC Procedures: To be developed

Data Quality Review: The evaluation team will review the data (see Methods and Assumptions) 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, 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 2010 Performance Measures:

- **Number of Superfund final assessment decisions completed [program performance assessment]**
- **Number of human exposure universe of sites with human exposures under control [program assessment measure]**
- **Number of groundwater migration universe of sites with groundwater migration under control [program assessment measure]**
- **Number of NPL sites with construction completed [program assessment measure]**
- **Number of NPL final and deleted sites meeting the criteria for Sitewide Ready for Anticipated Use**
- **Human exposures under control per million dollars [program assessment efficiency]**
- **Annual program dollars expended per Operable Unit (OU) completing cleanup activities [Federal Facilities program assessment efficiency]**
- **Oversee and complete PRP removal actions which includes voluntary, AOC and UAO actions. [program assessment measure]**
- **Superfund-lead removal actions completed annually [program assessment measure]**
- **Human Exposure avoided per million dollars spent on fund-lead removal actions [program assessment efficiency]**
- **Human Exposure avoided per million dollars spent assisting PRP-lead removal actions [program assessment efficiency]**
- **Number of Federal Facility Superfund sites where all remedies have completed construction [program assessment measure]**
- **Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined [program assessment measure]**

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability System (CERCLIS) is 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 core financial management system.

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. The Site/Project field of the IFMS account number that is assigned to every financial transaction identifies site-specific obligations. 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 2010 are used to demonstrate program progress and reflect major site cleanup milestones from start (Final Assessment Decision) to finish (Percentage of Sites Ready for Anticipated 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 data users including Regional Information Management Coordinators (IMCs), program personnel, data owners, and data entry 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, 7) the Office of Solid Waste and Emergency Response (OSWER) Quality Management Plan; and 8) Regional Data Entry Control Plans. Specific direction for these controls is contained in the Superfund Program Implementation Manual (SPIM).

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; 2) the OSWER Quality Management Plan; 3) EPA IT standards; 4) Quality Assurance Requirements in all contract vehicles under which CERCLIS is being developed and maintained; and 5) EPA IT security policies. In addition, specific controls are in place for system design, data conversion and data capture, and CERCLIS outputs.

Data Quality Reviews: Three audits, two by the Office Inspector General (OIG) and the other by Government Accountability Office (GAO), assessed the validity of the data in CERCLIS. The OIG audit report, *Superfund Construction Completion Reporting* (No. E1SGF7_05_0102_ 8100030), dated December 30, 1997, concluded that the Agency "has good management controls to ensure accuracy of the information that is reported," and "Congress and the public can rely upon the information EPA provides regarding construction completions." The GAO report, *Superfund: Information on the Status of Sites* (GAO/RCED-98-241), dated August 28, 1998, estimated 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. 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 has either implemented or continues to implement these recommendations.

The IG annually reviews the end-of-year CERCLIS data, in an informal process, to verify data that supports the performance measures. Typically, there are no published results.

EPA received an unqualified audit opinion by the OIG for the annual financial statements and recommends several corrective actions. The Office of the Chief Financial Officer indicates that corrective actions will be taken.

Data Limitations: 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 identified some weaknesses. The Agency disagreed with the study design and report conclusions; however, the report provided 11 recommendations on improving data quality with which EPA concurred and either implemented or is implementing. 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 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, which address timeliness, completeness, and accuracy, and has provided these reports to the Regions. Information developed and gathered in the modernization effort is a valuable resource for scoping the future redesign of CERCLIS. This redesign is necessary to bring CERCLIS into alignment with the Agency's mandated Enterprise Architecture. The first steps in this effort involved the migration of all 10 Regional databases and the Headquarters database into one single national database at the National Computing Center in RTP and the migration of Superfund Document Management System (SDMS) to RTP to improve efficiency and storage capacity. During this process SDMS was linked to CERCLIS which enabled users to easily transition between programmatic accomplishments as reported in CERCLIS and the actual document that defines and describes the accomplishments. EPA Headquarters is now scoping the requirements for an integrated SDMS-CERCLIS system, tentatively called the Superfund Enterprise Management System (SEMS). Work on SEMS started in FY 2007 and will continue through FY 2010.

SEMS will provide a common platform for major Superfund systems and future IT development. It will be constructed in part using EPA IT enterprise architecture principles and components. SEMS will provide a Superfund Program user gateway to various IT systems and information collections.

In an effort to better facilitate and capture important Superfund data, a new CERCLIS Five-Year Review Module was released June 2006. In addition, a new CERCLIS Reuse/Acreage Module was released in June 2007 to support two new performance measures.

References: U.S. Environmental Protection Agency, EPA Performance and Accountability Reports, http://www.epa.gov/ocfo/par/index.htm (accessed July 30, 2008).

U.S. Environmental Protection Agency, Superfund Accomplishment and Performance Measures, http://www.epa.gov/superfund/accomplishments.htm (accessed July 30, 2008).

U.S. Environmental Protection Agency, Office of Inspector General, Superfund Construction Completion Reporting, E1SGF7_05_0102_8100030, http://www.epa.gov/oigearth/eroom.htm (accessed July 30, 2008).

U.S Environmental Protection Agency, Office of Inspector General, Information Technology - Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Data Quality, No. 2002-P-00016, http://www.epa.gov/oigearth/eroom.htm (accessed July 30, 2008).

U.S. Government Accountability Office, "Superfund Information on the Status of Sites, GAO/RCED-98-241", http://www.gao.gov/archive/1998/rc98241.pdf (accessed July 30, 2008).

U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation, *Superfund Program Implementation Manuals (SPIM)*, http://www.epa.gov/superfund/policy/guidance.htm (accessed July 30, 2008).

U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Respose, "OSWER Quality Management Plan", http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf (accessed July 30, 2008).

U.S. Environmental Protection Agency, Office of Environmental Information, EPA System Life Cycle Management Policy Agency Directive 2100.5, http://www.epa.gov/irmpoli8/ciopolicy/2100.5.pdf (accessed July 30, 2008).

U.S. Environmental Protection Agency, Office of Environmental Information, EPA IT Standards, http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf (accessed July 30, 2008).

U.S. Environmental Protection Agency, Office of Environmental Information, EPA's Information Quality Guidelines, http://www.epa.gov/quality/informationguidelines (accessed July 30, 2008).

U.S. Environmental Protection Agency, Office of Environmental Information, EPA IM/IT Policies, http://intranet.epa.gov/oeiintra/imitpolicy/policies.htm (accessed July 30, 2008).

FY 2010 Performance Measures:

- **Cumulative percentage of RCRA facilities with human exposures to toxins under control. [program assessment measure]**
- **Cumulative percentage of RCRA facilities with migration of contaminated groundwater under control. [program assessment measure]**
- **Cumulative percentage of RCRA facilities with final remedies constructed. [program assessment measure]**
- **Number of final remedy components constructed at RCRA corrective action facilities per federal, state and private sector costs. [program assessment efficiency measure]**

Performance Database: The Resource Conservation Recovery Act Information System (RCRAInfo) is the national database that supports EPA's RCRA program and all four corrective action performance measures.

Data Source: States and regions enter all data. With respect to meeting the human exposures to toxins controlled and releases to groundwater controlled, a "yes," "no", or "insufficient information" entry is made in the database. A separate entry is made in the database to indicate the date of remedy construction. 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 costs are assembled from their respective budgets. Private sector costs are derived from Environmental Business Journal data.

Methods and Assumptions: 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 all RCRA Corrective Action Program's facilities. The environmental indicators are used to track the RCRA Corrective Action Program's progress in dealing with immediate threats to human health and groundwater resources. 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.

The remedy construction measure tracks the RCRA Corrective Action Program's progress in moving sites 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.

Suitability: 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). EPA has provided guidance and training to states and regions to help ensure consistency in those determinations.

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.

QA/QC Procedures: 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. The next version of the RCRAInfo is scheduled to be available in December 2008. This version, Version 4 (V4), has many added components that will help the user identify errors in the system.

Data Quality Reviews: 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 coincided 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 Corrective Action sites are monitored on a facility-by-facility basis and the QA/QC procedures identified above are in place to 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 Resource Conversation and Recovery (ORCR) 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: U.S. Government Accounting Office Report to Congress. "Study to Identify Measures Necessary for a Successful Transition to a More Electronic Federal Depository Library System", June 1996. http://www.access.gpo.gov/su_docs/fdlp/pubs/study/studyhtm.html (accessed August 15, 2008).

FY 2010 Performance Measures:

- **Number of LUST cleanups completed that meet risk-based standards for human exposure and groundwater migration. [program assessment measure]**
- **Number of LUST cleanups completed 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.) [program assessment measure]**
- **Cleanups complete (3-year rolling average) per total cleanup dollars. (from public and private sector) [program assessment 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/PMDefinitions.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 2008 Mid-Year Activity Report*, from Cliff Rothenstein, Director, Office of Underground Storage Tanks to UST/LUST Regional Division Directors, Regions 1-10, dated June 3, 2008, http://www.epa.gov/OUST/cat/ca_08_12.pdf

FY 2010 Performance Measures:

- **Address 100% of Statute of Limitations (SOLs) cases for Superfund sites with total unaddressed past costs equal to or greater than $200,000 through settlement, referral to DOJ, filing a bankruptcy claim, or where appropriate, write-off.**
- **Reach a settlement or take an enforcement action before a new Remedial Action (RA) start at 95% of non-Federal Superfund sites with RA starts during the fiscal year that have known viable, liable parties.**

Performance Database: The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is an automated, fully modernized EPA system that is used to capture and report on all essential program and enforcement performance information. CERCLIS is the Superfund program's primary repository of program, enforcement planning, and accomplishment data. CERCLIS contains national removal, site assessment, remedial, Federal facility, and enforcement program data for hazardous waste sites.

Data Source: EPA's regional offices are responsible for entering detailed site-specific information into CERCLIS, e.g., the status of cleanups, target and measure accomplishments, and resource planning and use information. EPA Headquarters routinely pulls and reviews CERCLIS data in order to effectively manage the Superfund program, evaluate progress towards reaching program performance goals and measures, and to report Superfund program accomplishments to internal and external stakeholders.

Methods, Assumptions and Suitability: There are no analytical or statistical methods used to derive this information. Headquarters pulls accomplishment data associated with targets and measures from CERCLIS on a quarterly basis using SCAP (Superfund Comprehensive Accomplishments Plan) and Enforcement reports that provide summary and detailed site information.

QA/QC Procedures: To ensure data accuracy and control, various administrative controls have been established within the Superfund Program Implementation Manual (SPIM). The SPIM is a planning document that defines program management priorities, procedures, and practices for the Superfund Program. The SPIM also provides standardized and common definitions for program planning and reporting for the following areas:
1. Report Specifications are contained in CERCLIS reports indicating how reported data are pulled and displayed;

2. A Coding Guide contains technical instructions for data users such as Regional Information Management Coordinators (IMCs), program personnel, data owners, and data input personnel;
3. Quick Reference Guides (QRG) are available in the CERCLIS Documents Database and provide detailed data entry instructions for most CERCLIS modules;
4. Superfund Comprehensive Accomplishment (SCAP) and Enforcement reports are used to track, budget, plan, and evaluate progress towards meeting Superfund targets and measures; and
5. A historical lockout feature is provided in CERCLIS to ensure that any changes to past fiscal year data can only be made by approved personnel and are recorded within a Change Log report.
These controls are contained in the Superfund Program Implementation Manual (SPIM) Fiscal Year 2008/2009 (http://www.epa.gov/superfund/action/process/spim08.htm).

CERCLIS operation and development is managed by the following administrative control and 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 to the above, specific controls are in place for system design, data conversion, 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.

GOAL 3 OBJECTIVE 3

<u>FY 2010 Performance Measures:</u>

- **Percentage of planned outputs delivered in support of the manage material streams, conserve resources and appropriately manage waste long-term goal (program assessment measure)**

- **Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of contaminated sites long-term goal (program assessment 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 Program Assessment, available at:
http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html (last accessed August 16, 2007)

<u>FY 2010 Performance Measure:</u>

- **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 Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html (last accessed August 16, 2007)

FY 2010 Performance Measures:

- **Percentage of Land research publications rated as highly cited papers (program assessment measure).**
- **Percentage of Land research publications in high impact journals. (program assessment 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 Land Protection and Restoration Research Program, available at: http://es.epa.gov/ncer/publications/bibliometrics/remediation_bibliometric_2005_021308.html (last accessed on Aug 21, 2008)

GOAL 4 OBJECTIVE 1

FY 2010 Performance Measure:

- **Cumulative number of assays that have been validated. (program assessment measure)**

Performance Database: Performance is measured by the cumulative number of screening 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 2010 Performance Measure:

- **Contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program. (program assessment 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 direction received during the FY 2006 program assessment

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 2010 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 (program assessment 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. Approximately 1.5 million homes are treated for termite infestations each 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: Clausen, C.A. and F. Green. 2002. Home wreckers in search of moisture. Techline. USDA Forest Service, Forest Products Laboratory, II-5. http://www.fpl.fs.fed.us/documnts/techline/ii-5.pdf

Gold, R.E., M.E. Merchant, and G.J. Glenn. Undated. How to select a termite control service. The Texas A&M University System, Texas Agricultural Extension Service. L-1785

LSU AgCenter. 2005. Termite Facts and Figures. Louisiana State University. http://www.lsuagcenter.com/en/environment/insects/Termites/formosan_termites/Termite+Facts+and+Figures.htm

Strayhorn, C.K. 1997. Homeowners beware. Window on State Government. Texas Comptroller of Public Accounts. Fiscal Notes, August 1997. http://www.cpa.state.tx.us/comptrol/fnotes/fn9708.html

Su, N.-Y. 2002. Novel technologies for subterranean termite control. Sociobiology 40(1):91-101.

Williams, L.H. and R. V. Smythe. 1979. Estimated losses caused by wood products insects during 1970 for single-family dwelings in 11 Southern States. U.S. Department of Agriculture Forest Service, Research paper SO-145.

FY 2010 Performance Measure:

- **Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations. (program assessment 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 potential average AEL(avoided economic loss) per emergency use granted is based on the actual acres for which the pesticide is used. Data are

available on yield losses without the emergency pesticide uses and the actual acres treated with the pesticides allowed under the emergency exemptions. 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 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 $239 billion[6] in 2006. Major field crops in value in 2007 were corn ($52 billion), soybeans ($27 billion), wheat ($14 billion), and cotton ($5 billion), while tomatoes ($2.2 billion), apples ($2.4 billion), and strawberries ($1.7 billion) are major fruit/vegetable crops in value. (USDA, 2008)

American agricultural production far outweighs domestic consumption and the U.S. is one of the World's largest agricultural exporters, worth approximately $82 billion in FY2007 (over 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, 2008).

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

New/Improved Data or Systems: This measure will utilize existing data and data systems.

References:
USDA data sources include:

FY 2010 Performance Measure:

[6] The value received by farmers was $239 billion in 2006

- **Percent of urban watersheds that exceeds the National Pesticide Program aquatic life benchmarks for three key pesticides of concern. (program assessment 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 in its second cyclye (cycleII) from 2002-2012, Data are available to the public on USGS-NAWQA website from the (http://water.usge.gov/nawqa). USGS is currently developg sampling plans for 2013 – 2022. 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. Monitoring plans call for bi-yearly sampling in 8 urban watersheds; and sampling every four years in a second set of 9 urban watersheds. The sampling frequency for these sites will range from approximately 13 to 26 samples per year depending on the size of the watershed and the extent of pesticide use period. Sampling frequency is seasonally weighted so more samples are collected when pesticide use is expected to be highest. USGS is currently developing sampling plans for 2013 – 2022.

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). Although the USGS has performed a reconnaissance of pyrethoids occurrence is bed sediment, there is not currently a comprehensive monitoring strategy.

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 2010 Performance Measure:

Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate

Performance Database: Most of the nation's Poison Control Centers (PCCs) participate in a national data collection system known as the National Poisoning Data System (NPDS). Among the types of exposures reported are pesticide related incidents in both residential and occupational settings. 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: NPDS, formerly known as the Toxic Exposure Surveillance System (TESS), is one of the most comprehensive sources of surveillance data on poisonings in the United States. NPDS is a uniform database of PCCs, which are members of the American Association of Poison Control Centers (AAPCC), and are distributed throughout the United States. The database was established in 1985 and now includes information on more than 36 million exposure cases. In 2006, 61 PCCs received more than 4 million cases, including more than 2.4 million human exposure cases and 1.4 million informational calls.

NPDS is a valuable public health resource and has been utilized to identify hazards, develop education priorities, guide clinical research, and identify chemical and bioterrorism incidents. As

a result, NPDS has helped prompt product reformulations, recalls, and bans, support regulatory actions, and provide post-marketing surveillance of new drugs.[7]

Each individual PCC provides 24-hour emergency medical information on the diagnosis and treatment of poisonings. The calls are managed primarily by AAPCC-certified Specialists in Poison Information (SPIs), who are typically pharmacists and nurses that have managed at least 2,000 calls. SPIs are required to complete detailed electronic medical records for both exposure and informational calls. The electronic medical records include general demographic information, including age, gender, location of exposure, and more detailed information if an exposure may have occurred, including suspected substance, reason for exposure, route of exposure, management site, symptoms, and medical outcome. To assist SPIs and ensure database uniformity, many of the fields included in the electronic medical records use categories that have been defined by the AAPCC. For example, SPIs characterize the medical severity of possible exposures using the medical outcome field, which includes the AAPCC-defined categories "None," "Minor," "Moderate," "Major," or "Death." Additionally, the records may also contain several open fields, which allow SPIs to record additional information that may be relevant to the treatment and diagnosis of each case.

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.

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[7] Bronstein AC, DA Spyker, LR Cantilena, J Green, BH Rumack, SE Heard. 2006 Annual Report of the American Association of Poison Control Centers' National Poison Data System. *Clinical Toxicology* (2007) 45, 815–917.

References: Poison Control Centers TESS (Toxic Exposure Surveillance System)
http://www.aapcc.org/poison1.htm

FY 2010 Performance Measure:

- **Improve or maintain a rate of incidents per 100,000 potential risk events in population occupationally exposed to pesticides (program assessment measure)**

Performance Database: Most of the nation's Poison Control Centers (PCCs) participate in a national data collection system known as the National Poisoning Data System (NPDS). 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:
NPDS, formerly known as the Toxic Exposure Surveillance System (TESS), is one of the most comprehensive sources of surveillance data on poisonings in the United States. NPDS is a uniform database of PCCs, which are members of the American Association of Poison Control Centers (AAPCC), and are distributed throughout the United States. The database was established in 1985 and now includes information on more than 36 million exposure cases. In 2006, 61 PCCs received more than 4 million cases, including more than 2.4 million human exposure cases and 1.4 million informational calls.

NPDS is a valuable public health resource and has been utilized to identify hazards, develop education priorities, guide clinical research, and identify chemical and bioterrorism incidents. As a result, NPDS has helped prompt product reformulations, recalls, and bans, support regulatory actions, and provide post-marketing surveillance of new drugs.[8]

Each individual PCC provides 24-hour emergency medical information on the diagnosis and treatment of poisonings. The calls are managed primarily by AAPCC-certified Specialists in Poison Information (SPIs), who are typically pharmacists and nurses that have managed at least 2,000 calls. SPIs are required to complete detailed electronic medical records for both exposure and informational calls. The electronic medical records include general demographic information, including age, gender, location of exposure, and more detailed information if an exposure may have occurred, including suspected substance, reason for exposure, route of exposure, management site, symptoms, and medical outcome. To assist SPIs and ensure database uniformity, many of the fields included in the electronic medical records use categories that have been defined by the AAPCC. For example, SPIs characterize the medical severity of

[8] Bronstein AC, DA Spyker, LR Cantilena, J Green, BH Rumack, SE Heard. 2006 Annual Report of the American Association of Poison Control Centers' National Poison Data System. *Clinical Toxicology* (2007) 45, 815–917.

possible exposures using the medical outcome field, which includes the AAPCC-defined categories "None," "Minor," "Moderate," "Major," or "Death." Additionally, the records may also contain several open fields, which allow SPIs to record additional information that may be relevant to the treatment and diagnosis of each case.

Data from the NPDS database are used for the number of occupational incidents - numerator. Specifically, it includes occupational incidents from exposures to disinfectants, algecides and conventional pesticides, including those with multiple active ingredients and where no active ingredient is identified.

The number of potential risk events in the population occupationally exposed to pesticides - the denominator - is calculated from several sources. The estimate of agricultural field workers is from the Department of Labor's National Agricultural Workers Survey. Department of Labor's Bureau of Labor Statistics captures employment characteristics for the national workforce. 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:
This performance 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.

<u>Calculation Description:</u>

For the Denominator :
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 1 – 3 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

Numerator:
Occupational Pesticide Incidents:

The Poison Control Centers' National Poisoning Data System recorded an average of 1831 occupational pesticide incidents with adverse health impacts in 2001 – 2003.

RATE OF INCIDENTS PER POTENTIAL PESTICIDE RISK EVENTS PER YEAR

1831 occupational pesticide incidents per 39,850,000 potential pesticide risk events/year	=	4.6 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, maintaine a comprehensive file of toxicology information, maintain SOPs, retain case records, and have a 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 NPDS system is subject to quality assurance requirements.

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.

The denominator data for non-agricultural workers is from 2004; more recent BLS data were 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 2010 Performance Measure:

- **Reduced cost per pesticide occupational incident avoided (program assessment 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

<u>FY 2010 Performance Measure:</u>

- **Percent reduction in concentrations of pesticides detected in general population (program assessment 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 potential organophosphate pesticide exposure, based on levels of the non-specific organophosphate dialkyl phosphate metabolites and the chlorpyrifos-specific metabolite 3,5,6-Trichloro-2-pyridinol at the 50th percentile. The Agency selected the 50th percentile because it is a central tendency value with smaller inherent variability than higher percentiles. However, the Agency recognizes that

an accurate estimate of the 50th percentile cannot be calculated if 50 percent of the observations are below the LOD. Therefore, the Agency may adopt an alternative approach, such as selecting the 75th percentile, if a sufficient number of observations are not above the LOD.

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 2010 Performance Measure:

- **Average cost and average time to produce or update an Endangered Species Bulletin (program assessment 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 2010 Performance Measure:

- **Reduce cost per acre using reduced risk pest management practices compared to the grant and/or contract funds expended on environmental stewardship (program assessment 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 2010 Performance Measures:

- **Percent of decisions completed on time (on or before PRIA or negotiated due date)**
- **Maintain timeliness of Section 18 Decisions**

Performance Database: The Pesticide Registration Improvement Act (PRIA) of 2003 established .pesticide registration service fees for registration actions. The Pesticide Registration Improvement Renewal Act (PRIA2), effective October 1, 2007, reauthorized the PRIA for five more years until 2012. The PRIA 2 legislation increased the number of actions covered by fees, modified the payment process and application in-processing. The category of action, the amount of pesticide registration service fee, and the corresponding decision review periods by year are prescribed in these statutes. Their goal is to create a more predictable evaluation process for affected pesticide decisions, and couple the collection of individual fees with specific decision review periods. They also promote shorter decision review periods for reduced-risk applications. PRISM (Pesticide Registration Information System) consolidates various pesticides program databases. It is maintained by the EPA and track regulatory data submissions and studies, organized by scientific discipline, which are submitted by the registrant in support of a pesticide's registration. All registration actions received under the PRIA and PRIA2 are entered and tracked in PRISM. In addition to being entered into PRISM, Section 18 actions are also tracked in a separate database which is used to populate a searchable web page linked to the

main Office of Pesticide Programs web page. S18 timeliness was reported on a FY basis for the first time in FY 2005.

Data Source: PRISM, Section 18 database

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. In addition, under PRIA and PRIA 2 , there are specific timelines, based on the type of registration action, by which the Agency must make a decision. These laws do allow the decision due date under PRIA to be negotiated to a later date, after consultation with and agreement by the submitter of the application. The timeliness measure represents the Agency's effectiveness in meeting these PRIA timelines.

QA/QC Procedures: All registration actions must employ sound science and meet the Food Quality Protection Act (FQPA) safety standards. All risk assessments are subject to public and scientific peer review. The office adheres to its Quality Management Plan (Nov. 2006) in ensuring data quality and that procedures are properly applied.

Data Quality Review: The Agency employs continuous monitoring of the status of PRIA decisions. Numerous internal Agency meeting continue to monitor workload and compliance with PRIA due dates. Throughout the pesticide registration program, weekly meetings are held to review the status of pending decisions, due date extensions, and refunds; to identify potential issues and target their resolution; to resolve fee category questions; and to coordinate schedules with science support organizations. Senior managers review justifications and make final decisions to extend of negotiate a PRIA due date and whether or not to issue a "PRIA Determination to Not Grant" a registration. On a bi-monthly basis, progress in meeting PRIA due dates and the short term pending workload are evaluated across all involved organizations and periodically shared with stakeholder groups.

Data Limitations: None **known**

Error Estimate: N/A

New/Improved Data or Systems: Reports developed in Business Objects (using PRISM as the data source) allow senior management to more effectively track the workload (e.g., pending actions with upcoming PRIA due dates, actions for which the PRIA date appears to have passed etc.) and ensure that PRIA or negotiated due dates are met.

References:
http://www.epa.gov/pesticides/fees/
FIFRA Sec 3(c)(5); FFDCA Sec 408(a)(2); Food Quality Protection Act (FQPA) 1996; Pesticide Registration Improvement Act (PRIA) 2003; Pesticide Registration Improvement Renewal Act (PRIA 2) 2007

<u>FY 2010 Performance Measure:</u>

- **Product Reregistration**
- **Number of Registration Review Pesticide Case Dockets Opened**
- **Number of Final Work Plans**

Performance Database: OPP's Reevaluation process includes Product Reregistration and Registration Review. The Product Reregistration process is scheduled to be completed in 2014, while the Registration Review process will be in full operation at that time. Major milestones are tracked in the Pesticide Registration Information System (PRISM). PRISM is maintained by 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 review. Actions are entered in PRISM as they occur and reported on a fiscal year basis. In addition manual counts are maintained by the office.

Data Source: EPA's Pesticides Program, PRISM, and Manual Systems.

Methods, Assumptions and Suitability: The measures are program outputs which represent the program's statutory requirements to ensure that approved pesticides remain safe for human health and the environment. While program outputs do not directly measure risk reduction, they do reflect progress made toward reducing risk. In 1988, Congress amended the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requiring EPA to evaluate all pesticides registered prior to November 1984 to assure that they meet current safety standard and are supported with high quality data. The review of all the active ingredients (AIs) was completed in October 2008. Over the next five years, registrants will be required to submit product specific data and new product labels to comply with the decisions on the AIs. OPP's review and approval (or cancellation) process of each individual product label is referred to as Product Reregistration. Product Reregistration is scheduled for completion in 2014. The Food Quality Protection Act of 1996 directed EPA to establish a Registration Review program with the goal of reviewing all registered pesticides, AIs and products, on a 15-year cycle to ensure that they continue to meet the standards of registration. EPA issued the final rule in 2006 and began implementing the program in 2007. Under the rule, EPA posts registration review schedules and these will provide a baseline for expected AI case dockets that will be opened for the next three year cycle and for decisions expected over the next several years. The first step of Registration Review is to open a public docket for each pesticide case entering the process to show the public what the Agency knows about the AI and seek comment. When comments are evaluated and data needs are finalized, OPP posts a Final Work Plan (FWP) for each AI case. Although the docket openings and the FWPs are tracked, both steps require notable resources to complete.

QA/QC Procedures: All registrations must be based on sound science and meet the Food Quality Protection Act (FQPA) safety standard. All risk assessments are subject to public and scientific peer review. In addition, OPP management reviews and signs new documents before being placed in the docket or posted on EPA's website.

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: EPA recently constructed a module in PRISM tracking major Registration Review milestones. This module enhances tracking capabilities and is an important management tool.

References: EPA Website: http://www.epa.gov/oppsrrd1/registration_review/ ("Registration Review: A Periodic Look at Old Pesticides");

FY 2010 Performance Measure:

- **Percentage of agricultural acres treated with reduced-risk pesticides (program assessment measure)**

Performance Database: EPA uses an external database, Doane Marketing Research (DMR) 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 agricultural 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 DMR. information is also compared to prior years for variations and trends as well as to determine the reasons for the variability.

DMR 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. DMR 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 November, 2006.

The main customers for the DMR 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: The DMR data are subject to extensive internal quality review, documented at the website. EPA's statistical and economics staff review data from DMR. 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 Service of the United States Department of Agriculture (USDA).

Data Limitations: DMR data are proprietary; thus in order to release any detailed information, the Agency must obtain approval from the company. 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 DMR 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. DMR 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 2010 Performance Measure:

- **Percent of agricultural watersheds that exceeds the National Pesticide Program aquatic life benchmarks for two pesticides of concern (azinphos-methyl and chlorpyrifos.)**

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 in its second cycle (cycle II) from 2002-2012. Data are available to the public on the USGS-NAWQA website from the (http://water.usgs.gov/nawqa/). USGS is currently developing sampling plans for 2013 – 2022. 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. Monitoring 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 sites will range from approximately 13 to 26 samples per year depending on the size of the watershed and the extent of pesticide use period. Sampling frequency is seasonally weighted so more samples are collected when pesticide use is expected to be highest. USGS is currently developing sampling plans for 2013 – 2022.

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: These data continue to be evaluated and 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 has requested 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). Although the USGS has performed a reconnaissance of pyrethoids occurrence in bed sediment, there is not currently a comprehensive monitoring strategy.

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.

FY 2010 Performance Measure:

- **Annual number of chemicals with proposed Acute Exposure Guideline Levels (AEGLs) values. (program assessment measure)**
- **Annual number of chemicals with final Acute Exposure Guideline Levels (AEGLs) values (program assessment measure)**

Performance Database: Performance is measured by the annual number of chemicals with "Proposed and Final" 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 contractors (currently Oak Ridge National Laboratory's scientists – this work will begin shifting to a competed contract after it is awarded). 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. In FY2009 and more so in FY2010, in-house and financial resources will increasingly be devoted to finalizing AEGL chemicals through the NAS.

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 and final" by the NAC/AEGL FACA Committee represents the measures 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). The 2008 Quality Management Plan (QMP) has been approved by OPPT and is currently under review by the Office of Environmental Information. Like the 2003 QMP, it will ensure the 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.

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 2010 Performance Measure:

- **Percent reduction from baseline year in total EPA cost per chemical for which Proposed AEGL value sets are developed (program assessment 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). The 2008 Quality Management Plan (QMP) has been approved by OPPT and is currently under review by the Office of Environmental Information. Like the 2003 QMP, it will ensure the 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 2010 Performance Measures:

- **Number of cases of children aged 1-5 years with elevated blood lead levels (> 10 ug/dL) (program assessment 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. (program assessment 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/. Performance results will be updated as new versions of CDC reports on human exposure to environmental chemicals become available.

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 2010 Performance Measure:

- **Annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process [program assessment efficiency]**

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 the 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, the federal program contractors and Regional lead program staff who process the applications or oversee the processing. The database is maintained on EPA servers at the National Computer Center (NCC) located in Research Triangle Park (RTP), North Carolina. 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 HeiTech Corporation,

located in Landover, Maryland. 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.

The above methods and assumptions apply to the lead abatement program. On March 31, 2008, EPA issued a new rule (Renovation, Repair, and Painting Program Rule or RRP rule) aimed at protecting children from lead-based paint hazards. The rule requires contractors and construction professionals that work in pre-1978 housing or child-occupied facilities to follow lead-safe work practice standards to reduce potential exposure to dangerous levels of lead for children in places they frequent. In April, 2009, training providers may begin applying to EPA for accreditation to provide renovator or dust sampling technician training. Persons seeking certification as renovators or dust sampling technicians may take accredited training as soon as it is available. In October, 2009, firms may begin applying to EPA for certification to conduct renovations. Beginning in April, 2010, renovations in target (pre-1978) housing and child-occupied facilities must be conducted by certified renovation firms, using renovators with accredited training, and following the work practice requirements of the rule.

For 2010, EPA will be reviewing and adjusting performance measures for both the abatement program and the RRP program as appropriate.

Suitability: This measure tracks EPA Headquarters and Regional effort in processing lead-based paint certification and refund applications for the abatement program. 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). The 2008 Quality Management Plan (QMP) has been approved by OPPT and is currently under review by the Office of Environmental Information. Like the 2003 QMP, it will ensure the standards and procedures are applied to this effort. In addition, NPCD has an approved Quality Management Plan in place, dated July 2008.

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 queries 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. Efforts are currently being made to automate this report.

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 currently undergoing improvements to track individual certifications and training provider accreditations for the Renovation, Repair and Painting (RRP) program. There will be additional performance measurements added to the system to measure the RRP rule.

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 2010 Performance Measures:

- **Reduction in the current year production-adjusted risk-based score of releases and transfers of toxic chemicals from manufacturing facilities [program assessment measure]**
- **Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities [program assessment 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 2006 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.

The Toxics Release Inventory covers multiple industries including manufacturing, metal and coal mining, electric utilities and commercial hazardous waste treatment. The measure only looks at releases from the manufacturing sector to most closely represent the sector over which HPV-related efforts will be effective. Currently, there are close to 650 chemicals found in the TRI, however, only about a third of those (222) that are High Production Volume Chemicals.

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 a specific Plan for the model ("Quality Assurance Project Plan Risk Screening Environmental Indicators Model Version 2.1.6") will ensure that those standards and procedures are applied to this effort. The 2008 Quality Management Plan (QMP) has been approved by OPPT and is currently under review by the Office of Environmental Information, and in line with the 2003 QMP will assure 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/oppt/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. For the 2.1.6 update, the air dispersion model used by RSEI is being updated to the Office of Air's recommended model, AERMOD. Additionally, 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 2010 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 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). The 2008 Quality Management Plan (QMP) has been approved by OPPT and is currently under review by the Office of Environmental Information. Like the 2003 QMP, it will ensure the 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), external experts who offer advice, information and recommendations to OPPT, provided comments 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 2010 Performance Measures:

- **Reduction in cost of managing PMN submissions through the Focus meeting as a percentage of baseline year cost [program assessment efficiency]**

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). The 2008 Quality Management Plan (QMP) has been approved by OPPT and is currently under review by the Office of Environmental Information. Like the 2003 QMP, it will ensure the 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/

<u>FY 2010 Performance Measures:</u>

- **Annual number of Moderate Production Volume (MPV) chemicals with Hazard Based Prioritizations completed through the Chemical Assessment and Management Program (ChAMP). [program assessment measure]**
- **Annual number of High Production Volume (HPV) chemicals with Risk Based Prioritizations completed through the Chemical Assessment and Management Program (ChAMP). [program assessment measure]**

Performance Database: EPA uses a reporting spreadsheet called "CHAMP HBP.RBP.tracking.xls" to track the number of completed screening-level hazard-based prioritizations (HBPs) and risk based prioritizations (RBPs). The spreadsheet is located on the Office of Pollution Prevention and Toxics (OPPT) secure Local Area Network (LAN) drive. Additionally, a sharepoint tracking system has been developed to track interim products such as

hazard, fate, and exposure characterizations, as well as draft, interim and final versions of these products to facilitate the process of generating final prioritization reports.

Data Source: Hazard based prioritizations and risk based prioritizations are the primary products produced for Chemical Assessment and Management program (ChAMP) chemicals. ChAMP chemicals are comprised of 2006 TSCA Inventory Update Reporting (IUR) organic high and moderate production volume chemicals plus chemicals originally sponsored through the HPV challenge program that are not already included as part of the 2006 IUR list. A web content page describing the CHAMP is available and is where HBPs and RBPs will be made publicly available. Risk and Hazard based recommendations are reviewed and approved by OPPT Division Directors and Office Director prior to being made publicly available.

Risk Based Prioritizations: RBPs are performed for chemicals that have a Screening Information Data Set (SIDS) developed and provided to EPA by industry through the voluntary High Production Volume Challenge Program and that have exposure and use information available. RBPs are completed by EPA staff and are based on information compiled and synthesized from screening-level hazard and exposure characterization reports. The screening-level hazard characterizations (HCs) are based primarily on test data and information gathered from the EPA's HPV Challenge program. The screening-level exposure characterizations (EC) are based on expanded exposure and use information collected for the first time from industry by EPA under the TSCA 2006 Inventory Update regulatory reporting requirement (http://www.epa.gov/EPA-TOX/2003/January/Day-07/t32909.htm) The HC and EC reports represent thorough review of available data and information performed by subject matter expert EPA staff and identify data gaps that limit the characterizations. These screening-level HCs and ECs are used to develop a screening-level risk characterization (RC). The RC document represents an integration of the hazard and exposure information by subject matter expert EPA staff. The RC is then used to formulate the risk based prioritization which includes the Agency's risk based prioritization decision.

Hazard Based Prioritizations: HBPs are performed for chemicals with available hazard data and information which is typically less than that available for chemicals assessed through the Risk Based prioritization process. This information is acquired from EPA and public sources (i.e., there is no industry provision of data nor systematic EPA data collection activity in developing the HBPs, which are based on data already available in public domain). The HBPs are informed by a screening level hazard characterization (HC) that is developed by EPA staff based on publicly available measured data and available EPA predictive models. Each HC document is reviewed by subject matter expert EPA staff. The HC is then used to formulate the HBP which includes the Agency's hazard based prioritizations decision.

Methods and Assumptions: All chemicals assessed, whether by HBP or RBP, are compared to a set universe of chemicals (defined above). The availability of hazard, exposure, and use data determines whether or not a chemical will be assessed through a risk- or hazard- based prioritization. Chemicals will be assessed and counted toward these performances measures as either a hazard- or risk-based prioritization. However, a small percentage of chemicals having HBPs may elevate to RBPs upon the receipt of new data. If new data is received before chemicals are assessed, the change will be made proactively. However, chemicals will not be

double counted if they have already been assessed through an HPV; the change in type of assessment will be tracked. These measures count the number of completed risk-and hazard-based prioritization documents at the time the Office Director has approved them and they will be posted imminently. Data availability (not production volume) dictates the measures' counts, an acknowledged slight discrepancy with the measures' text.

Suitability: These measures are direct output measures of the Chemical Risk Review and Reduction program. The Hazard Based Prioritizations measure is an output measure that supports the outcome goal of reducing risk from chemicals in commerce. The measure is suitable for year-to-year comparisons. Hazard screening is an important first step in characterizing potential risk and hazard based prioritizations form the initial basis for taking action to reduce risk and improve human health. The Risk Based Prioritizations measure is another output measure that also supports the outcome goal of reducing risk from chemicals in commerce. The measure is suitable for year-to-year comparisons. The Risk screening accounted for by this measure supports taking action to reduce risk to human health and the environment.

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). The 2008 Quality Management Plan (QMP) has been approved by OPPT and is currently under review by the Office of Environmental Information. Like the 2003 QMP, it will ensure the standards and procedures are applied to this effort. Specifically, each Screening-Level HC (supporting either RBPs or HBPs) and EC (supporting RBPs) and report is developed by qualified technical staff following established EPA risk assessment guidelines. These technical reports and the integrated RC are reviewed by a cross-divisional technical staff including branch chiefs from OPPT division offices. The resulting HBPs and RBPs are approved by OPPT Division Directors and the Office Director.

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 prioritize chemicals for further work. 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 the screening-level Hazard Characterizations (HC) described above. The 2006 IUR provides EPA with data and information on production volume and exposure and uses (for chemicals with production volumes above 300,000 lbs/ year) that EPA is using to develop EPA screening-level ECs as described above. These screening-level HCs and ECs are combined to create screening-level RCs, which summarize potential risk and serves as the basis for making Agency risk-based prioritization decisions regarding priority for further work. For chemicals identified as a risk concern, the RBPs will be implemented through voluntary and regulatory actions to achieve effective risk management.

Data Limitations:
Risk Based Prioritizations: RBPs are based on RCs derived from HCs mostly using the SIDS data gathered under the HPV Challenge Program and ECs developed using 2006 IUR data. Each

of the underlying data sources has limitations. In some instances SIDS data elements have not been provided by sponsors and remain data gaps: such gaps are identified in the HCs. Reporting exposure and use information is only required for chemicals produced or imported at or above 300,000 pounds per year. The lack of availability of information limits the exposure characterization, and therefore the ability to develop an RBP to only the highest volume chemical (i.e. those chemicals without this type of IUR information are prioritized based on hazard information only via the HBP). For purposes of developing the RBPs, EPA attempts to address these data limitations by performing searches of publicly available databases and literature for information on hazard endpoints, environmental release, and chemical uses.

Hazard-based Prioritization- More data gaps are expected for chemicals that are subject to HBP, which limits the confidence of the characterization. For chemicals subject to a hazard-based prioritization, data will be collected from publicly available sources in a manner consistent with the High Production Volume (HPV) Challenge program guidance on searching for existing information. When measure data are not available, empirical tools, Structure Activity Relationships (SAR) or Quantitative Structure Activity Relationships (QSAR) methods "read across" from tested analogs will be used to inform the characterization of hazards. Reading data across from tested chemicals to untested analogs will be done according to the principles and practices outlined in the OECD Guidance on Grouping of Chemicals (OECD, 2007; ENV/JM/MONO (2007)28). Modeling, when available and appropriate will be used to increase confidence around data gaps. However, it is anticipated that for some chemicals and hazard endpoints, neither data nor modeling will be available to provide a robust characterization of hazard. In such cases, this lack of information will be communicated in the HC and the HBP.

Error Estimate: Not applicable. No models, assumptions or statistical methods are applied.

New/Improved Data or Systems: Several improvements to ChAMP data systems are ongoing including: (1) the development of an integrated webpage, under the CHAMP website, for posting both RBPs (and supporting documents) and HC/HBP documents, (2) the development of search capability on webpage to facilitate fast and efficient location of documents of interest, (3) the development of an integrated platform for tracking both RBPs and HBPS and the CHAMP universe via one improved consolidated excel spreadsheet with pivot table or Access database, and (4) the development of a sharepoint tracking system to track progress on interim products and facilitate workflow. A system that incorporates both 3) and 4) may also be considered.

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 2010 Performance Measure:

- **Conduct 400 RMP inspections/audits annually**

Performance Database: The EPA Annual Commitment System (ACS) is the database for the number of risk management plan (RMP) 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 and Assumptions: Regions enter data into the Agency's Annual Commitment System. HQ prepares an annual report. Data are count data and not open to interpretation.

Suitability: The subobjective's goal is to reduce chemical risks at facilities and in communities. Under the authority of section 112(r) of the Clean Air Act, the Chemical Accident Prevention Provisions require facilities that produce, handle, process, distribute, or store certain chemicals to develop a Risk Management Program, prepare a Risk Management Plan (RMP), and submit the RMP to EPA The purpose of this performance measure is to ensure that facilities that are required to have risk management plans do indeed have plans and are available in case of an incident.

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 2010 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 2010 Performance Measures:

- **Brownfields properties assessed [program assessment performance measure]**
- **Number of properties cleaned up using Brownfields funding**
- **Jobs leveraged from Brownfields activities**
- **Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields properties. [program performance assessment measure]**
- **Acres of Brownfields made ready for reuse [program assessment performance measure]**
- **Acres of Brownfields made ready for reuse per million dollars [program assessment efficiency]**

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
Institutional Controls Required
Institutional Controls in Place/Date
Funding Leveraged
Jobs Leveraged

Performance measure data is tracked by fiscal year and will not be available for the FY 2010 PAR; data will be available for the FY 2011 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 (TBA) is collected from EPA Regions.

Methods, Assumptions and Suitability: 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 several month data lag for ACRES data.

Note that accomplishments reported by Brownfields Assessment Grantees, Brownfields Cleanup Grantees, Brownfields RLF Grantees, Regional TBAs, 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 TBA 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 for which any required institutional controls are in place. "Number of cleanup and redevelopment jobs leveraged" is the aggregate of jobs leveraged by Assessment, Cleanup, RLF and State and Tribal 128 Voluntary Response Program Grantees. "Amount of cleanup and redevelopment funds leveraged at Brownfields properties" is the aggregate of funds leveraged by Assessment, Cleanup, RLF, and State and Tribal 128 Voluntary Response Program 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 and launched and phased-in an online reporting form in FY 2007 to improve data collection and to expand the community of grantees completing the form.

References: U.S. Environmental Protection Agency, "Investing in Partnership, Possibility and People: A Report to Stakeholders from the US EPA Brownfields Program", Office of Brownfields and Land Revitalization, November 2005, http://www.epa.gov/brownfields/news/stake_report.htm (accessed August 15, 2008).

U.S. Environmental Protection Agency, "Brownfields Assessment Pilots/Grants", Office of Brownfields and Land Revitalization, http://www.epa.gov/brownfields/assessment_grants.htm (accessed August 15, 2008).

U.S. Environmental Protection Agency, "Brownfields Cleanup Revolving Loan Fund Pilots/Grants", Office of Brownfields and Land Revitalization, http://www.epa.gov/brownfields/rlflst.htm (accessed August 15, 2008).

U.S. Environmental Protection Agency, "Brownfields Job Training Pilots/Grants", Office of Brownfields and Land Revitalization, http://www.epa.gov/brownfields/job.htm (accessed August 15, 2008).

U.S. Environmental Protection Agency, "Brownfields Cleanup Grants", Office of Brownfields and Land Revitalization, http://www.epa.gov/brownfields/cleanup_grants.htm (accessed August 15, 2008).

FY 2010 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 2010 Performance Measures:

- **Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003 (program assessment annual measure)**
- **Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003 (program assessment annual measure)**
- **Additional people served per million dollars (US and Mexico federal expenditures) (program assessment efficiency measure)**
    - **The program is currently reviewing alternative efficiency measures.**

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 resulting from the completion of certified projects.

Data Source: Data sources to establish the baseline include U.S. population figures from the 2000 U.S. Census and Mexican population figures from CONAGUA. Data on population served

and homes connected by "certified" water/wastewater projects are estimated and reported by BECC and NADBank and reflected in EPA project completion schedules for certified projects.

Methods, Assumptions and Suitability: Summation of population served and homes connected by "certified" water/wastewater projects from BECC and NADBank as reflected in EPA project completion schedules.

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 2010 Performance Measures:

- **Acres of habitat protected or restored in National Estuary Program (NEP) study areas [program assessment annual measure]**
- **Program dollars per acre of habitat protected or restored [program assessment 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. This data is then reported in the NEPORT database housed by EPA.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 reported to EPA in NEPORT. 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 "protection" and "restoration" 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 Regions and HQ then confirms the individual NEP and national total. 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 to assist in tracking habitat projects.

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 2010 Performance Measure:

- **Percent of goal achieved in restoring, protecting or enhancing 240 acres of coastal habitat from the 2008 baseline of 1,199 acres.[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 "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 2010 Performance Measure:

- **Percent of goal achieved in reducing trade-equalized (TE) point source nitrogen discharges to Long Island Sound from the 1999 baseline of 59,146 TE lbs/day.**

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. 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
PCS information is publicly available at:
http://www.epa.gov/compliance/planning/data/water/pcssys.htm

FY 2010 Performance Measure:

- **Percent of goal achieved in reopening 50 river and stream miles to diadromous fish passage from the 2008 baseline of 124 miles. [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~~ 124.3 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 2008 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 2010 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[9] 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

[9] 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://www.fws.gov/wetlands/StatusAndTrends/technicaldocuments/QandA.pdf
http://wetlands.fws.gov/Pubs_Reports/publi.htm
http:wetlandsfws.er.usgs.gov/status trends/national reports/trends 2005.pdf

FY 2010 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 is currently under development and in FY 2009 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. http://www.epa.gov/wetlandsmitigation/

FY 2010 Performance Measure:

- **Average annual percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples [program performance assessment 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 FY2010, the database will contain quality reviewed field data from fish collected in 2008 and all quality reviewed analytical data for fish collected between 1972 and 2007. 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 2008 is expected to be able to be used for reporting in 2010. 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 was approved by the GLNPO QA Officer in July 2008 (http://epa.gov/greatlakes/monitoring/fish/reports/quality.pdf).

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 was held on December 11-12, 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 2010 Performance Measure:

- **Average annual percentage decline for the long-term trend in concentrations of PCBs in the air in the Great Lakes basin [program performance assessment 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 in air. Monitoring results from 2008 will be reported in 2010. 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 U.S. master 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 U.S. 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 every 12 days 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 and the Atmospheric Loadings reports 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 2010 Performance Measure:

- **Number of Beneficial Use Impairments removed within Areas of Concern. [program performance assessment measure]**

Performance Database: USEPA's Great Lakes National Program Office will track the cumulative total Beneficial Use Impairments (BUIs) removed within the Areas of Concern (AOCs) located entirely within the United States and the AOCs that are shared by both the United States and Canada. Results through September 2010 will be reported in 2010.

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. There were once a total of 43 Great Lakes Areas of Concern: 26 located entirely within the United States; 12 located wholly within Canada; and 5 shared by both countries. There were thus 31 United States or Binational Areas of Concern; however, with the de-listing of the Oswego River AOC, only 30 United States or Binational Areas of Concern remained at the end of Fiscal Year 2006. Remedial Action Plans

for each of these Areas of Concern address one or 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. This measure tracks cumulative progress against those beneficial use impairments. 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 2010 Performance Measure:

- **Cubic yards of contaminated sediment remediated (cumulative from 1997) in the Great Lakes [program performance assessment 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 and cumulative totals on a calendar year basis graphically. These databases are reported approximately one year after the completion of work, thus, results from calendar year 2009 remediation will be reported in FY 2010.

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, including appropriately characterized and managed navigational dredging of contaminated sediments. 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 totals. For reporting purposes, the yearly volume total is rounded to the nearest one thousand cubic yards and the cumulative volume total is rounded to the nearest one hundred thousand cubic yards.

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, June 2008.

2. Giancarlo Ross, M.B. "*Sediment Remediation Matrix*". Unpublished - in Great Lakes National Program Office files.

3. Giancarlo Ross, M.B. "*Sediment Remediation Graphics.*" 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 2010 Performance Measure:

- **Cost per cubic yard of contaminated sediments remediated (cumulative). [program assessment 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 2010 Performance Measures:

- **Percent of goal achieved for implementation of nitrogen reduction practices (expressed as progress meeting the nitrogen reduction goal of 162.5 million pounds reduced) [program assessment 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) [program assessment 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) [program assessment 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 [program assessment 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 162.5 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://archive.chesapeakebay.net/status/status07/DMPollutionControlIndex.xls. Data have been reported for calendar years 1985, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007 and are expected on an annual basis after 2007. Data are from Chesapeake Bay watershed portions of NY, MD, PA, VA, WV, DE, and DC.

The FY 2010 Annual Performance Report for these measures will be based on the results of the 2009 data collection. We expect to receive the preliminary results for 2009 in March 2010.

The description of the data and the methods used to interpret, analyze and quality assure the data are available at http://archive.chesapeakebay.net/status/status07/DMSurveyPollutionControlIndex2007.doc.

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 program assessment efficiency measure are in the guidance document "Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability" (Technical Support Document) 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 (page 36 of hard copy document) and a summary table of unit BMP costs is on electronic page 93 (page 70 of hard copy document).

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).

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 following publications.

- Chesapeake Bay Watershed Model Land Use and Model to the Airshed and Estuarine Models (http://www.chesapeakebay.net/pubs/1127.pdf)
- Chesapeake Bay Watershed Model Application And Calculation Of Nutrient And Sediment Loadings Appendix F: Point Source Loadings (http://www.chesapeakebay.net/pubs/114.pdf)
- Chesapeake Bay Watershed Model Application And Calculation Of Nutrient And Sediment Loadings Appendix D: Phase IV Chesapeake Bay Watershed Model Precipitation and Meteorological Data Development and Atmospheric Nutrient Deposition (http://www.chesapeakebay.net/pubs/112.pdf)
- 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 (http://www.chesapeakebay.net/pubs/777.pdf)

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 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 (http://www.chesapeakebay.net/pubs/777.pdf). 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 Jeff Sweeney jsweeney@chesapeakebay.net
- Reducing Pollution Summary (Controlling Nitrogen, Phosphorus and Sediment) indicators are published at http://www.chesapeakebay.net/status_reducingpollution.aspx The nutrient and sediment loads delivered to the Bay data files used in the indicator are located at http://archive.chesapeakebay.net/status/status07/DMPollutionControlIndex.xls. The description of the data and the methods used to interpret, analyze and quality assure the data are available at http://archive.chesapeakebay.net/status/status07/DMSurveyPollutionControlIndex2007.doc.
- 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/.
- 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" (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.

<u>FY 2010 Performance Measures:</u>

- **Percent of point source nitrogen reduction goal of 49.9 million pounds achieved [program assessment annual outcome measure- Chesapeake Bay Program]**

- **Percent of point source phosphorus reduction goal of 6.16 million pounds achieved [program assessment 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://archive.chesapeakebay.net/status/status07/psnpload%202007.xls. Data have been collected 1985-2007 and are expected on an annual basis after 2007.

The FY 2010 Annual Performance Report for these measures will be based on the results of the 2009 data collection. We expect to receive the preliminary results for 2009 in March 2010.

The description of the data and the methods used to interpret, analyze and quality assure the data are available at http://archive.chesapeakebay.net/status/status07/DMSurveyPolControl2007JGNS.doc.

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_nitrogenmunicipal.aspx.
- The Point Source Phosphorus Loads Delivered to the Bay indicator is published at http://www.chesapeakebay.net/status_phosphorusmunicipal.aspx.
- The Wastewater Pollution Controls indicator is published at http://www.chesapeakebay.net/status_wastewater.aspx.
- The description of the data and the methods used to interpret, analyze and quality assure the data are available at http://archive.chesapeakebay.net/status/status07/DMSurveyPolControl2007JGNS.doc.

FY 2010 Performance Measure:

- **Percent of forest buffer planting goal of 10,000 miles achieved [program assessment 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://archive.chesapeakebay.net/status/status07/forbuf2007.xls. Data have been collected 1996-2007 and are expected on an annual basis after 2007.

The FY 2010 Annual Performance Report for these measures will be based on the results of the 2009 data collection. We expect to receive the preliminary results for 2009 in March 2010.

The description of the data and the methods used to interpret, analyze and quality assure the data are available at http://archive.chesapeakebay.net/status/status07/DMSurveyFBufferPlanted2007JG.doc.

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 Riparian Forest Buffers Planted indicator is published at
http://www.chesapeakebay.net/status_forestbuffers.aspx?menuitem=19723

The description of the data and the methods used to interpret, analyze and quality assure the data are available at
http://archive.chesapeakebay.net/status/status07/DMSurveyFBufferPlanted2007JG.doc.

FY 2010 Performance Measures:

- **National Coastal Condition Report (NCCR) score for overall aquatic ecosystem health of coastal waters nationally (1-5 scale) [program assessment 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. EPA-620/R-03/002.

FY 2010 Performance Measure:

- **Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority areas (cumulative starting in FY 07)**

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. This site is a subset of "Surf Your Watershed" and is labeled as "Surf Your Gulf Watershed". "Surf Your Gulf Watershed" details 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 2010 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 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 Program: *NOAA Community Restoration Grant Program* Supports Gulf Ecological Management Sites (GEMS)

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. NOAA additionally requires 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:
A) 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 and the Gulf of Mexico Foundation. 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, ground-truthing, 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

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

Handley, L., Altsman, D., and DeMay, R., eds., 2007, Seagrass Status and Trends in the Northern Gulf of Mexico: 1940–2002: U.S. Geological Survey Scientific Investigations Report 2006–5287, 267 p.

FY 2010 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 abundance, productivity 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 ± 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 2010 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 2010 Performance Measure:

Percent of the population in of the U.S. Pacific Island Territories that has access to continuous drinking water meeting all applicable health-based drinking water standards measured on a four quarter rolling average basis

Performance Database: SDWIS (Safe Drinking Water Information System) is the database used to track this performance measure throughout the United States now including the Pacific territories. SDWIS contains basic water system information: population servered, and detailed records of violations of the Safe Drinking Water Act and the statute's implementing health-based drinking water regulations. However, because of computational idiosyncrasies in CNMI (including double counting of bottle water service with utility-provided water, and areas which lack 24-hour water service), we apply a hand-correction to the CNMI figures.

Data Source: Health-based violations are reported by the territories. 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 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 now solely 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 (all but the poorest residents rely on bottled water or rain water as the main 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: The territories follow QA/QC procedures in the data submitted to EPA for entry into the SDWIS database. 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 Program Guidance. The Agency will continue to 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 Quality Reviews: Although the territories are responsible for reviewing and assuring quality of health-based violation reporting, EPA periodically communicates directly with public water systems to corroborate the data (and continues to do so as part of ongoing enforcement and compliance efforts). EPA is also in direct communication with the CNMI 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) protential for 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 has worked with the territories of Guam and CNMI over the last few years to improve performance on data collection and entry. Regarding percentage of population receiving 24-hour water, EPA continues to work closely with the CNMI public water system and the CNMI Division of Environment Quality to both more accurately assess percentage of population receiving 24-hour water, and to provide 24-hour water to an increasing percentage of the population.

References:
USEPA SDWIS/FED: http://www.epa.gov/safewater/databases/indexx.html

FY 2010 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 2010 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 2010 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: QA/QC procedures do not apply to tracking the Regional Restoration Project Inventory database. 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. There is no Quality Management Plan or Quality Assurance Project Plan associated with this indicator.

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; (d) 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 2010 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. No significant error in counting acres addressed expected.

New/Improved Data or Systems: N/A

References: http://www.deq.state.or.us/lq/ecsi/ecsi.htm

FY 2010 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 2010 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 2010 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

<u>FY 2010 Performance Measures:</u>

- **Improved protocols for screening and testing (program assessment measure)**
- **Effects and exposure milestones met (program assessment measure)**
- **Assessment milestones met (program assessment measure)**
- **Risk management milestones met (program assessment 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 Program Review, available at:
http://www.whitehouse.gov/omb/expectmore/summary/10002280.2004.html (last accessed August 16, 2007)

FY 2010 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 (program assessment 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 Program Review, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001135.2005.html (last accessed August 16, 2007)

FY 2010 Performance Measures:

- **Percentage of planned outputs delivered in support of public health outcomes long-term goal (program assessment measure)**
- **Percentage of planned outputs delivered in support of mechanistic data long-term goal (program assessment measure)**
- **Percentage of planned outputs delivered in support of the aggregate and cumulative risk long-term goal (program assessment measure)**
- **Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal (program assessment 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 HHRA health assessments. (program assessment measure)**
- **Percentage of planned outputs delivered in support of Air Quality Criteria/Science Assessment documents (program assessment measure)**
- **Percentage of planned outputs delivered in support of HHRA Technical Support Documents (program assessment measure)**
- **Percentage of planned outputs delivered. (program assessment measure)**

- **Percent progress toward completion of a framework linking global change to air quality. (program assessment 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. (program assessment 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 (program assessment 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 (program assessment easure).**
- **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 (program assessment 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 (program assessment 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 (program assessment 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 Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004373.2005.html (last accessed August 16, 2007)
Global Change Research Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004307.2006.html (last accessed August 16, 2007)
Human Health Risk Assessment Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html (last accessed August 16, 2007)

FY 2010 Performance Measures:

- **Percentage of Human Health program publications rated as highly cited papers (program assessment measure).**
- **Percentage of SP2 publications rated as highly cited publications (program assessment measure).**
- **Percentage of SP2 publications in "high impact" journals (program assessment 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 Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004373.2005.html (last accessed August 16, 2007)
EPA Ecological Research Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10001135.2007.html (last accessed January 24, 2008)
EPA Pesticides and Toxics Research Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10009012.2007.html (last accessed January 24, 2008)

FY 2010 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 Program Assessment: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html (last accessed August 16, 2007)

FY 2010 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 Human Health Risk Assessment (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 Program Assessment: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html (last accessed August 16, 2007)

FY 2010 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 2010 Performance Measure:

- **Percent variance from planned cost and schedule (program assessment 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: The Global Research Program, Pesticides and Toxics Research Program, and Ecological Research Program have all adopted this efficiency measure. 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: N/A

FY 2010 Performance Measures:

- **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. (program assessment measure)**

- **Utility of ORD's environmental forecasting tools and methods for States, tribes, and relevant EPA offices to forecast the ecological impacts of various actions and to achieve environmental outcomes. (program assessment measure)**

- **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 to achieve positive environmental outcomes. (program assessment measure)**

Performance Database: N/A

Data Source: Data are generated through an independent expert review panel process. EPA's Board of Scientific Counselors (BOSC) provides rating of program progress on each long-term goal.

Methods, Assumptions and Suitability: These measures capture the assessment by an independent expert review panel of the appropriateness, quality, and use of the program's research under each long-term goal. Using a well-defined, consistent methodology, the BOSC provides a qualitative rating and summary narrative regarding the performance of each long-term goal. Rating categories include: Exceptional, Exceeds Expectations, Meets Expectations, and Not Satisfactory. Full ratings are expected approximately every 4 years, although the BOSC will provide progress ratings at the mid-point between full program reviews.

QA/QC Procedures: All long-term goal ratings are determined using a well-defined, consistent methodology that was developed in conjunction with EPA, OMB, and the BOSC.

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A
References: Ecological Research Multi-Year Plan, available at: http://epa.gov/osp/myp/eco.pdf (last accessed July 20, 2007)

FY 2010 Performance Measure:

- **Percentage of regulatory decisions in which decision-makers used HHRA peer-reviewed health assessments [program assessment measure]**

Performance Database: No internal tracking system.

Data Source: N/A

Methods, Assumptions and Suitability: A list of the research program's publications from the past ten years are searched against EPA's electronic dockets to determine if any regulatory decisions and other key agency documents have referenced the Human Health Risk Assessment program's health assessments.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: Not all EPA's regulations and key decisions are posted in the electronic dockets and, therefore, the impact and influence of the program's publications would not be captured in this measure. Additionally, the publication citations within the regulations can be inconsistent and often do not reflect the research models, tools or personal scientific support that informed the regulatory decision.

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Human Health Risk Assessment Program Assessment, available at: http://www.whitehouse.gov/omb/expectmore/summary/10004308.2006.html (last accessed August 25, 2008)

GOAL 5 OBJECTIVE 1

Existing Tool-Based Performance Measurement Framework

<u>FY 2010 Performance Measures:</u>

- **Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded enforcement actions**
- **Percentage of concluded enforcement cases requiring that pollution be reduced, treated, or eliminated**
- **Percentage of concluded enforcement cases requiring implementation of improved environmental management practices**
- **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 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 began 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 "out of compliance" quantity of pollutants released and the post enforcement action "in 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 28 states, 2 tribes, and 10 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 2010 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 2010 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.

Proposed Problem-Based Revised Performance Measurement Framework

Measures pertaining to enforcement and compliance actions are under review and may be modified in the coming months.

FY 2010 Performance Measures--draft:

- **Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded air enforcement actions.**
- **Dollars invested in improved environmental performance or improved environmental management practices as a result of concluded air enforcement actions (i.e., injunctive relief and SEPs)**
- **Percent of EPA activities requiring or resulting in direct environmental benefits or the prevention of pollution into the environment for air.**
- **Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded water enforcement actions.**
- **Dollars invested in improved environmental performance or improved environmental management practices as a result of concluded water enforcement actions (i.e., injunctive relief and SEPs).**
- **Percent of EPA activities requiring or resulting in direct environmental benefits or the prevention of pollution into the environment for water.**
- **Pounds of pollution estimated to be reduced, treated, or eliminated as a result of concluded waste, toxics, and pesticide enforcement actions.**
- **Dollars invested in improved environmental performance or improved environmental management practices as a result of concluded waste, toxics, and pesticide enforcement actions (i.e., injunctive relief and SEPs).**

- **Percent of EPA activities requiring or resulting direct environmental benefits or the prevention of pollution into the environment for waste, toxics and pesticides**
- **Severity of the crimes investigated (as measured by the % of open high impact cases).**
- **Percent of recidivism.**
- **Percent of closed cases which have a criminal enforcement consequence (indictment, conviction, fine or penalty).**
- **Percent of charged cases in which an individual was charged.**

Performance Databases: The Integrated Compliance Information System Federal Enforcement & Compliance (ICIS FE&C) database tracks EPA judicial and administrative civil enforcement actions. Criminal enforcement data is contained in the Criminal Case Reporting System (CCRS), which contains enforcement-sensitive, case-specific information.

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 began 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 information which the Criminal Enforcement program will use to develop the matrix for "high impact" cases will be initially developed through quarterly case reviews and will ultimately be incorporated into the Criminal Case Reporting System.

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 "out of compliance" quantity of pollutants released and the post enforcement action "in 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.

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 2010 Performance Measures--draft:

- **The % of state/tribal recipients of EPA trainings that increased their understanding of enforcement/compliance air program implementation requirements.**
- **The % of state/tribal recipients of EPA trainings that increased their understanding of enforcement/compliance water program implementation requirements.**
- **The % of state/tribal recipients of EPA trainings that increased their understanding of enforcement/compliance waste, toxics, and pesticides program implementation requirements.**

The capacity building measures are focused on training for any element of the compliance and enforcement program (compliance assistance, compliance incentives, compliance monitoring, and/or enforcement). The type of measurement will likely depend on the vehicle used to provide the training (e.g., workshop, webinar) and will be calculated manually. Along with the performance measure, the means for measuring performance is under development.

GOAL 5 OBJECTIVE 2

FY 2010 Performance Measures:

- **Quantity of priority chemicals reduced from all phases of the manufacturing lifecycle through source reduction and/or recycling [program performance assessment]**
- **Number of pounds of priority chemicals reduced from the environment per Federal government costs [program assessment efficiency]**

Performance Database: A Microsoft Access database is used to track data collected under Information Collection Request no. 2050-0190. Reporting Requirements Under EPA's National Partnership for Environmental Priorities (NPEP), renewed April 2006.
g an error tracking process for use in 2007 and should have an error estimate for fiscal year 2007 in early 2008.

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 completing projects. 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.

Methods and Assumptions: Information is reviewed by EPA staff for reasonableness based on best professional judgment. In cases where information is initially incomplete or lacks substantiation, EPA staff may conduct site visits to ensure that the commitment is reasonable.

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: All enrollment data fields are centrally tracked via a Headquarters managed Microsoft Access database. Regions have their own methods/systems for tracking data. Headquarters data are periodically reviewed by EPA Regional coordinators to ensure that they accurately reflect partner status. Corrections to the central database are made when errors are identified.

Data Quality Reviews: Information is reviewed by EPA staff for validity. In cases where information is initially incomplete or lacks substantiation, EPA staff may conduct site visits to ensure that the commitment is reasonable.

Data Limitations: The program does not have direct assurance of the data accuracy because time series measurements of partner processes and chemical management methods are not made by EPA staff.

Error Estimate: N/A.

New/Improved Data or Systems: N/A.

References: U.S. Environmental Protection Agency. Office of Solid Waste. Waste Minimization Program. http://www.epa.gov/epaoswer/hazwaste/minimize/index.htm (accessed August 15, 2008).

FY 2010 Performance Measures:

- **Pounds of hazardous materials reduced by P2 program participants [program assessment measure]**
- **BTUs of energy reduced, conserved or offset by P2 program participants**
- **Gallons of water reduced by P2 program participants (program assessment measure)**
- **Business, institutional and government cost reduced by P2 program participants [program assessment measure]**
- **Metric tons of Carbon Dioxide Equivalent (MTCO2e) reduced, conserved, or offset by P2 program participants [program assessment 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 information on the qualitative and quantitative environmental benefits and economic benefits that these alternative green chemistry technologies offer. The database was also designed to track the quantity of hazardous substances 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.

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 direct projects managed by EPA Regional staff. Regional Offices use a standardized spreadsheet to track, manage, and report on environmental performance data from P2 and Source Reduction grants. End of year grant data is aggregated and made available to the public through the Pollution Prevention website. The program is actively engaged in a project to improve the collection, tracking, and reporting of P2 grant results. The project will examine end use needs and existing technologies in an effort to streamline grant reporting, and improve the transparency and overall quality of the data.

Pollution Prevention Resource Exchange (P2Rx): There are 8 regional P2 Information centers which coordinate and supply information and, training for local and state technical assistance providers and businesses. These centers report to EPA through grant reports and host regional modules that contribute to the National P2 Results system. The P2RX centers have trained and assisted organizations in entering their data. 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. EPA grant support of these regional centers contributes to national P2 progress by providing an infrastructure of P2 information and training. To capture this indirect effect of EPA's role, 10% of the results reported through the P2Rx center are 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 Practice Green Health (PGH), a fully independent non-profit organization.). PSH works, in collaboration with the National Center for Manufacturing Sciences (NCMS), and PGH in providing technical assistance to the health care sector. PGH 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 (EEBC) to calculate pounds of hazardous pollution reduced, units of energy conserved, and costs saved (among other benefits) on an annual basis. Manufacturers of EPEAT registered products provide collective data on annual sales of EPEAT-registered products to the Green Electronics Council (GEC). The EPP team obtains this data from the GEC, runs these sales data through the EEBC 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 sponsors 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.

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 and materials/equipment suppliers.

GE: Data come from sources and partners including the regions, academia and industry. For example, for the GE activites related to the pharmaceutical industry, data will be supplied by individual companies or sites and other partners from the regions and academia. A pilot project with Region 2 and Pharmaceutical operating facilities and members of the Puerto Rico Manufacturer's Association will apply GE practices and measure their process changes through a GlaxoSmithKilne/North Carolina State University (GSK-NCSU) model.

Regional Offices: P2 Grant and Source Reduction grant data are secured from grant applications, grant semi-annual and final reports and sub-grantee and facility level performance information.

P2Rx: P2Rx centers report their outputs and outcomes in grant reports and assist State and Local program reporting through the regional modules of the P2 Results system. The centers conduct web-based surveys of customers, pre and post testing of training audiences and follow up services provided with customer satisfaction surveys. The centers evaluate long term impact of their services and information using case studies.

PSH: Because the PSH program is a voluntary program, the information collected is voluntarily submitted by hospital Partners to PGH, which provides the information to PSH.

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 manufacturers of EPEAT registered electronic products. For Janitorial Products, the data source is EPA EMS contacts for procuring janitorial products.

Methods and Assumptions: *GC:* The information from the nominations is collected and 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. DfE recently developed an emissions reduction calculator that estimates reductions in hazardous air pollutants, VOCs, and material usage achieved through implementation of specific best practices by auto refinishing businesses and schools.

GE: The information (e.g. solvent stream data) will be supplied by individual companies or sites and/or other partners from the regions or academia. The GSK/NCSU models will utilize input information from pilot companies to calculate environmental benefits. The pilot companies, in collaboration with the GSK/NCSU model developers and the GE program will also collectively review these materials for any information that could be used as business case studies and other resource materials.

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. Grantees use a variety of methodologies in collecting their data. However, the program now

requests grantees to include descriptions of the methodologies and assumptions behind the grant results in the required grant reports, which overtime will increase consistency in data collection.

P2Rx: The P2Rx centers follow Quality assurance project plans for their grants and have established standard operating procedures for development of web site statistics and information products. Data reported by state and local technical assistance programs in the National P2 Results system is collected and compiled by the regional centers. Some portion of these results is attributed to the P2Rx center for that region. Currently the centers are developing tracking and user identification approaches to better characterize the customers using their web site information. The centers currently track customers served through phone calls, emails, trainings and evaluate changes in awareness, knowledge, and behavior resulting from their services. Standard operating procedures for these approaches are being developed.

PSH: The data come from program Partner hospitals through PGH. 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. For EPEAT, the program assumes that manufacturers report accurate annual sales data, and that the GEC accurately reports this data to the EPEAT program. The assumptions needed for the EEBC to translate environmental attributes and activities into environmental benefits are relatively extensive and are laid out in the EEBC (e.g., the average lifecycle of a computer, the weight of packaging for a computer, etc.). The assumptions were reviewed when the EEBC underwent the peer review process. 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. In cases where new public information becomes available, benefits for award-winning technologies are updated. For example, if a technology is withdrawn from the market for some reason, the record for the benefit is updated to reflect that change and that quantity is no longer counted in the annual prevention metrics. Similarly, if news of an increased benefit because of increased market penetration becomes available, the magnitude of the benefit is increased to reflect that change.

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 HQ and Regional staff to ensure transparency, reasonableness and accuracy. For the pharmaceutical project, data will be internally reviewed by companies and may also be reviewed by model developers. It is an essential goal and foundation for this project that this information is transparent, verifiable and within the public domain.

Regional Offices: Data will undergo technical screening review by EPA Regional and Headquarters staff, EPA Project Officers before being entered into an aggregate reporting spreadsheet. Data for projects managed directly by EPA Regional staff will be reviewed by Regional personnel. Additional QA/QC steps are to be developed through the use of standard operating procedures. Also, the program has been working with the regional offices to develop consistent QA procedures, which can be applied at the beginning of the grant and throughout the life of the grant. For instance, a Quality Assurance Project Plan (QAPP)-lite guidance was developed and is now in use in several Regional offices. *P2Rx*: Data entered into the National P2 Results system will undergo technical screening review by P2Rx centers and EPA regional and Headquarters staff. The users guide for the P2 Results system is posted on the Internet: http://www.p2rx.org/measurement/info/FINAL_user_guide.pdf P2RX centers have developed Quality Assurance project plans for their grants and standard operating procedures for several of the tasks that the centers share in common. SOPs are on this web site: http://www.p2rx.org/AdminInfo/toc.cfm

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 EEBC and the Green Cleaning Calculator) underwent internal and external review during their development phases. For FEC, instructions and guidelines are provided to partners on how to report data. Reporting forms are reviewed by EPA staff when they are submitted. For EPEAT, manufacturers of EPEAT-registered products 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: OPPT is in the process of developing an official response to OIG recommendations published in their January 2009 report "Measuring and Reporting Performance Results for the Pollution Prevention Program Need Improvement." Overall, the report found the program deserving of its initial Moderately Effectively program program assessment rating and includes recommendations such as developing additional and refining existing measures, establishing QA/QC procedures, and addressing more improvement opportunities in program assessment improvement plans.

Data Limitations:

GC: Nominations for the Presidential Green Chemistry Challenge Awards Program are in the public domain. As a result, nominees are often reluctant to include proprietary information on cost differences or other quantitative benefits. Because the Presidential Green Chemistry Challenge is a voluntary, public program, it cannot routinely accept or process CBI. If the program stakeholders feel they need additional information during the judging for the awards program, they can and do ask EPA to request additional information from the nominee. EPA will then ask the company to share confidential information with CBI-cleared OPPT staff in order for EPA to conduct the verification. Often technologies are nominated before or soon after they become commercially available. Implemented benefits (those that have occurred due to the adoption of the nominated technology) are counted separately from potential benefits that may occur upon future adoption of the technology.

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 submitted data is not clearly quantified and/or available due to various reasons such as CBI. However, efforts will be made to minimize CBI information in working with the facilities to have more generic case studies. In these instances, the data have to be carefully evaluated and considered for reporting.

Regional Offices: Limitations arise from the reliance on data source information provided by individual state and other P2 grantees. These programs vary in attention to data collection from

sources within their jurisdictions, data verification and other QA/QC procedures. The program expects to develop standard operating procedures for the collection and management of grant 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. In addition, PGH now administers the awards program without EPA assistance, and may change the awards program data collection categories and methods.

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 has a built-in reliance on partners for data reporting. EPEAT relies on manufacturers of EPEAT-registered products, and the GEC, for data reporting.

Error Estimate:

Statistical approaches are generally not used across the program and therefore error estimates are not available.

New/Improved Data or Systems:
A new greenhouse gas calculator is nearing completion and will capture greenhouse gas reduction from a wide range of on-the-ground activities including: electricity conservation; renewable energy and green power; fuel specific reductions and substitutions, chemical specific reductions and substitutions, as well as process change resulting in reduced electricity usage. This calculator will allow the program to incorporate results from previous BTUs measure as well as measure and calculate new activities.

DfE: DfE will be implementing an emissions calculator for the DfE Automotive Refinishing Partnership. The emissions reduction calculator computes individual or aggregate quantities of toxics eliminated and cost savings based on annual material usage (e.g. gallons of paint) before and after a business switches to best practices or safer alternative paint products.

Regional Offices: The program's system for estimating and reporting outcome results has been substantially improved with the development of new calculators, tools, and clearer methodologies contained in the P2 measurement guidance. The program expects to deliver a P2 cost calculator designed to improve the process of projecting and reporting results related to cost savings.

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 PGH 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 PGH organization has agreed to share the consolidated information with EPA when data collection begins.

GE: The program is utilizing GlaxoSmithKline/North Carolina State University GSK/NCSU models (Jimenez-Gonzalex C, Overcash MR and Curzons AD. J. Chemistry Technology Biotechnology. 71:707-716 (2001) and plans to combine these models with OPPT tools such as ChemSTEER to accurately utilize inputs from pharmaceutical companies in the estimation of environmental benefits.

EPP: The EEBC is currently undergoing revisions for version 2.0. These revisions are intended to ensure that the EEBC reflects the best available data related to EPEAT-registered and ENERGY STAR-qualified products; and to add additional functionality to the EEBC. The EEBC is also being converted from an Excel spreadsheet to a Web-based tool, to make it more user friendly. Version 2.0 of the EEBC is anticipated to be ready for use starting with FY 2008 reporting.

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 EEBC 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*
P2RX: P2 Results user guide: http://www.p2rx.org/measurement/info/FINAL_user_guide.pdf
SOPs for P2RX centers: http://www.p2rx.org/AdminInfo/toc.cfm

FY 2010 Performance Measure:

- **Annual reductions of Design for the Environment (DfE) chemicals of concern per federal dollar invested in the DfE program [program assessment efficiency]**

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/quality/informationguidelines 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/quality/informationguidelines

The DfE Program Tracking Spreadsheet contains Confidential Business Information.

FY 2010 Performance Measures:

- **BTUs of energy reduced conserved or offset per federal dollar invested in the Federal Electronics Challenge program. (program assessment efficiency measure)**

Performance Database:
FEC uses the FEC Administrative Database for storage and retrieval of annual reporting information from FEC partners. FEC partners report the number of EPEAT gold silver and bronze registered products purchased; the number of computer products with power savings features turned on; and the number of computer products reused, recycled, and disposed of, through standardized reporting forms available at: http://www.federalelectronicschallenge.net/report.htm and submitted through an online, password-protected web site. The environmental benefits of these reported activities are then calculated by EPA staff by running summary data from submitted partner forms through the Electronics Environmental Benefits Calculator (EEBC) to calculate BTUs of energy reduced, conserved, or offset on an annual basis. Spending information is obtained from the OPPT Finance Central database.

Data Sources
For FEC, the data source is federal partners who fill out reporting forms online through a web-system with built in error checking. Partners report data at the facility level as opposed to the Agency level. There are hundreds of participating federal facilities spread across dozens of federal Agencies. Participating federal facilities are required to submit the reporting form, as

part of their partnership. Some agencies further require their facilities to submit the FEC reporting form as part of their implementation of Executive Order 13423 which seeks to make federal environmental, energy and transportation management more sustainable Financial resource data are obtained from from OPPT Finance Central database.

Methods and Assumptions:
The Federal Electronics Challenge program assumes that partners report accurate data. However, FEC data undergoes thorough internal technical review before these data are run through the EEBC. EPA staff provides guidance and technical assistance to partners in filling out reporting forms.

The assumptions needed for the EEBC to translate environmental attributes and activities into environmental benefits are relatively extensive and are laid out in the EEBC (e.g., the average lifecycle of a computer, the weight of packaging for a computer, etc.). The assumptions were reviewed when the EEBC underwent the peer review process.

EPA measures the efficiency of the Federal Electronics Challenge by comparing reductions of BTUs of energy achieved to program resources, including FTE, overhead and extramural dollars spent. The efficiency measure numerator is the annual BTUs of energy conserved, reduced, or offset and the denominator is the annual FEC program resources expended. The unit of measurement is expressed as Million BTUs per dollar.

Suitability: The indicators used for this measure are suitable because reductions in cost per million BTUs of energy reduced are expected to result from improvements in program implementation such as improved outreach and coordination efforts to federal partners. These cost reductions will enable EPA to achieve the goals of the Federal Electronics Challenge with greater efficiency.

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.

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).

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.

Data Limitations:
FEC has a built-in reliance on partners for data reporting.

Error Estimate:
Statistical approaches are generally not used and therefore error estimates are not available.

New/Improved Data or Systems:
EPP: The EEBC has recently been revised by EPA and version 2.0 will be available for use in the FY 2008 reporting cycle. Version 1.0 of the EEBC was developed and peer reviewed through a cooperative agreement between EPA and the University of Tennessee. These revisions are intended to ensure that the EEBC reflects the best available data related to EPEAT-registered and ENERGY STAR-qualified products; and to add additional functionality to the EEBC. The EEBC is also being converted from an Excel spreadsheet to a Web-based tool, to make it more user-friendly.

References:
EPP: Information about FEC's annual reporting is on the FEC web site at:
http://www.federalelectronicschallenge.net/report.htm

FY 2010 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 2010 data represents members' calendar year 2009 performance. That data will be reported to the Performance Track program by April 1, 2010. The data will then be reviewed, aggregated, and available for external reporting in September 2010. (Calendar year 2010 data will become available in September 2011.)
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.

<u>FY 2010 Performance Measure:</u>

- **75% of innovation projects completed in FY 2010 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 FY10, nine (9) projects will be reaching completion, at which point they are evaluated, and the target is for seven (7) 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 2008, 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 3-4 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 2010 are projects initiated in 2005, 2006 and 2007.

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 2010 will be based upon projects funded in FY 2005, FY 2006 and FY 2007.

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 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 2010 Performance Measures:

- **Percent of tribes implementing federal regulatory environmental programs in Indian country. (Strategic Target & program assessment measure)**
- **Percent of tribes conducting EPA-approved environmental monitoring and assessment activities in Indian country. (Strategic Target & program assessment measure)**
- **Percent of tribes with an environmental program. (Strategic Target & assessment measure)**
- **Number of environmental programs implemented in Indian country per million dollars. (program assessment efficiency measure)**

Performance Database: EPA's American Indian Environmental Office (AIEO) has 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 application, the Tribal Program Management System (TPMS), tracks progress in achieving the performance targets under Goal 5 Objective 3 of EPA's 2009-2014 Strategic Plan – "Improve Human Health and the Environment in Indian Country" and other EPA metrics. EPA staff use TPMS to establish program performance commitments for future fiscal years and to record actual program performance for overall national program management. The system serves as the performance database for all of the strategic targets, annual performance measures and program assessment measures.

Data Source: Data for the TPMS are input on an ongoing basis by Regional tribal programs and EPA headquarters.

The original documents for the statements and data entered into the fields of the TPMS can be found in the files of the Regional 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 that have been approved by Regional Quality Assurance Officers. All ongoing environmental monitoring programs are required to have active QAPPs. Regional tribal program liaisons obtain information from Regional Quality Assurance Officers and input data into the TPMS. The data are updated and reported on during 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
- a completed 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 TPMS, to derive a national cumulative total.

The performance measure, "Number of environmental programs implemented in Indian country per million dollars," is calculated annually by AIEO staff 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). Some tribes have multiple environmental programs, and these programs are counted individually.

Methods and Assumptions: TPMS contains all the information for reporting on AIEO performance measures and program assessment 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 that the authorized person who enters the data is knowledgeable about the performance status of the tribe.

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 Goal 5 Objective 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 official who certifies information in TPMS, submitted by EPA's Regional offices to AIEO, is the Regional Administrator. However, in some cases the Regional Administrator may wish to delegate the signatory authority to another 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 TPMS. Even though the Regional Project Officer may enter data on an ongoing basis, at the end of the reporting cycle the TPMS 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 TPMS, 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 TPMS is designed to improve data quality of AIEO's performance. TPMS tracks AIEO performance measures in the Agency Strategic Plans 2006-2011 and 2009-2014.

References:
Tribal Program Management System: https://iiaspub.epa.gov/TATS/
OCFO Information Quality Guidelines: http://intranet.epa.gov/ocfo/policies/iqg/index.html

GOAL 5 OBJECTIVE 4

<u>FY 2010 Performance Measure:</u>

- **Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-developed decision support tools and methodologies to promote environmental stewardship and sustainable environmental management practices. (program assessment measure).**

- **Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-identified and developed metrics to quantitatively assess environmental systems for sustainability (program assessment measure).**
- **Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-developed decision support tools and methodologies to promote environmental stewardship and sustainable environmental management practices (program assessment 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: Sustainability Research Stragegy, available at http://www.epa.gov/sustainability/pdfs/EPA-12057_SRS_R4-1.pdf (last accessed August 21, 2008)

FY 2010 Performance Measure:

- **Percent variance from planned cost and schedule (program assessment 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: N/A

ENABLING SUPPORT PROGRAMS

<u>FY 2010 Performance Measures:</u>

- **Average time to hire non-SES positions from date vacancy closes to date offer is extended, expressed in working days**. **(Goal is 45 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. This data is tracked internally and reported on a fiscal year and quarterly basis. The data is 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 is 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 FY08, EPA implemented a new standardized action tracking system across the 3 new HR Shared Service Centers. This tracking system will facilitate further improvement in EPA's end-to-end time-to-hire process.

References: EZ-Hire

FY 2010 Performance Measure:

- **Average time to hire SES positions from date vacancy closes to date offer is extended, expressed in working days**. **(Goal is 68 days)**

Performance Database: Data is manually maintained by the Executive Resources Staff (ERS) in a Word format. Data is updated throughout 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. This data is tracked manually on a weekly basis and reported on a quarterly basis. The data is reported by servicing human resources office and is 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 is 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 2010 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 currently 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. However, as EPA implements the advance metering requirements of the Energy Policy Act of

2005 and the Energy Independence and Security Act of 2007, which should be well underway by FY 2010, calibration of advanced meters will be performed, at a minimum, on an annual basis.

New/Improved Data or Systems: N/A

References: N/A

FY 2010 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 2010 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 2010 Performance Measures:

- **Environmental and business actions taken for improved performance or risk reduction;**
- **Environmental and business recommendations or risks identified for corrective action;**
- **Return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations; and**
- **Criminal, civil, administrative, and fraud prevention actions**

Performance Database: The OIG Performance Measurement and Results System (PMRS) 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, analysis, 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 contractors, 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[10], 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. OIG reports are referenced and independently quality reviewed.

Data Quality Reviews: There have not been any previous audit findings or reports by external groups on data or database weaknesses in the OIG PMRS. 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 PMRS as a prototype in FY 2001 and constantly revises the clarity and quality of the measures as well as system improvements for

[10]Government Auditing Standards (2007 Revision), General Accounting Office, GAO-07-731G, July 2007; Available on the Internet at www.gao.gov/govaud/ybk01.htm, last updated March 2009.

ease of use. During FY 2008, 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 PMRS. During FY 2009 the PMRS was converted to a relational database directly linked to the new Inspector General Enterprise Management System (IGEMS). The quality of the data will continue to improve in FY 2010 as staff will have to make fewer data entries due to the integrated nature of the system, gain greater familiarity with the measures, and perform 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 PMRS with supporting documentation available either through the OIG Web Site or other Agency databases. The OIG Web Site is www.epa.gov/oig.[11]

[11] U.S. EPA, Office of Inspector General, Audits, Evaluations, and Other Publications; Available on the Internet at www.epa.gov/oig , last updated February 2009.

outputs and outcomes, deliverables and milestones, and provide technical assistance to recipients on their Brownfield projects.

Management and Oversight Activities Supported through Enabling Support Programs

The Agency's supporting offices will ensure that process and systems are in place to enable the programs receiving Recovery Act funds will meet the requirements outlined in the Office of Management's (OMB) implementation guidance. This will include, but is not limited to, the following activities:

- Modify existing IT systems to address collection and reporting requirements of Recovery Act required data and information.

- Provide quality control and quality assurance (QA/QC) of project and financial information submitted by grantees to EPA. Provide reports as required by ARRA for EPA management and the public (http://www.epa.gov/recovery/).

- Review and obligate contracts and contract modifications for goods and/or services directly related to the Recovery Act.

- Review and award assistance agreements (e.g., grants, Interagency Agreements, cooperative agreements) for activities directly related to the Recovery Act.

- Conduct baseline monitoring, including recipient compliance with administrative terms and conditions, whether: (a) expended and remaining funds are reasonable; (b) the recipient has open administrative findings in the Grantee Compliance Database; and (c) there is a need for an amendment.

- Allocate, monitor, and report on Recovery Act funds and provide Agency guidance to enhance transparency and accountability of Recovery Act funds as required by the Act and OMB guidelines.

- Maintain proper funds control and financial management policies and procedures to meet transparency, accountability, and reporting requirements of the Recovery Act and the Anti-deficiency Act.

- Provide legal advice, as requested by Headquarters and the Regions, concerning interpretations of the Recovery Act, use of Recovery Act appropriated funds, and implementation of programs using Recovery Act funds.

7. The Inspector General

The Recovery Act also provided $20 million for EPA's Office of Inspector General (OIG).