

EPA's Mission

The mission of the Environmental Protection Agency (EPA) is to protect human health and to safeguard the natural environment – air, water and land – upon which life depends. This budget supports the Administration's commitment to ensure that all Americans are protected from significant risks to human health and the environment where they live, learn and work. This mission is being achieved through collaboration with states and tribes to implement air, water, waste, and chemical programs.

EPA's Fiscal Year (FY) 2011 budget request builds on the Agency's work to impact climate change through actions under the Clean Air Act. It supports a greater focus on community-level engagement, to augment and reinforce the critical work of our state and tribal partners. It moves forward with the Agency's ambitious vision for protecting and restoring America's waters. It will help assure the safety of chemicals, and it reflects an increase to ensure federal laws are enforced fairly and effectively. EPA will carry out its mission based on the core values of science, transparency and the rule of law to address the complex, inter-related and multi-disciplinary challenges to environmental protection today.

Annual Performance Plan and Congressional Justification

The EPA FY 2011 Annual Performance Plan and Congressional Justification requests \$10.020 billion in discretionary budget authority. This request will support EPA's efforts to focus on developing common-sense steps toward clean air, addressing the climate challenge, protecting our nation's waters, cleaning up communities and ecosystems, and strengthening EPA's scientific and enforcement capabilities. This budget also includes actions to improve EPA's internal operations to deliver environmental results for the American people. Below are funding highlights:

Supports Healthy Communities

The Environmental Protection Agency is committed to protect, sustain or restore the health of communities and ecosystems by bringing together a variety of programs, tools, approaches and resources. Results stem from effective regulatory frameworks, but also from partnerships with stakeholders. Partnerships with international, Federal, state, tribal, local governments and non-governmental organizations have long been a common thread across EPA's programs.

The FY 2011 budget includes a \$27 million multidisciplinary initiative for Healthy Communities. It supports states and communities in promoting healthier school environments by increasing technical support, outreach, and co-leading interagency efforts to coordinate and integrate existing school programs throughout the Federal government. It also provides resources to address air toxics within at-risk communities, and to enhance the important joint DOT/HUD/EPA outreach and related efforts with communities on sustainable development.

Improving a community's ability to make decisions that affect its environment is at the heart of EPA's community-centered work. This budget supports EPA efforts to accelerate brownfields cleanups through effective outreach and job creation in disadvantaged communities. The budget includes an increase of \$42 million to invest in revitalizing once productive community

properties by removing blight, satisfying a growing demand for land, limiting urban sprawl, fostering habitat enhancements, and spurring economic development.

In addition, EPA will integrate and leverage its assessment and cleanup authorities to address a greater number of contaminated sites, accelerate cleanups, and put those sites back into productive use while protecting human health and the environment. An element of this strategy will be to identify and define and implement new program measures to better portray progress and improve transparency. By deploying all cleanup tools available, including strengthened enforcement and compliance efforts, this request supports EPA's commitment to helping communities address cleaning up our communities.

Builds Strong State and Tribal Partnerships

This budget includes \$1.3 billion for State and Tribal categorical grants. Our partners are working diligently to implement new and expanded requirements under the Clean Air Act (CAA) and Clean Water Act (CWA), and need additional support during a time of constrained state budgets. Increases for air grants include \$25 million for developing and deploying technical capacity needed to address greenhouse gas (GHG) emissions in permitting under the CAA and \$60 million to support increased state workload for implementation of updated National Ambient Air Quality Standards. An additional \$45 million is requested for states to enhance their clean water enforcement and permitting programs. In order to help tribes move beyond capacity building to implementation of environmental programs, \$30 million is budgeted for a new Tribal Multi-media Implementation grant program. To further enhance Tribal capacity this budget also includes an additional \$9 million for Tribal General Assistance Program grants.

Supports Action on Climate Change and Improves Air Quality

EPA will take meaningful, common sense steps to improving air quality and addressing climate change. Making the right choices now will allow the Agency to improve public health, drive technology innovation for a better economy, and protect the environment – all without placing an undue burden on the nation's economy.

EPA's FY 2011 budget requests \$43.5 million in new funding for additional regulatory efforts aimed to reduce GHG emissions and address the Climate and Clean Energy Challenge. This includes \$25 million for state grants focused on developing the technical capacity for addressing GHG in their CAA permitting activities and an additional \$5 million for related EPA efforts. It also includes \$13.5 million in additional funding for the development and implementation of new emission standards that will reduce GHG emissions from transportation sources for passenger cars, light-duty trucks, and medium duty passenger vehicles. Funds also will support assessment and potential development of standards, in response to legal obligations, for other mobile sources and for assessment and potential development of New Source Performance Standards for several categories of major stationary sources, through approaches that are flexible and manageable for businesses.

The budget requests an additional \$4 million for implementing the Mandatory GHG Reporting Rule, to ensure the collection of high quality data. This budget includes an increase of \$2.3

million to support community pilot programs as they develop and implement air toxics approaches tailored to their local needs. An additional \$1.1 million will be invested to improve children's health through the delivery of effective asthma management strategies in schools and communities.

Invests in Clean Water

Protecting America's waters is a top priority and EPA has an ambitious vision for the nation's waters in the years ahead. Water quality has tremendous impacts on quality of life, on economic potential, and on human and environmental health.

In FY 2011, EPA continues its commitment to upgrading drinking water and wastewater infrastructure with a substantial combined investment of \$3.3 billion for the Clean Water and drinking Water State Revolving Fund programs. America's waterbodies are imperiled as never before from nutrient loadings and stormwater runoff to invasive species and drinking water contaminants. EPA will confront the challenges from multiple angles – local and national, traditional and innovative. A new Mississippi River Basin program is funded at \$17 million to focus on nonpoint source program enhancements to result in water-quality improvement. In addition, \$300 million is requested for the Great Lakes Restoration Initiative and support for the Chesapeake Bay Program is increased by \$13 million to \$63 million. Investments in these and other Clean Water and Drinking Water projects reflect a commitment to use leverage from Federal agency partnerships to strengthen disadvantaged communities by reconnecting them with their waters and achieving community-based goals.

Strengthens Enforcement

Through strengthened oversight, we will focus on environmental justice and partnership efforts to ensure innovative and creative environmental programs are delivered consistently nationwide, reaching historically under represented and at-risk populations. The FY 2011 President's Budget includes approximately \$615¹ million for EPA's enforcement and Compliance Assurance Program.

This includes \$2 million to support updated and enhanced state water program data transfers to our Integrated Compliance Information System (ICIS). ICIS is a critical tool for reviewing water quality information and strengthens the Agency's ability to modernize our compliance network, improve transparency, and provide important data to allow EPA, states and the public to track environmental progress and prioritize future actions.

Organization of the FY 2011 Annual Performance Plan and Congressional Justification

EPA's FY 2011 Annual Performance Plan and Congressional Justification integrates budget and performance. This submission presents multi-year performance data aligned program narratives. Verification and validation documents are provided electronically. This submission includes an appendix that responds to OMB requirements to address high priority performance goals.

¹ Corrects President's Budget funding levels in printed version.

Annual Performance Plan and Congressional Justification

Chapters Include

Resource Summary Tables

- Appropriation Summary (\$)
- Appropriation Summary (FTE)

Goal & Objectives Overviews (Goals 1-5)

- Goal, Appropriation Summary (\$)
- Goal, Appropriation Summary (FTE)

Program Project by Appropriation (S&T, EPM, IG, B&F, SF, LUST, OIL, and STAG)

- Resources for Appropriation
 - Resource Table by Appropriation, Program Area, Program Project
 - Program Project Fact Sheets (the following included within each fact sheet)
 - Resource Chart (\$, FTE)
 - Program Project Description
 - FY 2011 Activities and Performance Plan
 - Performance Information
 - FY 2011 Change from FY 2010 Enacted 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
- Verification and Validation

Appendix

- Coordination with other agencies by goal/objective - Environmental Programs
- Coordination with other agencies by goal/objective - Enabling Support Programs
- Major Management Challenges
- User Fees
- Working Capital Fund
- Acronyms for Statutory Authorities
- STAG – Statutory Authority and Eligible Users
- Program Projects by Appropriation
- Program Projects by Program Area (detailed)
- Discontinued Programs
- CJ e-Gov Summaries
- Superfund Special Accounts
- High Priority Performance Goals
- American Recovery and Reinvestment Act
- Statement – Acting IG

**Environmental Protection Agency
2011 Annual Performance Plan and Congressional Justification**

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**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

APPROPRIATION SUMMARY

Budget Authority
(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud
Science & Technology	\$797,065.1	\$846,049.0	\$846,697.0
Environmental Program & Management	\$2,405,796.7	\$2,993,779.0	\$2,891,036.0
Inspector General	\$40,605.1	\$44,791.0	\$45,646.0
Building and Facilities	\$37,842.7	\$37,001.0	\$40,001.0
Oil Spill Response	\$17,794.8	\$18,379.0	\$18,468.0
<i>Superfund Program</i>	\$1,350,247.8	\$1,269,732.0	\$1,258,377.0
<i>IG Transfer</i>	\$10,314.2	\$9,975.0	\$10,156.0
<i>S&T Transfer</i>	\$24,850.2	\$26,834.0	\$24,527.0
Hazardous Substance Superfund	\$1,385,412.2	\$1,306,541.0	\$1,293,060.0
Leaking Underground Storage Tanks	\$113,264.0	\$113,101.0	\$113,219.0
State and Tribal Assistance Grants	\$2,996,640.1	\$4,978,223.0	\$4,781,873.0
<i>SUB-TOTAL, EPA</i>	<i>\$7,794,420.7</i>	<i>\$10,337,864.0</i>	<i>\$10,030,000.0</i>
<i>Rescission of Prior Year Funds</i>			
Rescission of Prior Year Funds	\$0.0	(\$40,000.0)	(\$10,000.0)
<i>SUB-TOTAL, EPA (INCLUDING RESCISSIONS)</i>	<i>\$7,794,420.7</i>	<i>\$10,297,864.0</i>	<i>\$10,020,000.0</i>
<i>Recovery Act - EPM</i>	\$12,463.2		
<i>Recovery Act - IG</i>	\$1,767.6		
<i>Recovery Act - LUST</i>	\$192,024.0		
<i>Recovery Act - SF</i>	\$572,908.2		
<i>Recovery Act - STAG</i>	\$6,320,935.3		
Recovery Act Resources	\$7,100,098.3	\$0.0	\$0.0
TOTAL, EPA	\$14,894,519.0	\$10,297,864.0	\$10,020,000.0

\$10M rescission implemented in FY2009 against PY funds. No impact to actuals.

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APPROPRIATION SUMMARY

Full-time Equivalent (FTE)¹

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud
Science & Technology	2,444.3	2,442.5	2,469.0
Science and Tech. - Reim	2.1	3.0	3.0
Environmental Program & Management	10,615.5	10,925.3	11,066.5
Envir. Program & Mgmt - Reim	30.6	0.0	0.0
Inspector General	243.4	296.0	296.0
Oil Spill Response	94.3	102.2	102.2
Oil Spill Response - Reim	6.7	0.0	0.0
<i>Superfund Program</i>	2,940.7	3,017.5	3,007.1
<i>IG Transfer</i>	60.0	65.8	65.8
<i>S&T Transfer</i>	105.8	110.0	107.5
Hazardous Substance Superfund	3,106.5	3,193.3	3,180.4
Superfund Reimbursables	91.4	75.5	75.5
Leaking Underground Storage Tanks	65.0	75.3	74.2
FEMA - Reim	1.0	0.0	0.0
WCF-REIMB	118.9	136.1	136.1
Rereg. & Exped. Proc. Rev Fund	153.9	167.8	167.8
Pesticide Registration Fund	70.8	0.0	0.0
Recovery Act Reimbursable: M&O	0.6	0.0	0.0
Leaking Underground Storage Tanks - Reim	0.2	0.0	0.0
Inspector General - Reim	1.1	0.0	0.0
Recovery Act Reimbursable: SF	0.4	0.0	0.0
UIC Injection Well Permit BLM	2.7	0.0	0.0
SUB-TOTAL, FTE CEILING	17,049.4	17,417.0	17,570.7

¹ Totals include military personnel in the Public Health Service Corps.

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud
Pesticide Registration Fund²	0.0	70.8	70.8
TOTAL, EPA	17,049.4	17,487.8	17,647.5

² Presentation of reimbursable FTE for this account should not be interpreted as counting against the Agency ceiling, but rather a projection of reimbursable FTE to accurately and transparently account for the size of this program and the Agency.

**Environmental Protection Agency
2011 Annual Performance Plan and Congressional Justification**

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GOAL, APPROPRIATION SUMMARY

Budget Authority
(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud
Clean Air and Global Climate Change	\$1,309,522.4	\$1,095,311.3	\$1,192,949.6
Science & Technology	\$241,918.6	\$255,948.9	\$256,561.3
Environmental Program & Management	\$467,350.6	\$484,107.7	\$526,251.9
Inspector General	\$3,979.6	\$5,064.0	\$5,869.9
Building and Facilities	\$8,579.5	\$8,368.4	\$9,372.7
Hazardous Substance Superfund	\$3,411.0	\$3,868.2	\$4,173.8
State and Tribal Assistance Grants	\$584,283.1	\$337,954.0	\$390,720.0
Clean and Safe Water	\$8,887,323.4	\$4,896,505.1	\$4,587,186.2
Science & Technology	\$154,847.9	\$156,653.3	\$155,929.1
Environmental Program & Management	\$478,560.0	\$494,913.0	\$500,595.6
Inspector General	\$30,677.7	\$26,072.4	\$25,869.0
Building and Facilities	\$5,583.4	\$5,477.3	\$5,962.5
State and Tribal Assistance Grants	\$8,217,654.4	\$4,213,389.0	\$3,898,830.0
Land Preservation and Restoration	\$2,595,018.9	\$1,764,383.6	\$1,752,201.2
Science & Technology	\$13,323.6	\$15,983.0	\$15,541.6
Environmental Program & Management	\$221,283.7	\$222,861.0	\$227,450.0
Inspector General	\$2,010.8	\$2,158.9	\$2,269.7
Building and Facilities	\$4,431.7	\$4,650.9	\$4,752.1
Oil Spill Response	\$17,794.8	\$18,379.0	\$18,468.0
Hazardous Substance Superfund	\$1,924,004.6	\$1,273,403.8	\$1,262,538.8
Leaking Underground Storage Tanks	\$305,288.0	\$113,101.0	\$113,219.0
State and Tribal Assistance Grants	\$106,881.8	\$113,846.0	\$107,962.0
Healthy Communities and Ecosystems	\$1,342,119.2	\$1,799,742.6	\$1,673,517.4
Science & Technology	\$348,320.4	\$369,572.5	\$377,564.5
Environmental Program & Management	\$665,549.8	\$1,188,824.3	\$1,021,523.9
Inspector General	\$3,792.3	\$8,387.2	\$8,094.1

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud
Building and Facilities	\$13,796.6	\$13,024.8	\$14,138.4
Hazardous Substance Superfund	\$8,349.1	\$8,524.7	\$8,735.6
State and Tribal Assistance Grants	\$302,310.9	\$211,409.0	\$243,461.0
Compliance and Environmental Stewardship	\$760,535.1	\$781,921.5	\$824,145.5
Science & Technology	\$38,654.6	\$47,891.3	\$41,100.6
Environmental Program & Management	\$585,515.8	\$603,072.9	\$615,214.5
Inspector General	\$1,912.3	\$3,108.5	\$3,543.3
Building and Facilities	\$5,451.6	\$5,479.5	\$5,775.3
Hazardous Substance Superfund	\$22,555.7	\$20,744.3	\$17,611.8
State and Tribal Assistance Grants	\$106,445.2	\$101,625.0	\$140,900.0
Sub-Total	\$14,894,519.0	\$10,337,864.0	\$10,030,000.0
Rescission of Prior Year Funds	\$0.0	(\$40,000.0)	(\$10,000.0)
Total	\$14,894,519.0	\$10,297,864.0	\$10,020,000.0

Recovery Act funds are included in the goal totals above. See Appropriation tables for more details on Recovery Act funds.

\$10M rescission implemented in FY2009 against PY funds. No impact to actuals.

**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

GOAL, APPROPRIATION SUMMARY

Authorized Full-time Equivalents (FTE)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud
Clean Air and Global Climate Change	2,650.5	2,678.9	2,795.0
Science & Technology	719.1	724.6	730.7
Science and Tech. - Reim	1.7	3.0	3.0
Environmental Program & Management	1,860.3	1,869.5	1,973.3
Envir. Program & Mgmt - Reim	1.8	0.0	0.0
Inspector General	22.9	33.5	38.1
Hazardous Substance Superfund	16.6	18.4	18.7
FEMA - Reim	1.0	0.0	0.0
WCF-REIMB	26.9	29.9	31.3
Inspector General - Reim	0.1	0.0	0.0
Recovery Act Reimbursable: M&O	0.0	0.0	0.0
Clean and Safe Water	2,868.3	2,924.6	2,928.2
Science & Technology	479.6	484.3	493.1
Environmental Program & Management	2,188.2	2,247.4	2,246.5
Envir. Program & Mgmt - Reim	1.9	0.0	0.0
Inspector General	176.2	172.3	167.8
WCF-REIMB	18.4	20.5	20.8
Inspector General - Reim	0.8	0.0	0.0
Recovery Act Reimbursable: M&O	0.5	0.0	0.0
UIC Injection Well Permit BLM	2.7	0.0	0.0
Land Preservation and Restoration	4,464.8	4,555.6	4,551.2
Science & Technology	51.4	59.2	57.7
Environmental Program & Management	1,154.2	1,150.4	1,146.6
Envir. Program & Mgmt - Reim	7.6	0.0	0.0
Inspector General	11.6	14.3	14.7
Oil Spill Response	94.3	102.2	102.2
Oil Spill Response - Reim	6.7	0.0	0.0
Hazardous Substance Superfund	2,968.9	3,062.9	3,065.1

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud
Superfund Reimbursables	91.4	75.5	75.5
Leaking Underground Storage Tanks	65.0	75.3	74.2
WCF-REIMB	13.0	15.9	15.2
Leaking Underground Storage Tanks - Reim	0.2	0.0	0.0
Inspector General - Reim	0.1	0.0	0.0
Recovery Act Reimbursable: M&O	0.1	0.0	0.0
Recovery Act Reimbursable: SF	0.4	0.0	0.0
Healthy Communities and Ecosystems	3,751.3	3,891.3	3,967.1
Science & Technology	1,047.1	1,011.9	1,025.2
Science and Tech. - Reim	0.4	0.0	0.0
Environmental Program & Management	2,377.7	2,579.7	2,645.3
Envir. Program & Mgmt - Reim	10.5	0.0	0.0
Inspector General	21.8	55.4	52.5
Hazardous Substance Superfund	26.5	27.3	27.7
WCF-REIMB	42.5	49.2	48.6
Rereg. & Exped. Proc. Rev Fund	153.9	167.8	167.8
Pesticide Registration Fund	70.8	0.0	0.0
Inspector General - Reim	0.1	0.0	0.0
Recovery Act Reimbursable: M&O	0.0	0.0	0.0
Compliance and Environmental Stewardship	3,314.1	3,366.6	3,329.2
Science & Technology	147.1	162.5	162.3
Environmental Program & Management	3,034.8	3,078.4	3,054.9
Envir. Program & Mgmt - Reim	8.8	0.0	0.0
Inspector General	11.0	20.5	23.0
Hazardous Substance Superfund	94.5	84.7	68.8
WCF-REIMB	18.0	20.5	20.2
Inspector General - Reim	0.0	0.0	0.0
Total	17,049.0	17,417.0	17,570.7

\$10M rescission implemented in FY2009 against PY funds. No impact to actuals.

**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

Clean Air and Global Climate Change

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

STRATEGIC OBJECTIVES:

- Through 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.
- Through 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.

GOAL, OBJECTIVE SUMMARY

Budget Authority
Full-time Equivalents
(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Clean Air and Global Climate Change	\$1,309,522.4	\$1,095,311.3	\$1,192,949.6	\$97,638.3
Healthier Outdoor Air	\$956,816.1	\$720,156.2	\$811,320.1	\$91,163.9
Healthier Indoor Air	\$49,107.1	\$45,455.6	\$47,110.8	\$1,655.2
Protect the Ozone Layer	\$18,463.9	\$18,630.5	\$18,609.4	(\$21.1)
Radiation	\$37,757.7	\$42,631.3	\$42,634.8	\$3.5
Reduce Greenhouse Gas Intensity	\$137,287.8	\$167,264.2	\$168,558.1	\$1,293.9
Enhance Science and Research	\$110,089.8	\$101,173.4	\$104,716.4	\$3,543.0
Total Authorized Workyears	2,650.5	2,678.9	2,795.0	116.1

EPA will take meaningful, common sense steps to improving air quality and addressing climate change. Making the right choices now will allow the Agency to improve public health, drive technology innovation for a better economy, and protect the environment -- all without placing an undue burden on the nation's economy.

The Clean Air program is founded on several principles: using health and environmental risks to set priorities, streamlining programs through regulatory reforms, continuing to partner with state, local and tribal governments as well as industry and non-governmental organizations, promoting energy efficiency and clean energy supply, and encouraging market-based approaches. EPA implements the Clean Air and Global Climate Change goal through national, state, local, tribal and regional programs designed to provide healthier outdoor and indoor air for all Americans, reduce greenhouse gases (GHG), protect the stratospheric ozone layer, minimize radiation releases and enhance science and research.

In FY 2011, EPA is providing additional resources to the states and local governments to implement the National Ambient Air Quality Standards (NAAQS) by monitoring air quality and developing and implementing State Implementation Plans. In addition, EPA will develop guidance on GHG permitting for the states and local governments for anticipated GHG permitting work. To complement that work and to respond to pending legal obligations, EPA will assess and potentially develop New Source Performance Standards for GHGs and regulations for large transportation sources. EPA will also be implementing GHG regulations completed in FY 2009 and expected to be completed in 2010 such as the Mandatory Reporting Rule and the Light Duty Vehicle Rule.

EPA's key clean air programs, including those addressing six common "criteria" pollutants: particulate matter, ozone, lead, sulfur dioxide, nitrogen dioxide and carbon monoxide, and our work on acid rain, air toxics, indoor air, radiation and stratospheric ozone depletion, focus on some of the highest health and environmental risks faced by the country. Recent updates for the NAAQS for lead, and proposed updates for ozone could yield significant health and environmental benefits. Every year, state, local, tribal 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 and schools days.

High Priority Performance Goal

EPA will improve the country's ability to measure and control greenhouse gas (GHG) emissions. Building a foundation for action is essential.

- By June 15, 2011, EPA will make publically available 100% of facility-level GHG emissions data submitted to EPA in compliance with the GHG Reporting Rule.
- EPA, working with US DOT, will begin implementation in 2011 of regulations designed to reduce the GHG emissions from light duty vehicles sold in the US starting with model year 2012.

Clean Air

Cleaner cars, industries, and consumer products have contributed to cleaner air for Americans in much of the U.S. Since 1990, nationwide air quality has improved significantly for the six criteria air pollutants for which there are national ambient air quality standards. 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 FY 2008, EPA promulgated a more protective standard for lead; we recently proposed a new standard for ozone. In FY 2011, we will continue to work with state, local, and tribal agencies to ensure active progress toward meeting these new standards.

As EPA issues more protective NAAQS at a faster pace, states are faced with an increasing workload as they revise their State Implementation Plans (SIPs) to meet the new NAAQS. States must develop more stringent measures for areas that did not meet the previous NAAQS, and measures for new areas not previously in nonattainment. The measures often are based on multi-state strategies that require additional and more complicated modeling, refined emissions inventories, and increased stakeholder involvement. In some cases NAAQS revisions have also contained requirements for States to expand monitoring networks to help determine compliance with revised NAAQS. In addition, states will likely be tasked with new responsibilities under the Clean Air Act in order to help reduce GHG emissions. State programs for issuing operating permits and for prevention of significant deterioration will require additional resources when they begin to address greenhouse gas emissions in permitting large sources.

EPA's NO_x SIP Call, and the 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. 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 acidic water bodies.

Promoting Healthy Communities

From 1990 to 2005, emissions of air toxics declined by 42 percent – the results of a number of regulations for 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.

Historically, although EPA's air toxics program has conducted significant outreach to communities and tribes, it has focused largely, at a macro level, on developing national emission standards for air toxics and conducting national-scale risk assessments. As a general matter, EPA's enforcement program has taken a similar sector-based approach to addressing air toxic emissions.

The FY 2011 budget request builds on work that the Agency has done in communities in 2008 and 2009. Our efforts with the City of Houston and other communities disproportionately

impacted by air toxic emissions (e.g. Port Arthur, Texas), make it evident that the public health and environmental impacts associated with air toxics emissions occur largely at the local level. Further, existing information suggests that such risks may disproportionately affect some vulnerable subpopulations, such as schoolchildren.

Consistent with the Administrator's commitment to Congress, "...to protect the American public where they live, work, and play [as well as] schoolchildren where they learn," from the impacts associated with air toxic pollutants, the request includes funding to collaborate with states, and communities to identify if and where air toxics pollution is occurring at unsafe levels, and aggressively reduce air toxics pollution within any at-risk communities, and around schools and other places where children may be exposed. This budget includes an increase of \$2.3 million to support a limited number of community pilot programs as they develop and implement air toxics approaches tailored to their local needs.

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 actions they can take to reduce their risks from indoor air. EPA educates and encourages individuals, schools, industry, the health-care community, and others to take action to reduce health risks in indoor environments. Outreach includes 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.

In FY 2011, as a part of the Agency's Promoting Healthy Communities – Healthy Schools initiative, the Indoor Air Program will invest an additional \$1.1 million in efforts to improve children's health through the delivery of effective asthma management strategies in schools and communities. Regional offices will provide support to communities across the country and will allow targeting of efforts in underserved communities.

The Radon Program promotes action to reduce the public's risk to indoor radon (second only to smoking as a cause of lung cancer). This non-regulatory program 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.

Clean Energy & Climate Change

The FY 2011 budget request includes additional funding for steps the Agency can take in the near term to help pave the way to a clean energy future. Most of this funding is focused on assessing and potentially developing new GHG regulations in response to legal obligations, or implementing GHG regulations completed in FY 2009 and 2010. For example, the Agency will implement the GHG Mandatory Reporting Rule while also including the added benefit of identifying and communicating with industry possible cost-effective efficiency investments with the resultant GHG reductions.

The Agency will analyze critical air and climate-related issues relating to carbon capture and sequestration (CCS) technology, and eventually develop a framework for the permitting of the carbon dioxide capture component of the CCS project. This budget request includes an increase of \$2.0 million for this work.

The FY 2011 budget request provides an increase of \$6 million for analysis, development and implementation of new emission standards that will reduce GHG emissions from transportation sources. This includes the implementation of new standards for light-duty vehicles (passenger cars, light-duty trucks, and medium duty passenger vehicles), covering model years 2012 through 2016. The Agency plans to finalize these first-ever GHG emission standards in FY 2010. EPA also plans to propose and promulgate heavy-duty vehicle and engine standards to complete its obligation to regulate GHG emissions from motor vehicles in response to the Supreme Court's *Massachusetts v. EPA* decision. In addition, EPA will conduct analyses and technical assessments and potentially develop GHG emission standards for other transportation source categories in response to petitions to regulate GHG emissions of these sources.

New Source Performance Standards (NSPS) regulations could be an effective mechanism to reduce greenhouse gas emissions from major industrial sources. The NSPS program provides the opportunity to begin achieving emission reductions at new facilities through such actions as improvements in energy and industrial process efficiency. The request includes \$5 million to assess and potentially develop NSPS regulations for major industrial sectors and seek, where possible, market-oriented mechanisms and flexibilities to provide lowest cost compliance options.

This request includes an additional \$25 million to support state permit programs as they prepare to issue permits for large sources of GHGs.

Voluntary GHG Reducing Programs

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 GHG 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 GHGs with very high global warming potentials.

EPA will continue to implement the ENERGY STAR program across the residential, commercial, and industrial sectors consistent with the updated Memorandum of Understanding with DOE, with an increase of \$2 million. EPA will do this by: Enhancing the use of the ENERGY STAR label on products including adding products to the program; accelerating the rate that product specifications are updated in terms of stringency; and developing a comprehensive product certification and verification initiative for ENERGY STAR qualifying products. Another focus will be expanding ENERGY STAR programs that improve the installation of products such as heating and cooling equipment whose efficiency is greatly affected by installation practices.

Stratospheric Ozone – Domestic and Montreal Protocol

In FY 2011, 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.

Following the 2010 lowering of the ODS cap, EPA is responding to an increased number of ODS substitute applications, many of which represent lower GHG options. Under the Significant New Alternatives Policy (SNAP) program, EPA will review alternatives to ODS to assist the market's transition to alternatives that are safer, especially for the climate system.

Radiation

In FY 2011, EPA will continue to work with other Federal agencies, states, tribes, stakeholders, and international radiation protection organizations to develop and use voluntary and regulatory programs, public information, and training to reduce public exposure to radiation. The Agency also will continue to conduct radiation risk assessments including updating its scientific methodology, modeling, and technical tools for generating radionuclide-specific cancer risk coefficients to more specifically address sensitive population groups such as infants, women, and the elderly. Risk managers at all levels of government use this information to assess health risks from radiation exposure and to determine appropriate levels for clean-up of radioactively contaminated sites. EPA will continue to provide technical assistance to tribes to locate and clean up radioactive wastes produced from uranium mining that contaminate tribal lands and water resources with radionuclides and heavy metals.

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 NAAQS, which sets limits on how much stratospheric ozone, particulate matter, carbon monoxide, sulfur dioxide, nitrogen oxides, and lead, are allowed in the atmosphere. EPA also conducts research on hazardous air pollutants, also known as air toxics.

In FY 2011, the budget request for the Agency's air research program includes an additional \$3.0 million to support a next generation monitoring network for ambient air pollutants that will help build the scientific backbone necessary to plug gaps in our regulatory system. The Agency's air research program will also 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. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering. In FY 2011, 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 will also 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 2011, EPA requests \$85.3 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.

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

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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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Clean and Safe Water	\$8,887,323.4	\$4,896,505.1	\$4,587,186.2	(\$309,318.9)
Protect Human Health	\$3,204,952.3	\$1,770,225.2	\$1,603,813.0	(\$166,412.2)
Protect Water Quality	\$5,538,892.8	\$2,981,364.7	\$2,831,001.4	(\$150,363.3)
Enhance Science and Research	\$143,478.3	\$144,915.2	\$152,371.9	\$7,456.7
Total Authorized Workyears	2,868.3	2,924.6	2,928.2	3.6

Protecting America’s waters is a top priority and EPA has an ambitious vision for the nation’s waters in the years ahead. Water quality has tremendous impacts on quality of life, on economic potential, and on human and environmental health. America’s waterbodies are imperiled as never before from nutrient loadings and stormwater runoff to invasive species and drinking water contaminants. These challenges demand both traditional and innovative strategies, both national and local action.

In FY 2011 the Agency is launching new initiatives to confront the challenges from multiple angles - local and national, traditional and innovative. The Mississippi River Basin initiative will focus on nonpoint source program enhancements to result in water-quality improvement throughout the watershed and in the Gulf of Mexico. As part of the Healthy Communities

Initiative, EPA will launch the Community Water Priorities program to address issues related to urban waters. The Agency will also continue collaboration with the Department of Interior and the Army Corps of Engineers (Corps) to implement an Interagency Action Plan (IAP) to significantly reduce the harmful effects of Appalachian surface coal mining operations.

To make progress, the Agency also needs unprecedented partnerships with the states and tribes. In FY 2011, significant new resources are targeted to states, to help with the growing universe of facilities and the growing needs for Total Maximum Daily Limits (TMDLs), monitoring and innovative strategies for addressing infrastructure requirements. EPA will collaborate with states and tribes in each of these areas to achieve clean and safe water objectives.

In FY 2011, EPA continues its commitment to upgrading drinking water and wastewater infrastructure with a substantial combined investment of \$3.3 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. EPA is working to ensure that Federal dollars provided through the State Revolving Funds act as a catalyst for efficient system-wide planning, improvements in technical, financial, and managerial capacity, and the design, construction and on-going management of sustainable water infrastructure.

The National Water Program will continue to place emphasis on sustainable infrastructure, watershed stewardship, watershed-based approaches, water efficiencies, and best practices through Environmental Management Systems. EPA will specifically focus on green infrastructure, banking for wetlands conservation, and trading among point sources and non-point sources for water quality upgrades. In FY 2011, 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

High Priority Performance Goal

As part of the Administration's emphasis on High Priority Performance Goals, EPA will take actions over the next two years to improve drinking water and surface water quality. Work under this goal supports one of EPA's High Priority Performance Goals related to public health.

- Over the next two years, EPA will initiate review/revision of at least four drinking water standards to strengthen public health protection.

During FY 2011, EPA, the states, and community water systems will build on past successes while working toward the FY 2011 goal of assuring that 91 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.

To help ensure that water is safe to drink, EPA requests \$1.3 billion continuing EPA's commitment for the Drinking Water State Revolving Fund. EPA will continue to work with states to encourage targeting this affordable, flexible financial assistance to support utility compliance with safe drinking water standards. EPA will also continue to work with utilities to promote technical, financial, and managerial capacity as a critical means to meet infrastructure needs, and further enhance program performance and efficiency, and to ensure compliance with the Safe Drinking Water Act.

Climate and Clean Energy Challenge

In order to support a potentially important climate mitigation technology, EPA will build on its regulatory framework for Carbon Capture and Sequestration (CCS). As part of the Agency's efforts to meet the Climate and Clean Energy Challenge, EPA is requesting an additional \$1.1 million to support the Agency's work on geologic sequestration to ensure the integrity of underground drinking water aquifers. This includes completing guidance to implement the rule (e.g., monitoring, modeling, and Area of Review determinations), building state and regional capacity to issue permits, training permit writers to review complex data, and communicating that there is a protective program in place for Geologic Sequestration wells. In FY 2011, 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.

Clean Water

In FY 2011, EPA will continue to collaborate with states and tribes to make progress toward EPA's clean water goals. EPA's FY 2011 request includes a total of \$485.1 million in categorical grants for clean water programs. 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 National Pollutant Discharge Elimination System (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.

The Agency's FY 2011 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. The results of these efforts are 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 focus 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 the CWSRF, EPA is continuing our CWSRF commitment by requesting \$2.0 billion in FY 2011.

In FY 2011 EPA requests an additional \$45 million in the Section 106 grants. The new funding will strengthen the base state, interstate and tribal programs, address emerging water quality issues such as nutrients and new regulatory requirements, and support expanded water monitoring and enforcement efforts.

Imperiled Urban Waters

Many urban waters are impaired by pathogens, excess nutrients, and contaminated sediments that result from sanitary sewer and combined sewer overflows, polluted runoff from urban landscapes, and legacy contamination. As part of the Healthy Communities Initiative, EPA will launch the Community Water Priorities program to address issues related to urban waters. Through Federal technical support and grants to the states, the program will advance water quality improvements in urban watersheds through targeted implementation of core water programs. It also will leverage more effective partnerships and strategically target resources. With a particular emphasis on disadvantaged communities, the program will focus water quality protection and restoration efforts on urban waters.

Appalachian Coal Mining Interagency Action Plan

EPA, the Army Corps of Engineers (Corps), and the Department of Interior will implement the Interagency Action Plan to ensure that Appalachian surface mining projects do not violate water quality standards or result in significant environmental degradation in the watershed. Coordinating with the Corps, states, resource agencies, and the public, EPA will review CWA 404 and 402 permits of concern and negotiate a resolution to outstanding environmental issues with the Corps and mine operators.

Homeland Security

EPA has a major role in supporting the protection of the nation's critical water infrastructure from terrorist threats. EPA will move to the next phase of the Water Security Initiative (WSI) pilot program, focusing on support and evaluation activities, and will continue to support 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. The FY 2011 request includes \$10.4 million for WSI support and evaluation activities and \$1.2 million for WATR.

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 America's waters, under the

authorities of the Clean Water and Safe Drinking Water Acts. The complementary Drinking Water and Clean Water Research programs are both organized around specific long-term goals to provide needed scientific information and tools to the Agency and other decision makers.

In FY 2011, the range of research programs and initiatives will continue both the work of better understanding the scientific basis of our environmental and human health problems as well as advancing the design of sustainable solutions through approaches such as green chemistry and green engineering. The Drinking Water and Water Quality research programs will work to align themselves to provide a more unified approach to particular high-priority problems of source water quality and sustainability.

In FY 2011, drinking water research will be expanded to address potential water supply consequences associated with hydraulic fracturing. Congress has urged EPA to conduct this research, which supports the Agency's efforts to ensure the protection of our aquifers. Green infrastructure research will be expanded in FY 2011 to assess, develop, and compile scientifically rigorous tools and models that will be used by EPA's Office of Water, states, and municipalities. Green chemistry and green engineering approaches will advance the design of sustainable solutions to clean water challenges. EPA will leverage the success of the Science to Achieve Results (STAR) grants program by significantly increasing funding for research grants to top scientists in academia.

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Land Preservation and Restoration

Preserve and restore 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.
- 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Land Preservation and Restoration	\$2,595,018.9	\$1,764,383.6	\$1,752,201.2	(\$12,182.4)
Preserve Land	\$247,870.4	\$246,688.8	\$252,852.6	\$6,163.8
Restore Land	\$2,298,964.9	\$1,462,950.8	\$1,445,921.7	(\$17,029.1)
Enhance Science and Research	\$48,183.6	\$54,744.0	\$53,426.9	(\$1,317.1)
Total Authorized Workyears	4,464.8	4,555.6	4,551.2	-4.4

Land is one of America’s most valuable resources and cleaning up our communities to create a safe environment for all Americans is a priority for EPA. 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. Communities are directly affected by EPA’s actions whether they are site-specific actions or broad national policies. In recognition of the role of communities and stakeholders in its work, EPA has begun a new era of outreach and protection for communities historically underrepresented in EPA decision-making.

In FY 2011, EPA is helping to meet the Climate and Clean Energy Challenge, investing in Healthy Communities initiatives (Clean Green and Healthy Schools, Brownfields and Sustainable Communities) and continuing to build strong state and Tribal partnerships. EPA will work with states and tribes to assess Underground Storage Tank (UST) compatibility with

alternative fuels and evaluate the transport and degradation characteristics of ethanol and diesel blends; promote safe handling and management of poly-chlorinated biphenyl (PCB)-containing caulk in schools while building necessary regional technical support and outreach to effectively implement site-specific cleanup and disposal plans; build healthy and sustainable communities particularly in urban areas with EPA's efforts working with Feed People – Not Landfills; and strengthen our partnership with the U.S. Army Corps of Engineers on cleaning up contaminated sediments in urban rivers adjacent to Superfund sites.

To protect the land, human health and the environment, EPA focuses on 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 ensure effective and adequate oversight of our responsibilities by determining what needs to be done and who should pay; and sound science and research to address risk factors and new, innovative solutions.

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

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 2011, the Agency requests \$1.75 billion 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.

Controlling the many risks posed by accidental and intentional releases of harmful substances presents a significant challenge. In FY 2011, 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.

EPA's land program activities for FY 2011 align along four broad themes: 1) Integrated Cleanup Program Initiative; 2) Land Revitalization; 3) Recycling, Waste Minimization and Energy Recovery; and 4) implementation of the Energy Policy Act of 2005 (EPAAct).

¹ 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/swerst1/>, <http://www.epa.gov/fedfac/> and <http://www.epa.gov/swerrims/landrevitalization/>.

Integrated Cleanup Program Initiative:

In an effort to improve the accountability, transparency, and effectiveness of EPA's cleanup programs, EPA initiated a multiyear effort in 2010 to explore better uses of assessment and cleanup authorities to address a greater number of sites, accelerate cleanups, and put those sites back into productive use while protecting human health and the environment. By bringing to bear the relevant tools available in each of the cleanup programs (Superfund Remedial, Superfund Emergency Response and Removal, Superfund Federal Facilities Response, and Brownfields Projects), EPA will better leverage the resources available to address needs at individual sites. For example, EPA is defining and implementing new performance measures that further describe the achievements of EPA's cleanup programs. As an early step toward an improved Superfund Remedial program measurement, in FY 2011, EPA will implement a new performance measure to augment the site-wide construction completion measure. Further, this effort will examine all aspects of EPA's cleanup programs, in a more granular fashion, identifying key process improvements, enhanced efficiencies, and associated performance measures to clearly gauge and demonstrate progress from site assessment through site-wide construction completion. This effort may expand the transparency for EPA's cleanup programs, encourage community involvement, and enhance accountability to the public.

Land Revitalization:

All of EPA's cleanup programs (Superfund Remedial, Superfund Federal Facilities Response, Superfund Emergency Response and Removal, RCRA Corrective Action, and Underground Storage Tanks) and their partners are taking proactive steps to facilitate the cleanup and revitalization of contaminated properties. In FY 2011, the Agency requests \$950.7 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. EPA continues to support the RE-Powering America's Land initiative² in partnership with the Department of Energy. 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 25 percent renewable energy by 2025.

Recycling, Waste Minimization, and Energy Recovery:

EPA requests \$11.1 million in FY 2011 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 2011, EPA will continue the Resource Conservation Challenge (RCC) as a major national effort to find flexible ways to conserve our valuable natural resources through waste reduction, energy recovery, and recycling.³ Through RCC, the Agency will continue to build partnerships with government agencies⁴, businesses, and nonprofits to

² Additional information on this initiative can be found on <http://www.epa.gov/renewableenergyland/>.

³ For more information, refer to <http://www.epa.gov/rcc>.

⁴ Federal, state, local and Tribal agencies.

encourage recycling and waste prevention, and leverage resources to improve energy conservation.

Implementing the EAct:

The EAct⁵ 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 2011, EPA requests \$34.4 million to provide assistance to states to help them meet their EAct responsibilities, which include: (1) mandatory inspections every three years for all underground storage tanks and enforcement of violations discovered during the inspections; (2) operator training; (3) prohibition of delivery for non-complying facilities⁶; and (4) secondary containment or financial responsibility for tank manufacturers and installers.

In addition to EPA's land program activities, 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 maintain its Homeland Security emergency preparedness and response capability. In FY 2011, the Agency requests \$40.2 million to continue to: maintain its capability to respond effectively to incidents that may involve harmful chemical, biological, and radiological substances; operate the Environmental Response Laboratory Network (ERLN); maximize the effectiveness of its involvement in national security events through pre-deployments of assets such as emergency response personnel and field detection equipment; maintain the Emergency Management Portal (EMP); and 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 Brownfields 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

⁵ 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).

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.

the Federal government for cleanups financed by appropriations. In FY 2011, the Agency requests \$187.4 million to support enforcement activities at Federal and non-Federal Superfund 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 2009, the Superfund Enforcement program secured private party commitments that exceeded \$2.3 billion. Of this amount, PRPs have committed to future response work with an estimated value of approximately \$2 billion; PRPs have agreed to reimburse the Agency for more than \$371 million in past costs; and PRPs have been billed by the EPA for approximately \$79 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 2011, 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 2009, more than 948 site-specific special accounts have been established and over \$2.96 billion have been deposited into special accounts (including earned interest). Approximately \$1.43 billion from special accounts has been used by EPA for site response actions and another \$184.3 million has been obligated but not yet disbursed. EPA is carefully managing the \$1.34 billion that was available as of October 1, 2009 and has developed multi-year plans to use these funds as expeditiously as possible. These funds will be used to conduct many different CERCLA response actions, including, but not limited to, investigations to determine the extent of contamination and appropriate remedy required, construction of the remedy, enforcement activities, and post-construction monitoring.

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

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

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.

Enhancing Science and Research to Restore and Preserve Land

EPA's Land Research program, in accordance with the Administration's policy of scientific integrity⁹, provides the scientific foundation for the Agency's actions to protect America's land. The FY 2011 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. The range of research programs and initiatives will continue both the work of better understanding the scientific basis of our environmental and human health problems as well as advancing the design of sustainable solutions through approaches such as green chemistry and green engineering. In FY 2011, EPA requests \$53.4 million in support of EPA's efforts to enhance science and research for land preservation and restoration.

Restoration research activities in FY 2011 will focus on contaminated sediments, ground water contamination, site characterization, and site-specific technical support. Research will advance EPA's ability to characterize the effectiveness of contaminated sediment remediation and will be conducted in collaboration with the Great Lakes National Program Office (GLNPO) to develop alternative technologies to sediment dredging for remedy selection options. Research products will develop data to support dosimetric and toxicologic assessment of amphibole asbestos fiber-containing material from Libby, Montana.

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. UST research will assess UST compatibility with alternative fuels

Research will continue to focus on areas such as resource conservation, corrective action, multi-media modeling, leaching, containment systems, and landfill bioreactors. In FY 2011, EPA will continue working 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. Additionally, methamphetamine lab clean up studies will continue to evaluate clean up techniques and exposure risks. Research efforts also will address science needs for coal combustion residue regulatory actions.

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

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

In FY 2011, research also will continue in the area of nanotechnology fate and transport as part of the Nanotechnology 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.

**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

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.
- 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Healthy Communities and Ecosystems	\$1,342,119.2	\$1,799,742.6	\$1,673,517.4	(\$126,225.2)
Chemical and Pesticide Risks	\$402,056.3	\$411,538.1	\$425,033.7	\$13,495.6
Communities	\$333,638.9	\$251,749.2	\$297,729.0	\$45,979.8
Restore and Protect Critical Ecosystems	\$215,571.5	\$728,969.3	\$530,131.7	(\$198,837.6)
Enhance Science and Research	\$390,852.6	\$407,486.0	\$420,623.1	\$13,137.1
Total Authorized Workyears	3,751.3	3,891.3	3,967.1	75.8

In FY 2011, 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. Results stem from effective regulatory frameworks but also from partnerships with stakeholders. Partnerships with international, Federal, state, tribal, local governments and non-governmental organizations have long been a common thread across EPA's programs. Environmentalism has been described as a conversation that we all must have because it is about protecting people in the places they live, work and raise families. In FY 2011, the Agency is focused on expanding the conversation to include new stakeholders and involve communities in more direct ways. EPA is proactive about detection and prevention of environmental risks to

watersheds, communities, homes, schools and workplaces – but today’s challenges require renewed and re-focused efforts to address old pollution and prevent new pollution.

The Agency will carry out its responsibilities based on the core values of science, transparency and the rule of law, and will include environmental justice principles in the full range of decision-making. High-priority, cutting edge research will guide the Agency in finding efficient, innovative and sustainable ways to address complex, inter-related and cumulative sources and effects of pollution.

In FY 2011, EPA will invest in building Healthy Communities from multiple vantages: Brownfields to assist economically hard hit communities; Clean and Green Schools to protect our children, Community Waters grants to engage communities in new ways in making improvements in their immediate environment, and Sustainable Communities activities to help protect the future through smart development. Targeted geographic approaches receive new funds also, to support important work to restore the Chesapeake Bay under the Executive Order, and to reduce nutrient loading in the Mississippi River Basin with downstream benefits to the Gulf of Mexico. In addition, the Agency will move forward with the far-reaching Great Lakes initiative begun in 2010.

Ideally, EPA implements a strategy of preventing pollution at the source. EPA works to assure the safety of chemicals before they are in use, as well as maximize the use of recent advances in toxicology and analytical chemistry for chemical review. The Agency is shifting its focus to identify and address chemicals of concern more quickly through Existing Chemicals Action Plans, as well as filling data gaps on widely produced chemicals in commerce, including endocrine disruptor screening. Innovation in green chemistry and research to develop faster more efficient ways to uncover potential adverse effects are vital components of this work. In FY 2011 new funding will allow expansion and acceleration in endocrine disruptor research and computational toxicology.

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, schools, homes, and workplaces that might negatively impact human health and environmental quality. To do so, EPA conducts research to understand how specific groups of people may differ in their inherent susceptibility or may be disproportionately exposed. For example, sensitivity in children can depend 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. 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. A renewed focus is being placed on the continuing Environmental Justice (EJ) efforts to 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.

Changes in ecosystems have long-range impacts that are beginning to be recognized and difficult to reverse. In FY 2011 the Agency will continue collaboration with the Department of Interior

and the Army Corps of Engineers (Corps) to implement an Interagency Action Plan (IAP) to significantly reduce the harmful effects of Appalachian surface coal mining operations. Research on ecosystem services as well as the impact of climate change will help identify opportunities in regulatory, voluntary and outreach efforts. Routine ecological risk assessments determine potential effects of pesticides, toxics or pollutants from various sources on plants, animals, and ecosystems as a whole, as well as those species that are listed as threatened or endangered.

The combined effect – community level actions, geographically targeted investments, attention to chemicals, concern for ecosystems - implemented through the lens of science, transparency and law - will bring real improvements and real protections for ourselves and for our children.

High Priority Performance Goal

As part of the Administration's emphasis on High Priority Performance Goals,

II. EPA will take actions over the next two years to improve water quality. Clean water is essential for our quality of life and the health of our communities.

- All Chesapeake Bay watershed States (including the District of Columbia) will develop and submit approvable Phase I watershed implementation plans by the end of CY 2010 and Phase II plans by the end of CY 2011 in support of EPA's final Chesapeake Bay Total Maximum Daily Load (TMDL).
- By the end of fiscal year 2011, increase the percent of federal CWA discharge permit enforcement actions that reduce pollutant discharges into impaired waterways from 20% (FY 2009 baseline) to 25%, and promote transparency and right-to-know by posting results and analysis on the web.

III. EPA will ensure that environmental health and protection is delivered to our communities.

- By 2012, EPA will have initiated 20 Brownfields community-level projects as part of an enhanced effort to benefit under-served and economically disadvantaged communities. This will allow those communities to assess and address multiple Brownfields sites within their boundaries, thereby advancing area-wide planning and cleanups and enabling redevelopment of Brownfields properties on a broader scale than on individual sites. EPA will provide technical assistance, coordinate its enforcement, water and air quality programs, and work with other federal agencies, states, tribes and local governments to implement associated targeted environmental improvements identified in each community's area-wide plan.

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 \$144 million in

Pesticides Licensing programs in FY 2011. 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. Many of these actions involve reduced risk pesticides which, once registered, will result in increased societal benefits.

As part of the FY 2011 Healthy Communities initiative the Pesticides program will expand its work with schools to reduce risks children face from pesticide use in the school environment.

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

Toxics Programs

These programs span the full range of EPA activities associated with screening, assessing and reducing risks of both new and existing chemicals. EPA is strengthening its risk management activities to assure the safety of chemicals in products and in the environment. EPA will continue reviewing and acting on 1,500 TSCA Section 5 notices, including Pre-Manufacture Notices, received annually to ensure no unreasonable risk from new chemicals before they are introduced into U.S. commerce.

EPA will also continue to assess and act on the thousands of existing chemicals already in commerce before TSCA took effect and review data to support hazard assessment and risk management actions for High Production Volume (HPV) chemicals. In FY 2011 the program will evaluate the hazards and risks posed by HPV chemicals, and take appropriate risk management actions to reduce human health and environmental risks. One focus area is eliminating childhood lead poisoning, including implementing the Renovation, Repair and Painting (RRP) Rule to address lead hazards created by renovation, repair and painting activities in homes and child-occupied facilities with lead-based paint.

Pesticides and Toxics Fees

In FY 2011, EPA will administer or propose several user fees as follows:

- **Pesticides Maintenance Fee:** This fee provides funding for the Registration Review program with a portion supporting the processing of applications involving “me-too” or inert ingredients.
- **Enhanced Registration Services Fee:** To accelerate pesticide registration decision service, 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.

- **Pre-Manufacturing Notification Fee:** This fee supports the review and processing of new chemical pre-manufacturing notifications submitted to EPA by the chemical industry.
- **Lead Accreditation and Certification Fee:** This fee is collected from operators of lead training programs accredited under the 402/404 rule and for lead-based paint contractors certified under this rule.
- **Accelerated Chemical Risk Reduction Fee:** Under proposed TSCA reform legislation, the Agency envisions collecting fees to directly support implementation of a restructured chemicals management program.

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 urban waters, 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 2011, EPA will continue to lead the implementation of the Great Lakes Restoration Initiative. The Initiative identifies \$300 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 Great Lakes Restoration Initiative Action Plan to be completed in February 2010. Pursuant to the Action Plan, 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, Education, 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 2011, EPA, the Army Corps of Engineers, and Department of Interior will implement the Interagency Action Plan to significantly reduce the harmful effects of Appalachian surface coal mining operations. In FY 2011, EPA will review and/or develop policy, analyze proposed CWA

404 and 402 permits related to mining operations, and negotiate resolution to outstanding environmental issues with the Army Corps of Engineers (ACE) and mine operators. FY 2011 EPA will continue cooperation with Federal, state and Tribal governments and other stakeholders toward achieving the national goal of no net loss an overall increase in the acreage and condition of wetlands. The FY 2011 budget request for NEPs and coastal watersheds is \$27.2 million.

The \$63.0 million Chesapeake Bay program FY 2011 budget request will allow EPA to implement the President's Executive Order (E.O.) on Chesapeake Bay Protection and Restoration, to implement the Chesapeake Bay Total Maximum Daily Load (TMDL), to assist program partners in their protection and restoration efforts, to increase the accountability and transparency of the program, to continue responding to oversight reports, and to address other priority initiatives as they arise. The efforts initiated in response to the E.O. will help accelerate implementation of pollution reduction and aquatic habitat restoration efforts and ensure that water quality objectives are achieved as soon as possible.

The Chesapeake Bay TMDL, the nation's largest and most complex TMDL, will necessitate significant scientific and technical support to states and local jurisdictions in developing and implementing the most appropriate programs for meeting their responsibilities under the TMDL allocations. EPA has engaged multiple programs and offices to provide the regulatory, legal, enforcement, and technical support necessary to meet these challenges.

EPA is committed to its ambitious long-term goals of 100 percent attainment of dissolved oxygen standards in waters of the Chesapeake Bay and 185,000 acres of submerged aquatic vegetation (SAV). Along with its Federal and state partners, EPA has stated its intention to establish two-year milestones for all actions needed to restore water quality, habitats, and fish and shellfish.

The hypoxic zone that forms in the summer off the coasts of Louisiana and Texas is primarily caused by excess nutrients, many of which originate in middle American cities, farms and industries. To address this pressing water quality challenge, in FY 2011, EPA will target the Mississippi River Basin (\$12.4 million for grants; \$17 million total) to demonstrate how effective nutrient strategies and enhanced partnerships can yield significant progress in addressing non-point source driven nutrient pollution. This initiative supports the *Gulf Hypoxia Action Plan 2008* (<http://www.epa.gov/msbasin/actionplan.htm>) as well as the regional priorities outlined in the Gulf of Mexico Alliance's Governor's Action Plan II, both of which describe a strategy to reduce, mitigate, and control hypoxia in the Northern Gulf of Mexico and improve water quality in the Mississippi River Basin.

U.S.-Mexico Border Water Infrastructure Program

The U.S.-Mexico Border region hosts a growing population of more than 14.6 million people, posing unique drinking water and wastewater infrastructure shortages. In many areas along the US-Mexico Border, no drinking water or wastewater services exist. In addition, the rapid increase in population and industrialization in the border cities has overwhelmed those areas that have limited wastewater treatment and drinking water supply facilities. Untreated sewage

pollutes urban waters that flow north into the U.S. from Tijuana, Mexicali, and Nogales, into the Rio Grande or into the Pacific Ocean. In FY 2011, EPA sustains its long time commitment to the water and sanitation needs of the Border region by investing \$10 million in water infrastructure projects. The Agency will continue to monitor the program to ensure it is well managed and the Federal investment yields access to safe drinking water and wastewater collection and treatment services for the communities in both countries.

Healthy Communities: Clean, Green, and Healthy Schools

This initiative will create a multidisciplinary Healthy Schools program to support states and communities in promoting healthier school environments, increasing technical support and outreach, and co-leading an interagency effort to better coordinate and integrate existing school programs throughout the Federal government. Under the Healthy Communities and Ecosystems goal, EPA would broaden the implementation of EPA's existing school environmental health programs including asthma, indoor air quality, chemical clean out, green practices (i.e., cleaning products, energy use, lighting, etc.), and enhanced use of Integrated Pest Management. The Agency would also provide technical assistance for state school environmental health programs and for implementing voluntary guidelines for school siting and construction.

Community Action for a Renewed Environment (CARE)

CARE is a competitive grant and technical assistance program that offers an innovative way for under-served and other 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 2011, EPA is requesting new grant authority to continue this program beyond the demonstration phase.

Brownfields

EPA works collaboratively with state, Tribal, and local partners to promote the assessment, cleanup, and sustainable reuse of Brownfields. In FY 2011, an additional investment of \$38 million in Brownfields work will offer new opportunities to serve communities acutely impacted by the economic downturn.

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 support community involvement and area-wide planning associated with the assessment and cleanup of Brownfields sites. Through area-wide planning, communities would identify how Brownfield properties can be redeveloped to meet their needs for jobs, housing, recreation, and health facilities that would make a more viable and sustainable community, as well as identify opportunities to leverage additional public and private investment.

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.

Environmental Justice

EPA is committed to identifying and addressing the health and environmental burdens faced by communities disproportionately impacted by pollution. The Agency is committed to expanding the reach of environmentalism and giving those communities a voice in critical decisions that impact their lives. EPA works to make environmental justice an integral part of every program, policy and activity by:

- Engaging communities in EPA decision-making and enlisting our partners to meet community needs. EPA works to “open its doors” to communities of color, Native Americans, the poor, and other historically underrepresented groups. In addition, EPA actively engages community groups, other Federal agencies, states, local governments, and Tribal governments to recognize, support and advance environmental protection and public health for vulnerable communities.
- Supporting community efforts to build healthy, sustainable and green neighborhoods. EPA works to empower vulnerable communities to protect themselves from environmental harms and to build healthy and sustainable neighborhoods that enable disadvantaged groups to participate in the new green economy. EPA’s efforts to build community capacity include financial and technical assistance.
- Applying EPA’s regulatory tools to protect vulnerable communities. EPA will work to incorporate environmental justice considerations in EPA’s regulatory and policy decisions by building a strong scientific and legal foundation and engaging the public in EPA’s decision-making processes.

International Activities

Emissions from automobiles on the world’s highways contribute to the same urgent environmental problem as the degradation of peat bogs in Indonesia and deforestation in the Amazon – or booming industrial centers in China and India. In this global challenge, every nation’s actions create impacts that extend well beyond our individual borders. By assisting developing countries to improve their environmental governance, 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

To sustain and enhance domestic and international environmental progress, EPA enlists the cooperation of other nations and international organizations to help predict, understand, and address environmental problems of mutual concern. Sound environmental laws, regulations, policies, and their enforcement and implementation form an essential foundation for effective global environmental management. However, only sustainable economic solutions in developed and developing nations will bring real reductions in worldwide levels of GHG’s or other pollutants of concern.

EPA is committed to reducing the concentration and emissions of long-lived climate-warming gases while at the same time finding ways to assist communities, especially those most at risk, to adapt to climate-induced changes, nationally and internationally. EPA recognizes that adaptation cannot be imposed on anyone but rather, must at its core be a community-led consultative process that leads to actions that improve the lives and conditions of affected communities. On climate mitigation EPA is also actively working to identify additional ways to reduce the panoply of short-lived but potent climate pollutants such as black carbon soot, tropospheric ozone and methane, in the interest of trying to mitigate climate warming most immediately on the scale of continents and regions, while continuing to grapple with reducing the long-lived climate-warming gases.

EPA assists in the coordination of its international and domestic environmental policies so 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. .

Consistent with the principles of sustainable development, protecting the environment and public health in the U.S.-Mexico border region 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.

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 is engaging 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. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering. This research is critical for the Agency to meet its priorities for assuring the safety of chemicals, and protecting our communities.

EPA also conducts research through its Science to Achieve Results (STAR) program. The STAR program leverages innovative and cutting-edge research from top scientists in academia through a competitive and peer-reviewed grant process that is integrated with EPA's overall research efforts. In FY 2011, EPA is increasing funding for the STAR program by more than 40 percent.. A significant portion of STAR supports research under Goal 4, including the STAR Fellowships Research program. STAR Fellowships contribute to one of the Administration's top priorities in FY 2011, strengthening science, technology, engineering, and mathematics

education. The Agency proposes \$14.0 million for STAR Fellowships in FY 2011, an increase of more than \$6 million, which will allow EPA to award approximately 240 new fellowships. These fellowships help ensure the Nation has a diverse scientific workforce to meet the challenges of tomorrow. They also represent an investment in EPA's future and our ability to ensure that science remains the backbone of the Agency for years to come.

As designed, most of the long-standing EPA research programs investigate statute-specific environmental research questions, which have allowed the Agency to address many important environmental questions. However, current environmental problems are more complex and require a new approach to maximize the EPA research programs' responsiveness to the rapidly changing needs of internal and external partners. To facilitate this evolution, the Agency is beginning to realign elements of its research programs to further advance the Agency's ability to conduct integrated, multidisciplinary research that translates scientific and technological advances and findings to information that directly informs environmental and public health decisions. This new, more integrated approach will enhance our ability to develop high capacity decision support tools for managing contaminants across their life cycles.

In FY 2011, 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 potential source-exposure-effects-disease continuum and demonstrating reductions in human risk. This orientation 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 exploration of key events in pathways of toxicity that can be used to predict adverse health outcomes, development of models to predict exposures in complex community settings and for susceptible populations, and identification of viable bio-indicators of exposure, susceptibility, and effect that could be applied to evaluate public health impacts at various geospatial and temporal scales. Extramural STAR research complements intramural programs with a strong focus on children's health, safe schools, and epidemiologic approaches designed to link information from exposure and toxicology studies to human health outcomes. The Agency is requesting \$80.1 million in FY 2011 for Human Health research.

In FY 2011, 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 release external review draft ISAs for ozone and lead for public comment and Clean Air Science Advisory Committee review. 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 2011, EPA requests \$49.0 million for the Human Health Risk Assessment program, which includes \$14.4 million and 48 work years to allow the Integrated Risk Information System (IRIS) program to maintain recent increases in 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 \$74.0 million in FY 2011 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.

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 Endocrine Disruptors Screening program (EDSP). In FY 2011, EPA is requesting \$17.4 million for the continued development, evaluation, and application of innovative tools for endocrine disrupting chemicals. This includes a significant increase for the STAR grant program.

In FY 2011, the Computational Toxicology Research program will play a critical role in coordinating and implementing research across the Agency. In addition, greater emphasis will be placed on using systems biology based approaches to advance health-based assessments. In FY 2011, EPA is requesting \$21.9 million, an increase of \$1.9 million, to support application of mathematical and computer models to help assess chemical risk to human health and the environment. Funds for next-generation tools will speed and facilitate implementation of EPA's Endocrine Disruptor Screening Program (EDSP).

In FY 2011, continued pesticides and toxics research will focus on characterizing toxicity and pharmacokinetic profiles of perfluoroalkyl chemicals, developing analytical methods and examining the potential for selected perfluorinated telomers to degrade to perfluorooctanoic acid or its precursors. The program also will conduct research to develop spatially-explicit probabilistic models for ecological assessments. In FY 2011, EPA requests \$27.6 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 2011. This research will examine which processes govern the environmental fate of nanomaterials and what data are available and needed to enable nanomaterial risk assessment. EPA is requesting \$20 million for the Nanomaterials Research program in FY 2011 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 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 2011, EPA requests \$22.0 million for the Global Change Research program to enhance understanding of the effects of global change on the environment.

In FY 2011, 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 threat and consequence assessment. The FY 2011 request level for this area is \$30.7 million.

**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

Compliance and Environmental Stewardship

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

STRATEGIC OBJECTIVES:

- Reduce pollution by implementing an effective enforcement program that promotes compliance and deters violations. Use enforcement tools as part of a coordinated strategy to achieve goals for national priorities and programs.
- 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.
- Integrate Environmental Justice into all aspects of EPA’s programs.
- 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Compliance and Environmental Stewardship	\$760,535.1	\$781,921.5	\$824,145.5	\$42,224.0
Achieve Environmental Protection through Improved Compliance	\$516,127.8	\$531,383.1	\$545,315.4	\$13,932.3
Improve Environmental Performance through Pollution Prevention and Other Stewardship Practices	\$113,990.9	\$111,466.7	\$102,407.9	(\$9,058.8)
Improve Human Health and the Environment in Indian Country	\$81,547.0	\$80,731.9	\$124,477.2	\$43,745.3
Enhance Societies Capacity for	\$48,869.5	\$58,339.8	\$51,945.1	(\$6,394.7)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Sustainability through Science and Research				
Total Authorized Workyears	3,314.1	3,366.6	3,329.2	-37.4

Protecting the public and the environment from risks posed by violations of environmental regulations is central to the Environmental Protection Agency’s mission and a priority for this Administration. EPA ensures that government, business, and the public comply with federal laws and regulations by monitoring compliance and taking enforcement actions that result in reduced pollution and improved environmental conditions

Laws and regulations provide the fundamental building blocks of our environmental protection system and establish a level playing field for companies and citizens alike. Many of America’s historic environmental improvements are attributable to EPA’s strong and aggressive enforcement program. To help the Agency meet its mission, EPA will continue to employ a vigorous civil and criminal enforcement program to protect the public from environmental hazards, with a particular emphasis on the protection of vulnerable communities.

To accelerate the nation’s environmental protection efforts, EPA works to prevent pollution at the source, and promotes the principles of responsible environmental stewardship, sustainability, and innovation. EPA works to improve and encourage pollution prevention as the first choice for environmental protection, striving for sustainable practices and helping businesses and communities move beyond compliance and become partners in protecting natural resources, managing materials more wisely, reducing greenhouse gas emissions, and improving the environment and public health. EPA also works with other nations as they develop their own environmental protection programs, leading to lower levels of pollution in the United States and worldwide.

In 1984, EPA adopted a formal Indian Policy. The Agency affirms that Policy in recognition that the United States has a unique legal relationship with tribal governments based on the Constitution, treaties, statutes, Executive Orders, and court decisions. This relationship includes recognition of the rights of tribes – as sovereign governments – to act with self-determination. Ensuring compliance and promoting environmental stewardship are important components of the Agency’s efforts to protect human health and the environment in Indian Country. Tribes, the first stewards of America’s environment, provide an invaluable perspective on environmental protection that benefits and strengthens the Agency’s stewardship. In FY 2011, EPA is requesting an increase in support to tribal programs to address critical needs in assessing environmental conditions on their lands and building environmental programs tailored to their needs as well as a new multi-media grant to allow them to implement their highest priority programs.

EPA also will strengthen the scientific evidence and research supporting environmental policies and decisions on compliance, pollution prevention, and environmental stewardship.

High Priority Performance Goal

As part of the Administration's emphasis on High Priority Performance Goals, EPA will take actions over the next two years to improve enforcement results. Work under this goal supports one of the Agency's FY 2011 High Priority Performance Goals, specifically:

II. *Clean water is essential for our quality of life and the health of our communities. EPA will take actions over the next two years to improve water quality.*

By the end of fiscal year 2011, increase the percent of federal CWA discharge permit enforcement actions that reduce pollutant discharges into impaired waterways from 20% (FY 2009 baseline) to 25% and promote transparency and right-to-know by posting results and analysis on the web.

Improving Compliance with Environmental Laws

To be effective, EPA requires a strong enforcement and compliance program, one which: identifies and reduces noncompliance problems, 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 2011 budget to improve compliance with environmental laws is \$545.5 million.

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 which apply in various combinations to a universe of approximately 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 the selection of these priorities with programs and regions within EPA, and with states, local agencies, and tribes, in addition to soliciting public comment.

In FY 2011, the Agency proposes to merge the Compliance Assistance and Compliance Incentives activities into the Civil Enforcement program, with a small component of compliance assistance moving into the Compliance Monitoring program. Under the current structure, individual enforcement tools are emphasized. The new model will allow us to focus on outcomes, tailoring our approach to address the unique characteristics and requirements of individual cases. This new model also will allow us to better integrate our efforts with the states, refining our role as state capabilities evolve to best support the national enforcement program. Merging the Compliance Assistance and Incentives programs into the enforcement program allows the Agency to pursue the most effective approach and communicates our commitment to vigorous enforcement, making the threat of Federal enforcement more credible.

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 as well as to determine whether conditions presenting imminent and substantial endangerment exist. FY 2011 Compliance Monitoring activities will be both environmental media- and sector-based. EPA's 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 programs. In FY 2011 the Compliance Monitoring Program will increase to include work previously done under the Compliance Assistance program, primarily training activities. In FY 2011, the Compliance Monitoring program's proposed budget is \$111.7 million.

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 in order to promote compliance with Federal environmental statutes and regulations. The program collaborates with the Department of Justice, states, local agencies, and tribal governments to ensure consistent and fair enforcement of all environmental laws and regulations. The program seeks to protect public health and the environment and ensure a level playing field by strengthening our partnership with our co-implementers in the states, encouraging regulated entities to rapidly correct their own violations, ensuring that violators do not realize an economic benefit from noncompliance, and pursuing vigorous enforcement 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 2011 the Civil Enforcement program will expand to include work previously supported by the Compliance Incentives and Compliance Assistance programs. In FY 2009, EPA achieved commitments to invest more than \$5 billion in future pollution controls and pollution reduction commitments totaling nearly 600 million pounds. Over the last nine years, EPA's long-term environmental results achieved through enforcement settlements in FY 2001-2009 total an estimated 9.8 billion pounds of pollution reduced.

In FY 2011, the Agency will continue to aggressively implement its Civil Enforcement program, including the national compliance and enforcement priorities established for FY 2011-2013. Existing national priorities address problems that remain complex and challenging, including Clean Water Act "Wet Weather" discharges, violations of the Clean Air Act New Source Review/Prevention of Significant Deterioration requirements and Air Toxics regulations, and Resource Conservation and Recovery Act (RCRA) violations at mineral processing facilities. Information on priorities, regulatory requirements, enforcement alerts, and EPA results will be made available to the public and the regulated community through web-based sites. The Civil Enforcement program also will support the Environmental Justice program and the Administrator's priority to address pollution impacting vulnerable populations. The Civil Enforcement program will focus enforcement actions on facilities 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 addition, the Civil Enforcement program will help to implement the President's directive to develop and implement a compliance and enforcement strategy for the Chesapeake Bay; activities will include enhanced

enforcement to ensure existing regulations are complied with consistently and in a timely manner. In FY 2011, the Civil Enforcement program's proposed budget is \$187.1 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 deterrence message for potential violators, enhancing aggregate compliance with laws and regulations and protecting our communities.

In FY 2011, 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 cases across all pollution statutes. By the end of FY 2010, the program will have completed its three-year hiring strategy, raising the number of special agents to 200. With these resources, the program will expand its capacity in supporting efforts to address complex environmental cases in FY 2011. The Criminal Enforcement program's proposed budget is \$59.5 million.

EPA fulfills its uniquely Federal responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act by reviewing and commenting on other Federal agency Environmental Impact Statements (EISs), and making the comments available to the public. NEPA requires that Federal agencies prepare and submit EISs to identify potential environmental consequences of major proposed activities, and develop plans to mitigate or eliminate adverse impacts. EPA will continue to work with other Federal agencies to streamline and to improve their NEPA processes. Work will focus on a number of key areas such as review and comment on mining, on-shore and off-shore liquid natural gas facilities, coal bed methane development and other energy-related projects. EPA will also be conducting work as part of the Appalachian Coal Mining Interagency Action Plan. In FY 2011, the NEPA program's proposed budget is \$18.5 million.

Improving Environmental Performance through Pollution Prevention, Stewardship and Innovation

In FY 2011, EPA is reorienting its innovation programs to accomplish a new Administration priority—environmental stewardship strategies that promote a green, revitalized, sustainable economy. This will build from work done in previous years, and actively engage all parts of society (business, communities, government and individuals) in actions to promote actions that improve environmental quality and achieve sustainable results. EPA will draw on its innovation and cross media experience to provide strategic focus analysis and coordination across the Agency, with States and with other Federal agencies.

In FY 2011, with a request of \$15.4 million, EPA's Pollution Prevention (P2) program will provide technical assistance, information and supporting assessments to encourage the use of greener chemicals, technologies, processes, and products through eight principal programs: Environmentally Preferable Purchasing, Design for the Environment, Green Suppliers Network,

Regional Grants, Pollution Prevention Resource Exchange, Partnership for Sustainable Healthcare, Green Chemistry and Green Engineering. In addition, EPA's P2 program will continue to support the new Economy, Energy and Environment (E3) partnership among federal agencies, local governments and manufacturers to promote energy efficiency, job creation and environmental improvement. Through these efforts, EPA will encourage government and business to adopt source reduction practices that can help to prevent pollution and avoid resulting health and environmental impacts. P2 grants to states and tribes enable them to provide technical assistance, education, and outreach to assist businesses.

In FY 2011, through the Environmentally Preferable Purchasing Program (EPP), the Agency will be a leader in implementing the Federal Electronics Challenge, a partnership that encourages federal agencies to purchase and properly utilize cleaner and safer electronic products. In addition, EPA's Green Suppliers Network Program will continue to work with large manufacturers to engage their small and medium-sized suppliers in low-cost technical reviews that focus on process improvements and waste reduction. Through the Design for the Environment (DfE) and Green Chemistry programs, EPA will remain active in promoting and recognizing the use of greener chemicals, synthetic pathways, and formulations. The DfE Program helped companies reduce the use of more than 460 million pounds of hazardous materials in 2008 alone.

In FY 2011, through the National Partnership for Environmental Priorities (NPEP), the Agency will continue to reduce priority chemicals in wastes. As of August 2009, the NPEP program has obtained industry commitments for over eight million pounds of additional chemical reductions through 2014. Reductions will be achieved by recycling and/or source reduction made possible by safer chemical substitutes.

In FY 2011, EPA will focus its regulatory innovation work to accomplish a new Administration priority to promote greener, revitalized, sustainable communities and regional and national communities. This approach will help the Agency meet its core mission goals more efficiently by providing more tools and resources to communities and by creating stronger, more resilient communities. This area of work recognizes the importance of coordinating and integrating Agency strategies and address emerging cross-cutting issues to support greener national and local economies.

Promoting a Greener Economy

During FY 2011, EPA will realign and build upon its prior innovation and cross-media experience with a strategic focus on efforts that help to advance the goal of a greener economy. EPA also is analyzing and promoting new strategies for: energy and natural resource use, materials management, increased sustainability in goods and services, and financial transparency on environmental issues. These new efforts are designed to maximize the longer-term benefits of near-term investments in a cleaner, healthier environment and economy.

Program Evaluation

EPA uses program evaluation and performance analysis to support evidence-based decisions about which programs protect human health and the environment in the most efficient and the most cost-effective ways. This is particularly important in an era of fiscal responsibility that calls for greater Federal accountability and public transparency of our programs. EPA acknowledges that rigorous, independent empirical evidence plays an important role in effective environmental policy and EPA is committed to publicly disseminating complete evaluation findings. In FY 2011, EPA will build evaluation capacity, support a performance management training regimen (online and classroom) which enables EPA staff and managers to use essential tools such as logic modeling and performance measurement, and also support outcomes and impact measurement projects in collaboration with states and other co-regulators. EPA will make available to the public data that enable external evaluators to assess programs.

Improve Human Health and the Environment in Indian Country

The Administrator's priority on strong partnerships recognizes that Tribes bear important responsibilities for the day-to-day mission of environmental protection. To help address this challenge, in FY 2011, EPA is increasing its support of General Assistance Program (GAP) grants, as well as introducing a new focused multi-media Tribal grant to support implementation efforts.

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 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 2011, EPA will provide \$71.4 million in GAP grants (an increase of \$8.5 million) 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.

Additionally, the Agency is requesting a new focused \$30 million grant program to support the multi-media Tribal implementation program. These grants are tailored to address an individual tribe's most serious environmental needs through the implementation of Federal environmental programs, and will build upon the environmental capacity developed under the GAP. This new grant will advance negotiated environmental plans, measures and results as agreed upon by tribes and EPA, ensuring that tribal environmental priorities are addressed to the fullest extent possible.

Enhancing Capacity for Sustainability through Science and Research

The Agency proposes \$51.4 million in FY 2011 to enhance capacity for sustainability through science and research. With the Administrator's focus on a strong scientific foundation, the research tools and technologies to monitor, prevent, control, and clean up pollution are critical building blocks in our decision-making. EPA's Science and Technology for Sustainability (STS) research program, in accordance with the Agency's policy of scientific integrity,¹⁰ 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.

The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

In FY 2011, EPA will initiate a new research effort in design methods and management strategies for electronic devices to mitigate human exposure and environmental releases from the recycling and disposal of electronic waste. In addition, EPA will sustain the 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. The STS research program also 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.

¹⁰ 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
2011 Annual Performance Plan and Congressional Justification**

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**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

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

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology				
Budget Authority	\$797,065.1	\$846,049.0	\$846,697.0	\$648.0
Total Workyears	2,444.3	2,442.5	2,469.0	26.5

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, [\$846,049,000]\$846,697,000, to remain available until September 30, [2011]2012.(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010.)

**Program Projects in S&T
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Air Toxics and Quality				
Clean Air Allowance Trading Programs	\$9,918.4	\$9,963.0	\$9,979.0	\$16.0
Federal Support for Air Quality Management	\$11,395.0	\$11,443.0	\$7,697.0	(\$3,746.0)
Federal Support for Air Toxics Program	\$2,052.4	\$2,398.0	\$0.0	(\$2,398.0)
Federal Vehicle and Fuels Standards and Certification	\$76,035.5	\$91,782.0	\$100,761.0	\$8,979.0
Radiation: Protection	\$2,484.4	\$2,095.0	\$2,127.0	\$32.0
Radiation: Response Preparedness	\$3,497.5	\$4,176.0	\$4,263.0	\$87.0
Subtotal, Air Toxics and Quality	\$105,383.2	\$121,857.0	\$124,827.0	\$2,970.0
Climate Protection Program				
Climate Protection Program				
Energy STAR	\$0.0	\$1,000.0	\$0.0	(\$1,000.0)
Climate Protection Program (other	\$15,880.0	\$18,797.0	\$16,940.0	(\$1,857.0)

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
activities)				
Subtotal, Climate Protection Program	\$15,880.0	\$19,797.0	\$16,940.0	(\$2,857.0)
Subtotal, Climate Protection Program	\$15,880.0	\$19,797.0	\$16,940.0	(\$2,857.0)
Enforcement				
Forensics Support	\$14,450.6	\$15,351.0	\$15,909.0	\$558.0
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
Water Sentinel	\$16,798.2	\$18,576.0	\$11,643.0	(\$6,933.0)
Homeland Security: Critical Infrastructure Protection (other activities)	\$7,163.5	\$4,450.0	\$4,462.0	\$12.0
Subtotal, Homeland Security: Critical Infrastructure Protection	\$23,961.7	\$23,026.0	\$16,105.0	(\$6,921.0)
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	\$24,064.7	\$24,857.0	\$21,703.0	(\$3,154.0)
Laboratory Preparedness and Response	\$648.8	\$499.0	\$0.0	(\$499.0)
Safe Building	\$2,181.0	\$1,996.0	\$0.0	(\$1,996.0)
Homeland Security: Preparedness, Response, and Recovery (other activities)	\$14,877.3	\$14,305.0	\$12,895.0	(\$1,410.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	\$41,771.8	\$41,657.0	\$34,598.0	(\$7,059.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	\$587.0	\$593.0	\$594.0	\$1.0
Subtotal, Homeland Security	\$66,320.5	\$65,276.0	\$51,297.0	(\$13,979.0)
Indoor Air				
Indoor Air: Radon Program	\$371.0	\$453.0	\$461.0	\$8.0
Reduce Risks from Indoor Air	\$706.5	\$762.0	\$768.0	\$6.0
Subtotal, Indoor Air	\$1,077.5	\$1,215.0	\$1,229.0	\$14.0
IT / Data Management / Security				
IT / Data Management	\$3,852.1	\$4,385.0	\$4,111.0	(\$274.0)
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	\$36,892.0	\$33,947.0	\$30,950.0	(\$2,997.0)
Utilities	\$15,710.5	\$19,177.0	\$19,893.0	\$716.0

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Security	\$8,812.7	\$10,260.0	\$10,349.0	\$89.0
Facilities Infrastructure and Operations (other activities)	\$12,104.4	\$9,534.0	\$9,303.0	(\$231.0)
Subtotal, Facilities Infrastructure and Operations	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Subtotal, Operations and Administration	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide Risk	\$3,159.3	\$3,750.0	\$3,806.0	\$56.0
Pesticides: Protect the Environment from Pesticide Risk	\$2,121.9	\$2,279.0	\$2,312.0	\$33.0
Pesticides: Realize the Value of Pesticide Availability	\$442.8	\$537.0	\$546.0	\$9.0
Subtotal, Pesticides Licensing	\$5,724.0	\$6,566.0	\$6,664.0	\$98.0
Research: Clean Air				
Research: Clean Air	\$90,271.0	\$81,917.0	\$85,322.0	\$3,405.0
Research: Global Change	\$17,264.1	\$20,826.0	\$21,985.0	\$1,159.0
Subtotal, Research: Clean Air	\$107,535.1	\$102,743.0	\$107,307.0	\$4,564.0
Research: Clean Water				
Research: Drinking Water	\$43,762.7	\$49,155.0	\$52,258.0	\$3,103.0
Research: Water Quality	\$64,926.0	\$61,918.0	\$68,858.0	\$6,940.0
Subtotal, Research: Clean Water	\$108,688.7	\$111,073.0	\$121,116.0	\$10,043.0
Research / Congressional Priorities				
Congressionally Mandated Projects	\$5,282.0	\$5,700.0	\$0.0	(\$5,700.0)
Research: Human Health and Ecosystems				
Human Health Risk Assessment	\$41,478.1	\$44,789.0	\$45,626.0	\$837.0
Research: Computational Toxicology	\$13,710.1	\$20,048.0	\$21,855.0	\$1,807.0
Research: Endocrine Disruptor	\$9,948.7	\$11,355.0	\$17,378.0	\$6,023.0
Research: Fellowships	\$5,760.7	\$11,083.0	\$17,286.0	\$6,203.0
Research: Human Health and Ecosystems				
Human Health	\$76,613.3	\$83,904.0	\$80,122.0	(\$3,782.0)
Ecosystems	\$79,116.9	\$75,607.0	\$73,971.0	(\$1,636.0)
Research: Human Health and Ecosystems (other activities)	\$21.8	\$0.0	\$0.0	\$0.0
Subtotal, Research: Human Health and Ecosystems	\$155,752.0	\$159,511.0	\$154,093.0	(\$5,418.0)

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Subtotal, Research: Human Health and Ecosystems	\$226,649.6	\$246,786.0	\$256,238.0	\$9,452.0
Research: Land Protection				
Research: Land Protection and Restoration	\$11,696.8	\$14,111.0	\$13,800.0	(\$311.0)
Research: Sustainability				
Research: Sustainability	\$19,445.7	\$27,287.0	\$25,292.0	(\$1,995.0)
Toxic Research and Prevention				
Research: Pesticides and Toxics	\$28,200.0	\$27,347.0	\$27,645.0	\$298.0
Water: Human Health Protection				
Drinking Water Programs	\$3,359.7	\$3,637.0	\$3,827.0	\$190.0
Subtotal, Drinking Water Programs	\$3,359.7	\$3,637.0	\$3,827.0	\$190.0
TOTAL, EPA	\$797,065.1	\$846,049.0	\$846,697.0	\$648.0

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$20,336.2	\$20,791.0	\$21,178.0	\$387.0
Science & Technology	\$9,918.4	\$9,963.0	\$9,979.0	\$16.0
Total Budget Authority / Obligations	\$30,254.6	\$30,754.0	\$31,157.0	\$403.0
Total Workyears	86.5	88.6	88.6	0.0

Program Project Description:

This program provides regulatory and modeling support for Clean Air Allowance Trading programs. The Clean Air Interstate Rule (CAIR) is a major 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}. In accordance with the U.S. Court of Appeals for the District of Columbia Circuit Court's *State of North Carolina vs. the Environmental Protection Agency* decision in December 2008, the Clean Air Interstate Rule (CAIR), promulgated by EPA in May 2005, will "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 The Court remanded CAIR to EPA for further rulemaking consistent with the opinion and, concurrently, told EPA and the affected states to proceed with full and timely implementation of the original rule provisions to cut Sulfur Dioxide (SO₂) and Nitrogen Oxide (NO_x) emissions. 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}), which is pollution that drifts into a state from sources in upwind states. CAIR is projected to achieve large reductions of SO₂ and/or NO_x emissions across 28 eastern states and the District of Columbia.

All the affected states are expected to achieve the mandated reductions primarily by controlling power plant emissions through an EPA-administered interstate cap-and-trade program. Under CAIR, Phase 1, annual SO₂ and NO_x emissions are capped and there is an additional seasonal NO_x cap for states with sources that contribute significantly to transported ozone pollution. The CAIR annual and ozone-season NO_x control programs began on schedule on January 1 and May 1, 2009, respectively. Sources and states, affected under the CAIR SO₂ control program, are monitoring and reporting emissions to EPA. Compliance with the CAIR SO₂ control provisions began January 1, 2010. For additional information on CAIR, please visit <http://www.epa.gov/oar/cair>.

EPA is responsible for managing the Clean Air Status and Trends Network (CASTNET), a long-term atmospheric deposition monitoring network, established in 1987, that serves as the nation's

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

primary source for atmospheric data on the dry deposition component of acid deposition, rural ground-level ozone, and other forms of particulate and gaseous air pollution. 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 and Regional emission control programs through monitoring geographic patterns and temporal trends in ambient air quality and atmospheric deposition in non-urban 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 2011 Activities and Performance Plan:

In FY 2011, EPA will:

- Finalize a CAIR replacement rule consistent with the Court's opinion: Conduct legal, technical, and economic analyses to support the replacement rule. Review and evaluate public comment to the rule proposal. Continue assessing regulatory impacts on the U.S. economy, environment, small businesses, and local communities.
- Continue implementation and operation of the CAIR NO_x and SO₂ control programs: Consistent with the decision made by the U.S. Court of Appeals for the District of Columbia Circuit in December 2008, EPA will continue timely and full implementation of these programs so as to "preserve the environmental values covered by CAIR" during the CAIR replacement rulemaking period.
- Continue to assist states with CAIR implementation: Provide technical assistance to states in implementing state plans and rules for CAIR NO_x and SO₂ control 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 three Regional interstate allowance trading programs and perform annual and end-of-season analyses of emissions vs. allowances held.
- Continue operating infrastructure for CAIR: Effective and efficient operation of CAIR depends critically upon ongoing maintenance and continuous improvement of the e-GOV infrastructure supporting the 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 flexible approaches, such as cap-and-trade programs, and emissions averaging where they potentially could be more cost-effective than application of source-specific emission standards.

In FY 2011, 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 2011, the program will continue to manage CASTNET. The FY 2011 request level for CASTNET is \$3.95 million. For additional information on CASTNET, please visit <http://www.epa.gov/CASTNET/>. In addition, the program will continue managing the TIME and LTM programs for monitoring surface water chemistry and aquatic ecosystem response in sensitive areas of the U.S. This program was transferred from the Research and Development program to the Air and Radiation program under the FY 2010 President's Budget. The FY 2011 request level for TIME/LTM is \$0.72 million.

Reducing emissions of SO₂ and NO_x 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 SO₂ and NO_x can be chemically transformed into sulfate and nitrates that are very tiny particles which, when inhaled, can cause serious respiratory problems and may lead to premature mortality. Sulfates and nitrates can be carried, by winds, hundreds of miles from the emitting source. These same small particles are also a main pollutant that impairs visibility across large areas of the country, particularly damaging in national parks known for their scenic views. Nitrogen dioxide emissions also contribute substantially to the formation of ground-level ozone. Ozone, when inhaled in sufficient concentrations, can cause serious respiratory problems.

Performance Targets:

EPA tracks the change in nitrogen deposition and sulfur deposition to assess the effectiveness of the Acid Rain program with performance targets set for every three years. Performance measures associated with this program are included in the Clean Air Allowance Trading Program Project under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$16.0) This reflects an increase in contracts funding to support the finalization of the CAIR replacement rule.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$93,700.7	\$99,619.0	\$134,634.0	\$35,015.0
<i>Science & Technology</i>	<i>\$11,395.0</i>	<i>\$11,443.0</i>	<i>\$7,697.0</i>	<i>(\$3,746.0)</i>
Total Budget Authority / Obligations	\$105,095.7	\$111,062.0	\$142,331.0	\$31,269.0
Total Workyears	695.8	714.7	860.5	145.8

Program Project Description:

Federal support for the criteria pollutant and air toxics programs includes a variety of tools to help characterize ambient air quality and the level of risk to the public from toxics in the air and to help measure national progress toward improving air quality and reducing air toxics risk. The program supports development of State Implementation Plans (SIPs) through modeling and other tools. EPA works with states and local governments to ensure the technical integrity of the SIPs and transportation conformity determinations and to help state and local governments identify the most cost-effective control options available. The program also develops and provides 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. Finally, the program includes activities related to the stationary source residual risk program, which involves an assessment of source categories subject to Maximum Achievable Control Technology (MACT) standards to determine if more stringent standards are needed to further reduce the risks to public health (taking into account developments in practices, processes, and control technologies).

Programs supporting mobile source air toxics reductions programs have been consolidated in the Federal Vehicle and Fuels Standards and Certification program.

FY 2011 Activities and Performance Plan:

As part of implementing the 8-hour ozone and fine particulate matter (PM_{2.5}) standards, EPA will continue providing state and local governments with substantial assistance in developing SIPs and implementing the conformity rule during FY 2011. EPA will ensure national consistency in how conformity determinations are conducted across the U.S. and the Agency will work with state and local 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. EPA also will assist areas in identifying the most cost-effective control options available and provide guidance, as needed, for areas that implement conformity.

In FY 2011, 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.

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. The air quality grants and permitting program will be improved by working to update the current grant allocation processes to ensure resources are properly targeted and by developing program efficiency measures.

In FY 2011, EPA will work with partners to develop improved emission factors and inventories, including a better automated, higher quality National Emissions Inventory (NEI). This effort will include gathering improved activity databases and using geographic information systems and satellite remote sensing, where possible, for key point, area, mobile, and fugitive source categories and global emission events. EPA also is working on improving monitoring systems to fill data gaps and to get a better assessment of actual population exposure to toxic air pollution.

Performance Targets:

EPA, collaborating with the states, will implement Federal measures, assist with the development of clean air plans, and develop air toxics tools to continue improving air quality (as measured by the air quality index and other measures) and to continue reducing air toxics risk.

Performance measures associated with this program project are included in the Federal Support for Air Quality Management Program Project under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$93.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$4,750.0 / -28.2 FTE) This represents the outgoing transfer of mobile source resources, including 28.2 FTE with associated payroll of \$4,097.0 and associated travel of \$62.0, to the Federal Vehicle and Fuels Standards and Certification program in support of a sector-based multi-pollutant approach to air quality management.
- (+\$914.0) This represents the incoming transfer of stationary source resources from the Federal Support for Air Toxics program. The Federal Support for Air Toxics Program has been consolidated with this program in support of a sector-based multi-pollutant approach to air quality management.
- (-\$3.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

CAA (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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$24,168.0	\$24,446.0	\$0.0	(\$24,446.0)
<i>Science & Technology</i>	<i>\$2,052.4</i>	<i>\$2,398.0</i>	<i>\$0.0</i>	<i>(\$2,398.0)</i>
Total Budget Authority / Obligations	\$26,220.4	\$26,844.0	\$0.0	(\$26,844.0)
Total Workyears	136.1	145.8	0.0	-145.8

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 help measure the Agency’s progress in reducing this risk. The program develops and provides 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. The program also includes activities related to the stationary source residual risk program.

FY 2011 Activities and Performance Plan:

All activities in this program will be assumed by the Federal Support for Air Quality Management Program and the Federal Vehicle and Fuels Standards and Certification Program to support the switch to a sector-based multi-pollutant approach to air quality management.

Performance Targets:

There are no FY 2011 performance targets associated with this Program Project because the resources have been transferred to the Federal Support for Air Quality Management Program and the Federal Vehicle and Fuels Standards and Certification Program.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$968.0) This represents a transfer of funding and program responsibilities for the stationary source program to the Federal Support for Air Quality Management Program in support of a sector-based multi-pollutant approach to air quality management.
- (-\$1,430.0/ -5.4 FTE) This represents a transfer of funding and program responsibilities for the mobile source program, including 5.4 FTE with associated payroll of \$776.0, to the Federal Vehicle and Fuels Standards and Certification in support of a sector-based multi-pollutant approach to air quality management.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	<i>\$76,035.5</i>	<i>\$91,782.0</i>	<i>\$100,761.0</i>	<i>\$8,979.0</i>
Total Budget Authority / Obligations	\$76,035.5	\$91,782.0	\$100,761.0	\$8,979.0
Total Workyears	306.0	306.2	349.8	43.6

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.

As part of its move to a sector-based multi-pollutant approach to air quality management, EPA has consolidated all mobile source work into the Federal Vehicle and Fuels Standards and Certification Program. 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.

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. EPA also develops and provides 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.

FY 2011 Activities and Performance Plan:

EPA will continue to achieve results in reducing pollution from mobile sources, especially NOx emissions associated with rulemakings finalized as part of the Agency's National Clean Diesel Campaign. 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. Under the recently finalized Locomotive and Marine Engines Rule, new fuel and engine requirements will reduce PM by 90 percent and NOx by 80 percent for newly-built locomotives and marine diesel engines. Combined, these measures will prevent over 26,000 premature deaths each year, reduce millions of tons of pollution a year, and prevent hundreds of thousands of respiratory illnesses.

Additional emission reductions from light-duty vehicles will be a key strategy in helping areas attain the ozone, PM, and nitrogen dioxide (NO₂) National Ambient Air Quality Standards (NAAQS) and in reducing exposure to toxics for the millions of people living, working, or going to school near major roads. In FY 2011, EPA will work on new light-duty vehicle control strategies (Tier 3), which could include tighter NOx standards, off-cycle standards, and PM standards for gasoline vehicles. The Tier 3 program also will include lower-sulfur gasoline that will enable tighter emission standards by allowing more efficient aftertreatment. Gasoline sulfur control also will provide immediate benefits for the in-use fleet and greenhouse gas (GHG) emission reduction co-benefits. The program will address any needs for mitigation of adverse air quality impacts that might develop from the increased use of renewable fuels (e.g., increase in NOx due to increases in ethanol use).

In FY 2011, EPA requests additional resources to further address GHG emissions from mobile sources as part of the Agency's efforts to meet the Climate and Clean Energy Challenge and to respond to pending legal obligations. Additional resources are requested to develop and issue GHG standards for heavy-duty vehicles as part of the Agency's response to the Supreme Court's *Massachusetts v. EPA* decision concerning GHG emissions of motor vehicles, which include heavy-duty vehicles. EPA is also requesting additional resources to support the promulgation of light-duty vehicle standards, and to assess and potentially develop GHG standards for other transportation categories in response to rulemaking petitions submitted in the past several years. EPA will participate in the appropriate international forums for ocean-going vessels (International Maritime Organization) and aircraft (International Civil Aviation Organization) in order to coordinate and advance GHG emission controls from these sources.

In the fuels arena, EPA will begin implementation of the new Renewable Fuel Standards (RFS2) and 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. EISA also required EPA to develop a comprehensive lifecycle GHG methodology to implement the Act's GHG threshold requirements. In FY 2011, EPA will continue a multi-year testing program 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 support of the new RFS2 standards, in FY 2011 EPA is upgrading 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 2011, the Agency also will continue to implement its real-time reporting system to ensure compliance with 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.

EPA's NVFEL will continue to conduct testing operations on motor vehicles, heavy-duty engines, non-road engines, and fuels to certify that all vehicles, engines, and fuels that enter the U.S. market comply with all Federal clean air and fuel economy standards. The NVFEL 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 2011, EPA will continue to conduct testing activities for fuel economy, Tier II testing, reformulated gasoline, future fleets, alternative fuel vehicle conversion certifications, Onboard Diagnostics (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 2011, 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 2011. 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 Corporate Average Fuel Economy (CAFÉ) and gas guzzler fuel economy testing and for providing the fuel economy data to the Department of Transportation, the Department of Energy, and the Internal Revenue Service. In FY 2011, EPA expects to expend significant resources on ensuring compliance with certification as well as in-use requirements for foreign-built engines and equipment.

A rule establishing onboard diagnostics (OBD) requirements for nonroad engines will be developed in 2011. 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. OBD standards are needed to ensure that engines are properly maintained and compliant, ensuring that the full benefits of the emission standards are realized in-use. In addition, EPA will begin implementation of an in-use compliance testing program for non-road 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 rulemaking to address off-cycle emissions from heavy-duty trucks through the application of a supplemental test procedure; 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 non-road 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 2011 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 conduct 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 and 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. The CAA requires regular updates of the emission models to account for technology changes and new emission data. Assessing mobile source emissions requires sustained and ongoing emission research resources. In FY 2011 EPA will continue improving MOVES by implementing emission testing programs to collect the necessary information from new technologies, incorporating new emission data into the model, and expanding the application of the model to include additional nonroad sources and toxic emissions.

Through the World Summit on Sustainable Development (WSSD) "Partnership for Clean Fuels and Vehicles" (PCFV) with developing countries, EPA will continue addressing the impact to human health and the environment from motor vehicles in developing countries. EPA will focus its efforts on two priorities: reducing sulfur levels in diesel and gasoline, and 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. In addition, the combination of low sulfur diesel and diesel particulate filters can significantly reduce black carbon, which is growing in importance because of its negative impact on climate change. The PCFV, based on past efforts supported by EPA, has been very successful in achieving the elimination of lead in gasoline in many areas of the world, including sub-Saharan Africa. The emphasis of the PCFV is now on lower sulfur levels in fuel and clean vehicle technologies.

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 2011, 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 2011, 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/>.

In FY 2011, 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 National Ambient Air Quality Standards 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.

Work under this program project supports the Agency's new High Priority Performance Goal (HPPG), addressing measuring and controlling Greenhouse Gases (specified in full in Appendix A).

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Limit the increase of CO emissions (in tons) from mobile sources compared to a 2000 baseline.	1.52 M	Data Avail 2010	1.69 M	1.86 M	Tons

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Millions of Tons of Volatile Organic Compounds (VOCs) Reduced since 2000 from Mobile Sources	1.54 M	Data Avail 2010	1.71 M	1.88 M	Tons

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Millions of Tons of Nitrogen Oxides (NOx) Reduced since 2000 Reduced from Mobile Sources	3.05 M	Data Avail 2010	3.39 M	3.73 M	Tons

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Tons of PM-10 Reduced since 2000 from Mobile Sources	111,890	Data Avail 2010	124,322	136,755	Tons

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Tons of PM-2.5 Reduced since 2000 from Mobile Sources	110,190	Data Avail 2010	122,434	134,677	Tons

Other recent rulemakings finalized by the Agency include the control of air toxics from mobile sources (the Mobile Source Air Toxics Rule in 2007), significantly reducing hydrocarbon air toxics while delivering PM co-benefits, and the establishment of first-ever evaporative emission standards for small spark ignition and recreational marine engines (the Small SI/Recreational Marine Engine Rule in 2008). All together, EPA estimates that six recent rulemakings, including the 2007 Heavy Duty, Nonroad Diesel Tier 4, and Light Duty Tier 2 rules, will yield approximately \$200 billion in combined benefits annually by 2030.

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

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$790.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$4,000.0) This reflects a decrease in funding for modifications and enhancements to the National Vehicle and Fuel Emissions Laboratory, which were funded at \$10.3 million in FY 2010. EPA will evaluate to what extent additional modifications to the laboratory are needed.
- (+\$2,050.0/ +6.0 FTE) This reflects additional resources to support the promulgation of GHG standards for passenger cars, light-duty trucks, and medium-duty passenger vehicles, including 6.0 FTE with associated payroll of \$797.0. These resources will also advance the President's policy to reduce greenhouse gas (GHG) emissions and improve fuel economy for all new cars and trucks sold in the United States.
- (-\$138.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+3,996.0 / +4.0 FTE) This reflects an increase to support additional needs for heavy-duty vehicle and engine GHG emission standards and for initial analysis and technology assessment efforts needed to support potential development of GHG emission standards for other mobile source categories, including 4.0 FTE with associated payroll of \$531.0. This analysis and technology assessment work will include inventory modeling, compliance modeling, cost estimation, and air quality benefits analysis.
- (+\$6,181.0 / +33.6 FTE) This reflects an incoming transfer of mobile source resources and FTE which had been distributed across multiple programs to the Federal Vehicle and Fuels Standards and Certification program, including 33.6 FTE with associated payroll of \$4,873.0. This consolidation supports the goals, objectives, and performances measures of the overall mobile source program.
- (+\$100.0) This increase is associated with increased programmatic laboratory fixed costs.

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; 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$9,962.0	\$11,295.0	\$11,439.0	\$144.0
<i>Science & Technology</i>	<i>\$2,484.4</i>	<i>\$2,095.0</i>	<i>\$2,127.0</i>	<i>\$32.0</i>
Hazardous Substance Superfund	\$2,299.2	\$2,495.0	\$2,593.0	\$98.0
Total Budget Authority / Obligations	\$14,745.6	\$15,885.0	\$16,159.0	\$274.0
Total Workyears	85.8	88.6	88.6	0.0

Program Project Description:

This program supports the ongoing radiation protection capability at 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. These nationally-recognized 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 cleanups, using the best available science to develop risk assessment tools. The labs also develop guidance, in collaboration with the public, industry, states, tribes, and other governments, for cleaning up sites that are contaminated with radioactive materials.

FY 2011 Activities and Performance Plan:

In FY 2011, 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. Some of these sites are located near at-risk communities, emphasizing the Administration's commitment to protecting vulnerable communities.

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. They also provide technical services, guidance, and standardized procedures.

Performance Targets:

EPA 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 that provide a benchmark to assist in the development of the outyear targets.

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.

Performance measures associated with this program project are included in Radiation Response Preparedness Programs under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$33.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$2.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and teleconferencing.
- (+\$1.0) This is an increase for contracts to support the radiation lab work.

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), 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$2,672.6	\$3,077.0	\$3,088.0	\$11.0
<i>Science & Technology</i>	<i>\$3,497.5</i>	<i>\$4,176.0</i>	<i>\$4,263.0</i>	<i>\$87.0</i>
Total Budget Authority / Obligations	\$6,170.1	\$7,253.0	\$7,351.0	\$98.0
Total Workyears	40.2	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, are nationally recognized radiological laboratories that 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 personnel are members of EPA’s Radiological Emergency Response Team (RERT) and are trained to provide direct expert scientific and technical assistance in the field.

FY 2011 Activities and Performance Plan:

In FY 2011, 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.²

Also in FY 2011, both 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 laboratories 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.

² Additional information can be accessed at: <http://www.epa.gov/radiation/rert/>

EPA 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 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. Performance measures associated with this program project are included in Radiation Response Preparedness Programs under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$76.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$5.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$16.0) 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$97,184.7	\$113,044.0	\$123,050.0	\$10,006.0
<i>Science & Technology</i>	<i>\$15,880.0</i>	<i>\$19,797.0</i>	<i>\$16,940.0</i>	<i>(\$2,857.0)</i>
Total Budget Authority / Obligations	\$113,064.7	\$132,841.0	\$139,990.0	\$7,149.0
Total Workyears	223.9	226.0	259.0	33.0

Program Project Description:

EPA manages the Clean Automotive Technology (CAT) and the Fuel Cell and Hydrogen programs, which develop advanced clean and fuel-efficient vehicle 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 (GHG) technologies into the transportation sector of the economy and support the Administration’s priority of taking action on climate change. (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 five 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 FY2011 goal is to uphold technology transfer commitments for hydraulic hybrid delivery truck commercialization through evaluation, troubleshooting and support of pre-production trucks being tested in real-world service, and determine the most efficient and durable large scale pilot-production configuration

FY 2011 Activities and Performance Plan:

In FY 2011, 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.
- Continue work on 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 HCCI engine which gets diesel efficiency from gasoline fuel without the need for costly diesel aftertreatment. The partnership also will begin its initial work on ways to demonstrate the use of clean low greenhouse gas renewable fuel with hydraulic hybrid vehicles.

Performance Targets:

EPA is working through its technology transfer demonstration projects with industry to develop performance data that 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 2010. The Agency will use the data to develop performance measures for the Clean Automotive Technologies program.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$1,976.0) This reduction reflects a phase down of the Federal cost-share for California technology demonstration partnerships (with South Coast Air Quality Management District, California Air Resources Board, and California Energy Commission).
- (-\$1,000.0) Funding will be discontinued in this appropriation for the ENERGY STAR program since ENERGY STAR work under the Science and Technology appropriation will be completed in FY 2010. Funding for ENERGY STAR is continued in the Environmental Programs and Management appropriation.
- (+\$119.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	<i>\$14,450.6</i>	<i>\$15,351.0</i>	<i>\$15,909.0</i>	<i>\$558.0</i>
Hazardous Substance Superfund	\$2,695.9	\$2,450.0	\$2,501.0	\$51.0
Total Budget Authority / Obligations	\$17,146.5	\$17,801.0	\$18,410.0	\$609.0
Total Workyears	97.6	105.2	105.2	0.0

Program Project Description:

The Forensics Support program provides specialized scientific and technical support for the nation's most complex civil and criminal enforcement cases as well as technical expertise for Agency compliance efforts. This work is critical to establishing non-compliance and building viable enforcement cases. 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.³

FY 2011 Activities and Performance Plan:

Efforts to stay at the forefront of environmental enforcement in FY 2011 include focused refinement of single and multi-media compliance monitoring investigation approaches, 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. Consistent with these activities and working with appropriate organizations across the Agency, NEIC also will play a role in evaluating the scientific basis and/or technical enforceability of select EPA regulations. Additionally, NEIC will apply its technical resources in support of the Agency's national enforcement priorities.

³ For more information, refer to: <http://www.epa.gov/compliance/neic/index.html>.

In FY 2011, NEIC will continue to function under rigorous 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$536.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$92.0) This change reflects an increase in support costs for the forensics laboratory at the NEIC.
- (-\$70.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$6,837.2	\$6,836.0	\$2,415.0	(\$4,421.0)
<i>Science & Technology</i>	<i>\$23,961.7</i>	<i>\$23,026.0</i>	<i>\$16,105.0</i>	<i>(\$6,921.0)</i>
Hazardous Substance Superfund	\$1,767.0	\$1,760.0	\$0.0	(\$1,760.0)
Total Budget Authority / Obligations	\$32,565.9	\$31,622.0	\$18,520.0	(\$13,102.0)
Total Workyears	47.8	49.0	28.0	-21.0

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 2011 Activities and Performance Plan:

In FY 2011, EPA will move to the next phase of the Water Security Initiative (WSI) pilot program, focusing on support and evaluation activities. EPA also will continue to support water sector-specific agency responsibilities, including the Water Alliance for Threat Reduction (WATR), to protect the nation's critical water infrastructure. The Agency will continue 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 2011 request includes \$10.4 million for WSI support and evaluation activities and \$1.2 million for WATR. The request supports technical assistance for the existing pilots, research efforts on evaluating chemical, biological, and radiological (CBR) analytical methods and event detection software, and assistance in conducting outreach efforts to migrate lessons learned from the pilots to the water sector. In FY 2011, EPA will begin focusing 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.

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.

In FY 2011, the Agency will move to the next stage of the pilots which is an 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 that 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 focuses solely on water and represents the water component of the EPA's Environmental Response Laboratory Network (ERLN). The ERLN is a network with a similar purpose as the WLA but will focus on analyses of all other environmental matrices. 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 eleven 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. EPA has integrated the eleven Regional Laboratory Response Plans into a single National Plan. In FY 2011, EPA will focus its efforts on conducting exercises, within the

framework of this National Plan, and will work to expand the membership of the WLA with the intention of achieving nationwide coverage. 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 2011, 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 2011, EPA will continue working 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;
- Conduct training sessions and outreach on EPA's Consequence Analysis Tool, which allows water systems to quantify the public health and economic consequences of specific types of events;
- Support WATR through continuing to conduct additional training sessions for drinking water systems, serving over 100,000 people, and to implement metrics for gauging the reduction of security and resiliency risk at these systems;
- Support the establishment of mutual aid agreements among utilities to improve recovery times;
- Provide an expanded set of tools (e.g., best security practices, incident command system and mutual aid training, contaminant databases, decontamination guidance) in order to keep the water sector current with evolving water security priorities;

- Test and refine a risk assessment tool that will enable utilities to address the risks from all hazards, including climate change impacts;
- Continue to implement specific recommendations of the Water Decontamination Strategy as developed by EPA and water sector stakeholders (e.g., defining roles and responsibilities of local, state, and Federal agencies during an event); and
- Develop annual assessments, as required under the National Infrastructure Protection Plan (NIPP), 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$86.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$6,968.0) This reduction reflects completion of funding for the establishment of five full-scale contamination warning system demonstration pilots in public water systems under the Water Security Initiative (WSI). In FY 2011, the remaining funding for this program will still be needed for WSI outreach, support, and evaluation activities.
- (-\$39.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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): Healthier Outdoor Air; Radiation

Goal: Healthy Communities and Ecosystems

Objective(s): Chemical and Pesticide Risks; Enhance Science and Research

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$3,054.1	\$3,423.0	\$2,012.0	(\$1,411.0)
<i>Science & Technology</i>	<i>\$41,771.8</i>	<i>\$41,657.0</i>	<i>\$34,598.0</i>	<i>(\$7,059.0)</i>
Hazardous Substance Superfund	\$55,479.4	\$53,580.0	\$42,274.0	(\$11,306.0)
Total Budget Authority / Obligations	\$100,305.3	\$98,660.0	\$78,884.0	(\$19,776.0)
Total Workyears	187.8	174.2	181.0	6.8

Program Project Description:

Through research, development, and technical support activities, EPA’s Homeland Security Research Program (HSRP) enhances the Nation’s preparedness, response, and recovery capabilities for homeland security large-scale catastrophic incidents involving chemical, biological, or radiological threats and attacks. The range of research programs and initiatives will both continue to develop a better understanding of the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering. 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 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 and decontamination capabilities.

FY 2011 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 and attacks, including 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 responders across government and industry.

FY 2011 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 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 incidents involving CBR agents. 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 needs for EPA expertise in a number of key areas including materials decontamination and disposal, threat assessment, and sampling and analytical methods. Activities in FY 2011 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. EPA will collect, generate, and evaluate data on the toxicity, infectivity, mechanism of action, fate, transport, and exposure consequences for CBR contaminants. Data 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 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 CBR agents and analytical methods for the ERLN that are required to characterize the nature and extent of contamination and document restoration. 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 2011 to support EPA's National Response Plan and first responders in carrying out their homeland security missions. The following are several key activities to be completed in FY 2011:

- Development and verification of analytical and sampling methods for CBR agents in the environment.
- Development of health-based Provisional Advisory Levels (PALs) for 12 chemical agents 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 Guidelines Levels (AEGs) program, which derives limits for exposure durations of up to eight hours.
- Understanding outdoor surface deposition, adhesion, and reaerosolization of anthrax.
- Evaluation of techniques for decontaminating surfaces contaminated with ricin.
- Evaluation of technologies for decontamination of building materials contaminated by radiological agents.
- Evaluation of background soil concentration ranges of anthrax in U.S. soils.
- Summary of work on the use of spray technologies for decontamination of chemical agent contaminated surfaces.

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 2011 to support EPA's Water Program and water utilities in carrying out their homeland security missions. The following are several key activities to be completed in FY 2011:

- Determination of the persistence of contaminants in drinking water distribution systems and the effectiveness of decontamination techniques.
- Evaluation of methods to contain and treat wastewater generated from decontamination efforts and assess requirements for its discharge to treatment works or water bodies.
- Development of decontamination protocols and technologies for drinking water and wastewater systems.
- Determination of the impacts of flushing water infrastructure following contamination.
- Update of the Blast Vulnerability Assessment Model to include underground storage tanks.

Radiation Monitoring:

Maintenance 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.

Through FY 2010, EPA expects to install at least 134 monitors providing near real-time radiation monitoring coverage for each of the 100 most populous U.S. cities as well as expanded geographic coverage. In FY 2011, the Agency will maintain the expanded RadNet air monitoring network. These near real-time monitors replaced or augmented 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. With the expanded RadNet air monitoring network, 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.

Biodefense:

EPA will **focus on filling** critical gaps in microbial resistance, efficacy test protocols for decontamination products, and decontamination tool boxes for bioterrorism agents.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of efficient and effective clean-ups and safe disposal of contamination wastes.	100	85	100	80	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of water security initiatives.	100	100	100	80	Percent

Unassociated with the proposed reduction in funding, the Homeland Security Program will be piloting an effort to set more ambitious performance targets. The program is expanding the scope and ambitiousness of research to be completed each year in order to speed the delivery of that research to decision-makers. Setting stretch goals that will result in achieving 80-90% performance levels will provide program managers more meaningful information to manage and improve program performance over time.

Work under this program supports multiple strategic objectives. In FY 2011, the program plans to meet its targets of completing and delivering planned outputs in support of: 1) the efficient and effective cleanup and safe disposal of decontamination wastes, 2) the Water Security Initiative, 3) the rapid assessment of risk and the determination of cleanup goals and procedures following contamination, 4) the National Laboratory Response Network, and 5) the validation of standardized methods for evaluating the 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. In addition, the program developed an efficiency measure that demonstrates that the program utilizes total resources efficiently.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,526.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$5.0) This reflects adjustments to IT and telecommunications resources. Realignment of these resources is based on FTE allocations.
- (-\$78.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$190.0 / -2.6 FTE) This reflects the net result of realignments of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities. These realignments are based on FTE allocations as well as scientific equipment needs.
- (-\$1,449.0) This change reflects a shift of resources for the Agency's water security and decontamination research activities. The extramural dollars reflect the transfer of extramural funding to payroll.
- (+10.0 FTE) The change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities. FTE will assist in water security and decontamination efforts.
- (-\$4,009.0 / -0.6 FTE) This reflects a reduction in the areas of water security, threat and consequence assessment, and safe buildings research due to the decreasing need for Water Security Initiative modeling support and a shift in focus to higher priority Agency needs.

- (-\$1,764.0) This reflects decreased support for homeland security pesticides activities due to substantial development and validation of methods to evaluate the efficacy of antimicrobial products against bioterrorism agents.
- (-\$499.0) This reflects a reduction to audits and training to support national radiological laboratory capacity and capability as the Agency focuses on higher priority areas.
- (-\$591.0) This reflects a reduction for EPA's RadNet national environmental radiation monitoring network as expansion of RadNet's geographic coverage to include the most at-risk populations is complete.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$6,648.8	\$6,369.0	\$6,391.0	\$22.0
<i>Science & Technology</i>	<i>\$587.0</i>	<i>\$593.0</i>	<i>\$594.0</i>	<i>\$1.0</i>
Building and Facilities	\$8,559.9	\$8,070.0	\$8,070.0	\$0.0
Hazardous Substance Superfund	\$1,203.6	\$1,194.0	\$1,194.0	\$0.0
Total Budget Authority / Obligations	\$16,999.3	\$16,226.0	\$16,249.0	\$23.0
Total Workyears	5.1	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 2011 Activities and Performance Plan:

In FY 2011, 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1.0) This increase supports the security needs of the 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$5,347.1	\$5,866.0	\$5,615.0	(\$251.0)
<i>Science & Technology</i>	<i>\$371.0</i>	<i>\$453.0</i>	<i>\$461.0</i>	<i>\$8.0</i>
Total Budget Authority / Obligations	\$5,718.1	\$6,319.0	\$6,076.0	(\$243.0)
Total Workyears	39.9	39.4	37.1	-2.3

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 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to 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 health risk reduction 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 improving transparency by making all aspects of the State Indoor Radon Grant (SIRG) program performance/results data available to the public via our website⁴ or other easily accessible means.

Performance Targets:

⁴ <http://www.epa.gov/radon>

In FY 2011, EPA's performance targets are: 1) that 12.5 percent of single-family homes, above EPA's action level, will have operating radon mitigation systems and 2) that 34.5 percent of single family homes are built with mitigation ready systems in high radon potential areas. EPA estimates that by meeting these targets, the program will prevent over 900 future premature cancer deaths annually.

Performance measures associated with this program project are included in Radon Programs under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$8.0) This reflects an increase for payroll and cost of living for existing FTE.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$24,335.2	\$20,759.0	\$22,156.0	\$1,397.0
<i>Science & Technology</i>	<i>\$706.5</i>	<i>\$762.0</i>	<i>\$768.0</i>	<i>\$6.0</i>
Total Budget Authority / Obligations	\$25,041.7	\$21,521.0	\$22,924.0	\$1,403.0
Total Workyears	65.7	63.8	69.8	6.0

Program Project Description:

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

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to support Tribal capacity building by conducting in-person and online training courses on asthma and indoor air quality intervention and remediation approaches. EPA also will support Tribal communities with field measurements and assessments upon request and provide technical support for indoor air quality remediation. EPA's indoor air quality technical assistance and training work is primarily focused toward Tribal communities and it meets an identified need at a relatively low cost.

Performance Targets:

EPA will continue to work under its long term strategic goal for 2014 that 7.2 million people with asthma will be taking the essential actions to reduce their exposure to environmental triggers. EPA's goal is to motivate an additional 400,000 people with asthma to take these actions in 2011, bringing the total number to approximately 6.1 million people with asthma who are taking the essential actions to reduce their exposure to environmental triggers. 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 percent 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 triennially with the next report date for asthma planned in 2012 and schools for 2013.

Performance measures associated with this program project are included in Indoor Air Programs under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$6.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$1.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$1.0) This increase in contract funding will support indoor air work at the Las Vegas laboratory.

Statutory Authority:

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

Program Area: IT / Data Management / Security

IT / Data Management

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$90,809.5	\$97,410.0	\$98,060.0	\$650.0
<i>Science & Technology</i>	<i>\$3,852.1</i>	<i>\$4,385.0</i>	<i>\$4,111.0</i>	<i>(\$274.0)</i>
Leaking Underground Storage Tanks	\$164.3	\$162.0	\$0.0	(\$162.0)
Oil Spill Response	\$36.3	\$24.0	\$0.0	(\$24.0)
Hazardous Substance Superfund	\$17,266.1	\$17,087.0	\$16,720.0	(\$367.0)
Total Budget Authority / Obligations	\$112,128.3	\$119,068.0	\$118,891.0	(\$177.0)
Total Workyears	484.6	503.1	489.3	-13.8

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 2011 Activities and Performance Plan:

For FY 2011, the following IT/DM activities will continue to be provided for the S&T funded programs:

- **Internet Operations and Maintenance (IOME)** – FY 2011 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 2011, IOME activities will be funded at \$0.41 million, under the S&T appropriation.)
- **Policy and Planning** - FY 2011 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 2011, 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 2011, Quality Program activities will be funded at \$3.70 million under the S&T appropriation.)

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$252.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$28.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$498.0) This reduction reflects a one-time investment to improve EPA's IT capabilities in order to support the Agency's expanding use of video conferencing under the green travel and conferencing initiative.

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

Facilities Infrastructure and Operations
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
Science & Technology	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Building and Facilities	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
Leaking Underground Storage Tanks	\$895.5	\$904.0	\$916.0	\$12.0
Oil Spill Response	\$576.1	\$505.0	\$534.0	\$29.0
Hazardous Substance Superfund	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
Total Budget Authority / Obligations	\$481,429.3	\$496,978.0	\$510,344.0	\$13,366.0
Total Workyears	390.2	411.1	415.1	4.0

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, facilities maintenance and operations, energy conservation, greenhouse gas reduction, sustainable buildings programs, and space planning.

FY 2011 Activities and Performance Plan:

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. The Agency also 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 2011, the Agency is requesting a total in the S&T appropriation of \$30.95 million for rent; \$19.89 million for utilities; \$10.35 million for security; \$0.94 million for transit subsidy; and \$0.25 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 also will continue with energy audits, commissioning, renewable

energy, water conservation, and green buildings. Work in these areas is required under Executive Order 13423⁵, *Strengthening Federal Environmental, Energy, and Transportation Management*, and EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, which expands upon Executive Order 13423 and requires additional reductions to green house gas emissions.

Lastly, EPA will provide transit subsidy to eligible applicants as directed by Executive Order 131506 *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 the performance measure in the Facilities Infrastructure and Operations program project under the EPM appropriation. This measure can also be found in the Performance Four Year Array.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$2,997.0) This reduction reflects S&T's rent reduction as a result of the space consolidation effort, as well as a rebalancing of cost methodologies between the EPM, S&T, and SF appropriations.
- (+\$716.0) This change reflects an increase in utility costs.
- (+\$89.0) This change reflects an increase in security costs.
- (+\$5.0) This change reflects an increase in transit subsidy.
- (-\$236.0) This reduction eliminates EPA's funding for the Lab 21 conference, which will now be fully funded from private sector resources.

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.fedcenter.gov/programs/eo13423/>

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$60,952.3	\$62,944.0	\$64,666.0	\$1,722.0
<i>Science & Technology</i>	<i>\$3,159.3</i>	<i>\$3,750.0</i>	<i>\$3,806.0</i>	<i>\$56.0</i>
Total Budget Authority / Obligations	\$64,111.6	\$66,694.0	\$68,472.0	\$1,778.0
Total Workyears	481.2	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, see <http://www.epa.gov/oppbead1/labs/index.htm>

FY 2011 Activities and Performance Plan:

In 2011, the Agency will protect human health by evaluating 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 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 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. There are no specific performance measures for this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$60.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$4.0) This reflects an adjustment in management support contracts.

Statutory Authority:

Pesticide Registration Improvement Renewal Act; Federal Insecticide; Fungicide and Rodenticide Act; Food Quality Protection Act; Federal Food; Drug, and Cosmetic Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$42,531.0	\$42,203.0	\$43,031.0	\$828.0
<i>Science & Technology</i>	<i>\$2,121.9</i>	<i>\$2,279.0</i>	<i>\$2,312.0</i>	<i>\$33.0</i>
Total Budget Authority / Obligations	\$44,652.9	\$44,482.0	\$45,343.0	\$861.0
Total Workyears	333.2	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 (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

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/ESA35/ESA35DaleQA.html>.

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: <http://www.epa.gov/opp00001/regulating/laws.htm>

laboratories, develop multi-residue analytical methods to allow enforcement agencies to test for several different chemicals using one test.

FY 2011 Activities and Performance Plan:

In 2011, the Agency will support the protection of the environment by developing methods and conducting analyses to make better 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 the regions on activities related to analysis of environmental samples for select pesticides or other environmental contaminants related to pesticide production or disposition. Additionally, the labs 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 ineffective 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, and cotton.

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 information for the newest pesticides. The microbiology laboratory also posts 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), which are methods 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 expected to provide approximately 7,000 standards. As a special project comes to an end in FY 2010, the annual rate will return to approximately 6,500 and will remain at this level in FY 2011.

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. There are no specific performance measures under this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$33.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

Pesticide Registration Improvement Renewal Act; Federal Insecticide, Fungicide and Rodenticide Act; Food Quality Protection Act; Federal Food, Drug, and Cosmetic Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$12,772.7	\$13,145.0	\$14,156.0	\$1,011.0
<i>Science & Technology</i>	<i>\$442.8</i>	<i>\$537.0</i>	<i>\$546.0</i>	<i>\$9.0</i>
Total Budget Authority / Obligations	\$13,215.5	\$13,682.0	\$14,702.0	\$1,020.0
Total Workyears	89.4	89.7	93.2	3.5

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...”⁹

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,¹⁰ 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 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. Another example of savings is the estimated \$1.8 billion in termite damage which is avoided each year through the availability of effective termiticides.¹¹ 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.

⁹ 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 <http://www.epa.gov/opp00001/regulating/laws.htm>

¹⁰ 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.

¹¹ U.S. Census Bureau data (www.census.gov/compendia/statab/files/house.html); University of Georgia Entomology Dept. (<http://www.ent.uga.edu/pubs.htm>) National Pest Management Association (www.pestworld.org/Database/Article.asp?ArticleID=34&UserType).

Three pesticide laboratories provide data that are used by EPA to make informed regulatory decisions that recognize societal benefits: 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 also validate 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 ensure that pesticides deliver intended results. 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 2011 Activities and Performance Plan:

In FY 2011, 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. There are no specific performance measures under this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

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

Statutory Authority:

Pesticide Registration Improvement Renewal Act (PRIA 2); Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); Food Quality Protection Act (FQA); Federal Food, Drug, and Cosmetic Act (FFDCA).

Program Area: Research: Clean Air

Research: Global Change

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

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	<i>\$17,264.1</i>	<i>\$20,826.0</i>	<i>\$21,985.0</i>	<i>\$1,159.0</i>
Total Budget Authority / Obligations	\$17,264.1	\$20,826.0	\$21,985.0	\$1,159.0
Total Workyears	36.9	35.5	40.1	4.6

Program Project Description:

EPA’s Global Change research program is focused on understanding and assessing 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 and supports the Administrator’s priorities for taking action on climate change, improving air quality and protecting America’s waters. 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 is developing decision support tools to help decision makers evaluate alternative strategies for reducing greenhouse gas emissions to better quantify the environmental implications (and potential co-benefits) associated with deployment of these strategies. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

The program 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 (e.g., the Clean Air Act, Clean Water Act, and Safe Drinking Water Act) to address the anticipated impacts of a changing climate. Interactions between climate and air quality and climate and water quality are likely to play larger roles in ambient air and water health assessments in the future. To meet this challenge, the Clean Air Research program, the Drinking Water Research program, and the Water Quality Research program, are all working closely with the Global program to develop frameworks for the research that will be most useful to stakeholders charged with protecting public and environmental health.

The program is an active participant in the U.S. Global Change Research Program (USGCRP), the interagency Federal effort to improve scientific understanding of climate change and global change.¹² EPA’s program priorities are consistent with those of the USGCRP, which coordinates and integrates climate change and global change research among thirteen Federal departments

¹² For more information, see <http://www.globalchange.gov/>.

and agencies, and USGCRP's Strategic Plan¹³. 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 composed of qualified, independent scientists and engineers—conducted a peer review of the program in 2005, and reported that the program “has provided substantial benefits to the nation and that it is on course to make significant further contributions.”¹⁴ The subcommittee completed a mid-cycle review of the program in 2008 and reaffirmed its assessment of the program.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA research will continue to focus on four areas:

- Understanding how climate change will affect air quality in the United States;
- Understanding how climate change will affect water quality and aquatic ecosystems;
- Evaluating alternative strategies for reducing greenhouse gas emissions and the environmental implications of those strategies; and
- Supporting the statutory mandates of the USGCRP to produce periodic assessments of the effects of climate change.

Research and assessments, in all four areas, will continue to improve understanding of the implications of climate change for human health. They also will address the impacts of alternative adaptation and mitigation strategies.

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 2011 funding will continue research to 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 assess, in collaboration with EPA's Air and Radiation program, 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 and water quality and particular areas of vulnerability. These assessments will help EPA's Air and Water programs 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.

¹³ 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/>

¹⁴ 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>.

The National Research Council (NRC) of the National Academies recently highlighted the importance of the EPA's decision support activities in its 2009 report, *Informing Decisions in a Changing Climate*¹⁵ and recommended that EPA "expand its climate-related decision support programs to serve more regional and sectoral constituencies." As recommended by the NRC, the program began to place greater emphasis on its decision support efforts in FY 2009. These efforts include 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.

In FY 2011, the program will continue to develop computer models that simulate how global change may affect U.S. air quality,¹⁶ continuing progress toward the program goal to complete a framework linking global change to air quality. The program also 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.¹⁷ Program 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 a comprehensive assessment of the effects of climate change on water quality, including aquatic ecosystems. In FY 2011, EPA will continue research on the effects of global change, including changes in land use 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 2011, the program also will continue to perform research, in collaboration with other programs, to provide information that will inform efforts to mitigate greenhouse gases and other radiative forcing compounds. The program will provide technical information on the environmental and human health implications of alternative technologies to EPA program offices responsible for developing and implementing regulations and legislation to reduce greenhouse gas (GHG) emissions. The research also will identify potential mitigation options that could reduce both traditional air pollutants (e.g., ozone and particulate matter) and greenhouse gases. Research on geologic sequestration of carbon dioxide and the impacts of different capture technologies, in partnership with EPA's Drinking Water research program and the Department of Energy, will support the Water program's carbon sequestration rulemaking.

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

16 For more information, see <http://www.epa.gov/nerl/goals/global/>.

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

The U.S. Global Change Research Act of 1990 mandates periodic scientific assessments of the effects of global change.¹⁸ 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.¹⁹ 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. The third SAP (SAP 4.1), Coastal Sensitivity to Sea-Level Rise: A Focus on the Mid-Atlantic Region, was released in January 2009. EPA will continue to participate in USGCRP’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 2011, STAR’s global change component will focus on two research areas. First, new grants will fund development of effective strategies to both mitigate climate change and reduce air pollution while accounting for future changes in climate, land use, and technology. One component of these grants will jointly consider the climate and air quality impacts of strategies to reduce black carbon. Second, STAR funding will enable investigation of the sensitivity of U.S. water systems to global change. Research in this area will improve our understanding of opportunities and the effectiveness of adaptive responses to reduce the risk of impaired water quality and ecosystem services at the watershed scale. Research also will address the potential adaptive benefits of low impact neighborhood design, green infrastructure, soil and water conservation practices, and other potential responses to reduce the risk of future aquatic ecosystem and water quality impacts.

To improve the Research: Global Change program, EPA has taken steps to finalize independent, review-informed performance measures; clarify the program’s framework and mission; develop a means to measure the program’s efficiency; and 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 early 2010. Additionally, the program is revising and broadening its multi-year plan around a clearer framework, and has developed an approach for improving program efficiency.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered.	100	100	100	100	Percent

¹⁸ See 15 USC §2936.

¹⁹ For more information, see <http://www.climatescience.gov/Library/sap/sap-summary.php>.

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Global publications rated as highly cited publications.	23	Data Avail 2010	No Target Established	24	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Global publications in high impact journals.	24.6	Data Avail 2010	No Target Established	25.6	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. 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$3.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$427.0 \ +3.0 FTE) This represents a realignment of resources from the Air program to the Global Change program for research on air quality-climate interactions and feedback to effectively couple regional air quality and global climate models and includes 3.0 FTE with associated payroll of \$431.0.
- (+\$232.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability Program/Project to support Small Business Innovation Research (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 2011 budget is enacted, when the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (+\$233.0 \ +1.6 FTE) This reflects the net result of realignments of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, and includes 1.6 FTE with associated payroll of \$230.0. These realignments are based on FTE allocations as well as scientific equipment needs. This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. This increase is the net result of realignments of support FTE to better align with programmatic priorities.

- (-\$26.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	<i>\$43,762.7</i>	<i>\$49,155.0</i>	<i>\$52,258.0</i>	<i>\$3,103.0</i>
Total Budget Authority / Obligations	\$43,762.7	\$49,155.0	\$52,258.0	\$3,103.0
Total Workyears	188.3	190.2	190.8	0.6

Program Project Description:

EPA's Drinking Water Research program (DWRP) conducts comprehensive integrated research in support of EPA's Office of Water and Regional Offices. The program is organized around two long term goals that focus on characterization and management of health risks across the water continuum with an emphasis on sound scientific approaches for ensuring safe and sustainable drinking water.

The program provides methodologies, data, tools, models, and technologies in support of regulatory decisions, health risk assessments and other needs pertaining to 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 range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

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. A major component of the research program is addressing the information gaps associated with chemicals and microorganisms that are on the recently released third Contaminant Candidate List (CCL3) and supporting the unregulated contaminant monitoring rule (UCMR3). Current policy-relevant research topics include the following:

- Research to address revisions to the 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 protecting underground sources of drinking water. A key focus is supporting the Underground Injection Control (UIC) regulations that pertain to geologic sequestration of carbon. In addition, research is being initiated on water resources implications associated with the use of hydraulic fracturing for gas extraction. Several peer-reviewed research strategies^{20,21} and guidance from external experts^{22,23,24,25} have provided input and guidance for charting the research directions within the DWRP. The Agency's Research and Development program uses Multi-Year Plans²⁶ (MYPs) to outline how each program will develop and implement research while meeting Annual Performance Goals (APGs) and Annual Performance Measures (APMs) for evaluating progress. National Programs and associated MYPs are subjected to rigorous, external peer review²⁷. The Drinking Water MYP was revised, in partnership with the Water program and with input from the Regional Offices, to reflect the new structure of the program and to plan and communicate ongoing and anticipated science activities and regulatory needs for FYs 2009 through 2014.

EPA and its external reviewers, including the EPA Science Advisory Board and the Board of Scientific Counselors, have recognized that a statute-specific research approach is limited in its potential for solving modern environmental problems. While the Drinking Water and Water Quality research program have both made many important contributions to EPA decision making and have worked to integrate various disciplines throughout the programs, they could benefit by building upon important synergies and emerging tools to address these evolving environmental problems. Moving in that direction, portions of the Drinking Water program are being aligned with related aspects of the Water Quality research program. The result will be a more holistic research program that maximizes responsiveness to the rapidly changing needs of EPA's Office of Water and other critical partners, while simultaneously addressing the Administrator's priorities for protecting America's waters.

Efforts will include increased integration of water efficiency concepts and energy-water interdependencies across the program from source water protection to treatment and distribution systems. In addition, more explicit efforts are being made to identify opportunities to improve water supplies in urban communities and small systems in collaboration with the Agency's efforts on Environmental Justice and community-based programs. Potential examples include working with the Office of Water to identify sites for field-based research including monitoring studies, infrastructure evaluation, and epidemiology projects. In addition, the program is continuing its emphasis on developing cost-effective systems that are appropriate for small communities.

²⁰ 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).

²¹ 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).

²² National Research Council. *Classifying Drinking Water Contaminants for Regulatory Consideration*. Washington, D.C.: The National Academies Press (2001).

²³ National Academies of Science. *From Source Water to Drinking Water: Workshop Summary*. Washington, D.C.: The National Academies Press (2004).

²⁴ National Research Council. *Indicators for Waterborne Pathogens*. Washington, D.C.: The National Academies Press (2004).

²⁵ National Research Council. *Public Water Supply Distribution Systems: Assessing and Reducing Risks--First Report*. Washington, D.C.: The National Academies Press (2005).

²⁶ 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>.

²⁷ 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>.

FY 2011 Activities and Performance Plan:

In FY 2011, the Drinking Water Research program will continue its evolution towards conducting more integrated multidisciplinary research focused on characterizing and managing health risks associated with surface and underground sources of drinking water, treatment strategies, and distribution/storage systems and water infrastructure. The program has made a progressive shift from addressing individual contaminants on a case-by-case basis toward developing approaches for screening, prioritizing and evaluating health risks associated with exposure to environmentally relevant chemical and microbiological contaminants and mixtures. A key emphasis will be on conducting integrated research that links water availability and quality issues with regulatory drivers including the role of water reuse, green infrastructure, alternative design approaches, and the impact of centralized/decentralized treatment and distribution on drinking water quality.

The program is organized around five theme areas: exposure/health effects, assessment tools, source water/water resources, treatment strategies, and distribution/storage/infrastructure. This structure provides opportunities for integrating health risk research with questions relevant to water availability, water efficiency and energy considerations, and expanding the risk characterization-risk management paradigm. Anticipated products for FY 2011 are listed below by thematic area.

Exposure/Health Effects: A major research focus is clarifying potential health effects of CCL contaminants. New efforts are being initiated to characterize potential exposure and health significance of disinfection byproducts (DBPs) with an emphasis on the use of alternatives to chlorine disinfection. Epidemiological studies of drinking water contaminant risks also are being initiated. Work in FY 2011 will focus on:

- Developing and applying new research tools to characterize, screen, and prioritize potential health effects of chemical contaminants and contaminant mixtures (including emerging contaminants), and provide support in assessing those effects; and
- Developing approaches to evaluate the relative potency and toxicity of water disinfected by different processes (with a focus on alternative treatments, such as chloramination and ozonation), and characterize the health effects impact of treatment interactions with varied source water characteristics.

Assessment Tools: Research is focused on developing reliable characterization tools to enable screening, sample analysis, and modeling of waterborne chemicals, indicators and pathogens. Research products in this area will enable quantification of CCL chemicals and pathogens in support of the Unregulated Contaminant Monitoring Rule and other water monitoring applications. Biomarkers of exposure and measurement methods (recovery, viability, speciation) will be further developed. FY 2011 efforts will support the following:

- Demonstrate applications of proteomics for characterizing waterborne pathogens.
- Develop new and/or improved analytical method(s) to measure emerging and/or CCL related chemicals to collect occurrence data under the UCMR.

- Produce analytical techniques to quantify toxic arsenicals in cells and tissue samples to support mode of action research.
- Produce innovative methods for the concentration, recovery, and assessment of protozoa, viruses, and bacteria from large volumes of water.
- Characterize naturally-occurring amoeba-resistant bacteria from water samples.

Source Water/Water Resources: A special emphasis for FY 2011 is to address high priority research questions related to the safety of drinking water and the safety, reliability, and sustainability of drinking water infrastructure. In addition, the program will expand its work on underground sources of drinking water to incorporate research on potential water supply consequences (quality and availability) associated with hydraulic fracturing activities and the effectiveness of existing and alternative mitigation strategies.

Research in this area will characterize health risks associated with drinking water sources, develop tools that allow for identification of impacted and susceptible water sources, and establish links between water availability and changes in water quality. Protection of surface water and ground water sources of drinking water requires reliable monitoring methods coupled with implementation of best management practices (BMPs). There will be a shift in FY 2011 towards an increased emphasis on protecting ground water sources with a focus 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). For FY 2011, efforts will focus on the following:

- Developing 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; and
- Assessing the ability of various drinking water treatment technologies to remove selected potential endocrine disrupting chemicals that may be in source water.

In FY 2011, research on underground sources of drinking water will be expanded to address potential water supply consequences associated with hydraulic fracturing, a potentially important aspect of energy resource exploration and management. Congress has urged EPA to conduct this research, which supports the Agency's priority to restore and protect the quality of the nation's waters by ensuring the protection of our aquifers. Research will focus on developing a systems approach for assessing direct and indirect consequences of hydraulic fracturing activities on sources of drinking water, with an emphasis on modeling, monitoring, and mitigation strategies. The research program will include funding for STAR grants to leverage the expertise of top scientists in academia. In addition, it will integrate regionally based field activities to provide a national perspective on potential opportunities for improved safeguards. The program also will study options to optimize water and energy efficiency throughout the lifecycle of hydraulic fracturing activities.

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: Integrated research efforts will be directed at water supply distribution systems and infrastructure. The Drinking Water Research program will support the Agency's involvement in the "Distribution System Research and Information Collection Partnership" with a focus on infrastructure, biofilms, nitrification, and contaminant accumulation. This work is in support of the revisions to the Total Coliform Rule (TCR) and the next round of six year review. Research will continue in support of the Lead and Copper Rule (LCR):

- Studies will be conducted to better understand the growth and colonization of viral, bacterial and protozoan pathogen in distribution systems; the role of free-living amoebae in fate, transport and infectivity; and nitrification reactions that occur in distribution systems, accumulation, mobilization and disinfection of contaminants from distribution systems including lead, arsenic, and vanadium.
- Research started in FY 2007 under the "Water Infrastructure for the 21st Century" Initiative, will continue in FY 2011 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 system integrity and performance including 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, and repair or rehabilitation techniques through increased use of full-scale demonstrations.
- Research will continue on the effects of corrosion and accumulation of contaminants in the distribution system.

The program also will continue research in support of the Ground Water Rule and the Enhanced Surface Water Treatment Rule. 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.

Additionally, in FY 2011 portions of the Drinking Water research program will be aligned with portions of the Water Quality research program to focus on high priority problems affecting water quality and availability. This base shift will improve understanding of critical water resource questions with cross-cutting implications for drinking water and water quality.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 risk.	100	93	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 under the SDWA.	100	100	100	100	Percent

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

The program gauges its annual and long term success by assessing its progress on several key measures. In 2011, the program will strive to complete 100 percent of its planned outputs in support of 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$2,471.0 \ +3.0 FTE) This reflects an increase for research on hydraulic fracturing and its impact on drinking water and includes an FTE increase of 3.0 with associated payroll of \$381.0. Research will provide policy relevant methods, models, monitoring tools, and data on potential risks to water resources associated with extracting gas from subsurface formations using vertical and horizontal fracturing technologies. The research program includes funding for STAR grants to leverage the expertise of top scientists in academia. Congress has urged EPA to conduct this research, which supports the Agency’s priority to restore and protect the quality of the nation’s waters by ensuring the protection of our aquifers. The request brings the research on hydraulic fracturing program total to \$4.4 million and 6.0 FTE.

- (+\$1,158.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$216.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, when the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (+\$65.0K) This realignment of resources from the Land Protection and Remediation program reflects the natural evolution in research direction from groundwater remediation issues to groundwater protection issues related to carbon sequestration.
- (-\$98.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$709.0 \ -2.4 FTE) This reflects the net result of realignments of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, and includes a 2.4 FTE reduction with decreased associated payroll of \$304.0. Realignments are based on FTE allocations as well as scientific equipment needs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	<i>\$64,926.0</i>	<i>\$61,918.0</i>	<i>\$68,858.0</i>	<i>\$6,940.0</i>
Total Budget Authority / Obligations	\$64,926.0	\$61,918.0	\$68,858.0	\$6,940.0
Total Workyears	235.5	236.8	244.9	8.1

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, and also supports the Administrator's priority of protecting America's waters. The Agency maintains a Water Quality research program Multi-Year Plan²⁸ (MYP) that outlines steps and provides a timeline for meeting these needs along with related annual performance goals and measures for evaluating progress. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

EPA and its external reviewers, including the EPA Science Advisory Board and National Science Foundation, have recognized that a statute-specific research approach is limited in its potential for solving modern environmental problems. While the Water Quality research program and Drinking Water research program have both made many important contributions to EPA decision making and have worked to integrate various disciplines throughout the programs, they could benefit by building upon important synergies and emerging tools to address these evolving environmental problems. Moving in that direction, portions of the Water Quality research program are being aligned with related aspects of the Drinking Water research program. The result will be a more holistic research program that maximizes responsiveness to the rapidly changing needs of EPA's Water program and other critical partners.

28 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/myip.htm>.

EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee composed of independent expert scientists and engineers—conducted a review in June 2009 of WQRP and determined that it is serving its clients well in conducting critical research to meet the regulatory mandates of the Clean Water Act. BOSC noted that the WQRP is making an exceptional effort to obtain client input, but more effort is needed to establish a mechanism for quantifying long term outcomes of the program. The progress made by the WQRP in response to the previous BOSC review was assigned an overall rating of “Meets Expectations” but the BOSC found that the program was exceeding expectations in several areas with respect to quality of research.

FY 2011 Activities and Performance Plan:

Research efforts within the Water Quality research program are aligned with the Agency's strategic objectives²⁹ under the CWA to promulgate protective standards, identify contaminant contributions to impaired waters, use tools to restore and protect the nation's waters with due consideration to minimizing impacts from point and non-point sources of contamination, and maintain and improve the nation's aging infrastructure.

Water quality research, addressing key uncertainties, is critical to the Agency's efforts to protect America's water. Although the quality of the nation's waters has shown improvement, threats to water quality remain, and new threats continue to be identified. In FY 2011 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). In particular, urban watershed management is a top Agency priority. Therefore, the budget request includes a substantial increase for green infrastructure research to facilitate the nation's transition to more sustainable water infrastructure systems and watershed management practices. This and other Water Quality research is categorized within three broad areas: Water Quality Integrity Research; Watershed Management Research; and Source Control and Management Research.

Water Quality Integrity research priorities support regulatory-driven needs related to revising aquatic life guidelines for toxics and emerging contaminants, for example, pharmaceuticals and personal care products (PPCPs), recreational water criteria (beaches research), nitrogen and phosphorus criteria, and sediments. Research also will continue on developing approaches for addressing multiple stressor effects on stream biota and on invasive species. In FY 2011, research will continue to help provide the data and analysis to support revisions to recreational water criteria as well as support implementation of revised criteria. EPA's water program is the major client for research products under this program and will use them in the development and application of water quality criteria. Projects to support criteria development will be completed by December 2010, and consequently some beaches research resources will be redirected to support hydraulic fracturing research within the Drinking Water research program.

Research on diagnostic methods to identify contaminant contributions to impaired waters 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

²⁹ U.S. EPA, Office of the Chief Financial Officer, 2006-2011 EPA Strategic Plan, Washington, D.C. EPA. Available at <http://www.epa.gov/ocfo/>

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 the Tiered Aquatic Life Uses (TALU) framework, while providing information on technical guidance for the development of nutrient water quality criteria for coastal wetlands and estuaries and the 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. Research in this area will develop tools and processes to identify or measure the following:

- Impaired or vulnerable resources,
- Threats and causes of impairment for effective decision making,
- Ways to reduce impairment and vulnerability, and
- The effectiveness of implemented management measures.

In FY 2011, this research will help the Agency address the quality of our neglected urban rivers. 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” (concrete and steel) infrastructure, but are less proven. Therefore, research will be conducted on wet weather flow problems in urban areas and innovation in green infrastructure, identifying ways to improve efficiency as well as evaluate and measure effectiveness. A significant portion of funds will support Science to Achieve Results (STAR) grants to leverage the most innovative thinking by academia’s top scientists. In addition to evaluating the comparison of green and “grey” infrastructure, research will focus on the combination of the green with the “grey” infrastructure to achieve control of wet weather flow. Additional research will document and critically review green urban watershed management case studies, incorporating green infrastructure in a manner that will be widely useful to urban planners and water resource managers.

Watershed management research also will continue to support 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 of watersheds and their subsystems. This research supports assessing condition, including providing technical support to the EPA National Aquatic Resources Assessments (NARS) which is critical for determining impaired resources and the condition of the nation’s water bodies in a scientifically defensible manner. It includes the development of tools for assessing and diagnosing of impairment, selecting mitigation options, and measuring and determining success. It also includes support for CWA Section 305(b) reporting, use attainability analyses identifying designated uses, and TMDL adaptive management. Research activities in this area also include Gulf of Mexico Hypoxia research which supports EPA’s efforts on the Mississippi River Basin

Watershed Nutrient Task Force to address goals of developing a 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). In addition, the program will continue to invest in 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 as well as different sources of non-human pathogens (e.g., cows versus geese). Research will be conducted to improve water quality modeling to better predict pathogen and fecal indicator loadings, concentrations, and associated health risks. The results of this research support the development and implementation of revisions to the ambient water criteria for recreational settings. In particular, such work supports improved TMDLs that will more accurately identify and allocate loadings from the sources of pathogens that must be managed to meet water quality standards.

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 of pollutants in the water column, and improvements in aquatic ecosystems, and for demonstrating the effectiveness of protecting designated uses from future development or other impacts.

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. Field studies at concentrated animal feed operations (CAFOs) will determine the magnitude of releases to groundwaters 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.

Research will continue on the public health and environmental risk posed by 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.

In FY 2011, 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 on the performance of non-point source 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 component of aging water infrastructure research, (see 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. Researchers in the Water Quality and Drinking Water research programs are working together on integrated, goal-oriented issues. Efforts are underway to plan and execute work in a more integrated fashion to adapt to and address the future of water resources management. This will help ensure that natural and engineered aquatic systems have the capacity and resiliency to meet current and future water quality needs to support growing societal, industrial, agricultural, and ecological water availability requirements. Additionally, in FY 2011 portions of the Water Quality research program will be aligned with portions of the Drinking Water research program to focus on high priority problems affecting water quality and availability. This base shift will improve understanding of critical water resource questions with cross-cutting implications for water quality and drinking water.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs (in support of WQRP long-term goal #2) delivered	100	86	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs (in support of WQRP long-term goal #3) delivered	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of WQRP publications in high impact journals.	No Target Established	Biennial	15.7	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of WQRP publications rated as highly cited publications.	No Target Established	Biennial	16.7	No Target Established	Percent

The research conducted under this program supports EPA Strategic Objective 2.3—Enhance Science and Research. Specifically, the program conducts leading-edge, sound scientific research to support the protection of human health through the reduction of human exposure to contaminants in fish, shellfish, and recreational waters, as well as to support the protection of aquatic ecosystems. In FY 2011, 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 protecting water quality and human health.

FY 2010 Change from FY 2011 Enacted Budget (Dollars in Thousands):

- (+\$5,950.0 \ +7.0 FTE) This reflects a more than doubling of funding for green infrastructure research to improve urban watershed management practices and facilitate the nation's transition to more sustainable water infrastructure systems. The increase also includes 7.0 FTE with associated payroll of \$915.0. A significant portion of funds will support STAR grants to leverage the most innovative thinking by academia's top scientists.
- (+\$1,036.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$863.0 \ +1.1 FTE) This reflects the net result of realignments of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, and includes 1.1 FTE with associated payroll of \$143.0. Realignments are based on FTE allocations as well as scientific equipment needs.
- (+\$183.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (-\$92.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$1,000.0) This reflects a realignment of resources previously supporting science needs for the five year review and revision process for recreational criteria (Beaches program), to hydraulic fracturing work within the Drinking Water research program. In particular, as the Beaches work nears completion, human health effects work will be discontinued.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	<i>\$41,478.1</i>	<i>\$44,789.0</i>	<i>\$45,626.0</i>	<i>\$837.0</i>
Hazardous Substance Superfund	\$3,776.4	\$3,404.0	\$3,350.0	(\$54.0)
Total Budget Authority / Obligations	\$45,254.5	\$48,193.0	\$48,976.0	\$783.0
Total Workyears	197.0	188.6	202.8	14.2

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. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

EPA's human health risk assessment program provides the scientific foundation for the Agency's actions to protect Americans' public health and the environment and supports the Administrator's priorities for improving air quality, assuring the safety of chemicals and protecting America's waters. 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 also are disseminated to the public on the IRIS internet database.³⁰ 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. As of January 2010, more than 550 health hazard assessments were available through IRIS.

³⁰ Available at: <http://www.epa.gov/iris>.

Methods, Models and Approaches to Improve Risk Assessment Science: Risk assessment approaches, methods, and models are needed to enhance the quality and objectivity of assessments through the incorporation of contemporary scientific advances. These developments are often first used in the development of IRIS assessments and ISAs. However, they often support decision making by EPA's Program and Regional Offices as well. These scientific products are externally peer reviewed and disseminated through the published literature and EPA Web sites.

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 Plan³¹ (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 in 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 plans³² (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 composed 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 forming 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, has clearly defined milestones and provides additional essential support to 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. In mid 2010, the BOSC will review the progress of the HHRA program in implementing its previous recommendations.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA requests \$29.4 million to continue to develop IRIS and other health hazard assessments. EPA will continue to evaluate the implementation of the new IRIS process over time. This will address concerns and recommendations in the Government Accountability Office's (GAO) High Risk Series report identifying weaknesses in the IRIS process to ensure

31 Available at: <http://www.epa.gov/ord/htm/multi-yearplans.htm>

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

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 2011. This continued investment will make improvements in the following areas:

- Applying mode of action information in risk assessments;
- Characterizing risks to susceptible populations;
- Characterizing environmental exposures for use in risk assessments;
- Improving quantification of health risks (e.g., PBPK and BBDR modeling, categorical regression, meta analysis approaches);
- Improving characterization of variability and uncertainty analysis in risk assessment; and
- Applying cumulative risk assessment principles to health assessments

In addition, EPA requests \$6.8 million in FY 2011 for the Human Health Risk Assessment program to continue to conduct Integrated Science Assessments (ISAs). In FY 2011, the program will:

- Continue 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
- Release external review draft ISAs for ozone and lead 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 productivity including revising management controls to better incorporate both programmatic priorities and the level of effort required to increase the number of IRIS assessments completed each year; implementing new performance measures to improve performance management; and investigating alternative approaches for measuring progress related to providing timely, high quality scientific assessments.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of HHRA Technical Support Documents.	90	100	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, including the on-time delivery of HHRA health assessments and technical support documents. The current IRIS process was streamlined in 2009 in response to GAO recommendations and the program's newest measures will be formalized and the targets for outputs adjusted accordingly.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$601.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$255.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR 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 2011 budget is enacted, when the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (-\$76.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$410.0 \ -0.9 FTE) This decrease reflects a minor reduction of resources in support of risk assessment research and includes decreased associated payroll of \$128.0. It will delay some work addressing benchmark dose software updates. This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.
- (+\$483.0 \ +1.1 FTE) This reflects the net result of realignments of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, including 1.1 FTE with associated payroll of \$156.0. Realignments are based on FTE allocations as well as scientific equipment needs.
- (-\$16.0 \ +14.0 FTE) This FTE increase supports development of Integrated Science Assessments (ISAs) and strengthens the Agency's work on addressing risk assessment methods, a top priority for the Administration, and includes 14.0 FTE with associated payroll of \$1,988.0. In addition, \$2,011.0 in extramural funds are redirected to payroll to support these critical risk assessment FTE. This represents an on-going realignment of administrative FTE to meet court-ordered NAAQS deadlines.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$13,710.1	\$20,048.0	\$21,855.0	\$1,807.0
Total Budget Authority / Obligations	\$13,710.1	\$20,048.0	\$21,855.0	\$1,807.0
Total Workyears	36.9	32.7	34.6	1.9

Program Project Description:

Computational Toxicology is the application of mathematical and computer models to help assess the hazards and 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.

EPA is developing robust and flexible computational tools that can be applied to the thousands of contaminants and contaminant mixtures found in America’s air, water, and hazardous-waste sites in support of the Administrator’s priorities for improving air quality, assuring the safety of chemicals, cleaning up our communities and protecting America’s waters. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

Established in 2003, EPA’s Computational Toxicology Research program (CTRP) has the longterm goal of improving understanding about the relationship of sources of chemicals in the environment and their potential to cause adverse health effects by providing tools for screening for exposures and hazards and prioritizing chemicals for additional follow up assessments. The National Center for Computational Toxicology, established in 2005, comprises the largest component of the CTRP. Research under this program is also conducted through EPA’s Science to Achieve Results (STAR) grant program and other EPA laboratories. 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”³³ (Tox21), and include several substantial and innovative projects in chemical screening and prioritization, informatics, and systems biology³⁴. The tools are transforming environmental health protection by providing risk assessors and managers more efficient and effective methods for managing chemical risks.

³³Toxicity Testing in the Twenty-first Century: A Vision and a Strategy
http://dels.nas.edu/dels/rpt_briefs/Toxicity_Testing_final.pdf

³⁴ http://www.epa.gov/ncct/pdf/ORD_NCCT_Imp_Plan.pdf

The contribution of the STAR program to the CTRP includes two centers in bioinformatics and two in computational toxicology. The bioinformatics centers will have completed their work by FY 2011. The newest STAR computational toxicology center focuses on developmental toxicity. The research of these centers will help fill gaps in our understanding of the molecular pathways that may result in toxicity to the developing embryo and fetus, which we know represent highly susceptible life stages to chemical exposure. As these pathways are identified, assays will be developed to test their sensitivity to thousands of chemicals.

Partnering With Others

All of these CTRP efforts are coordinated with other Federal partners through the Tox21 initiative in order to hasten this transformation in environmental health protection³⁵. The CTRP efforts are also at the core of *The U.S. Environmental Protection Agency's Strategic Plan for Evaluating the Toxicity of Chemicals*³⁶. The *Strategic Plan* and the CTRP Implementation Plan for FY 2009-2012 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 composed of independent expert scientists and engineers. The fourth review of the CTRP by the BOSC subcommittee occurred in late 2009. The draft report for this review will be vetted by the BOSC Executive Committee at their meeting in February 2010.

FY 2011 Activities and Performance Plan:

The CTRP Implementation Plan will focus on three key areas in FY 2011:

- Chemical prioritization and categorization tools;
- Information technology; and
- Systems biology models under a unified long term goal of providing high-throughput decisions support tools for chemical exposure, as well as hazard and risk assessment to EPA's regulatory program offices.

Chemical Prioritization and Categorization Tools

Managing the risks from toxic chemicals in the environment to protect human health is a top priority for EPA. Given the thousands of chemicals in use, to achieve this goal the Agency must continue improving its capability to predict which chemicals present the greatest risk and are in 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” enables testing on 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.

³⁵ Collins et al., 2008, *Science*; <http://www.sciencemag.org/cgi/reprint/319/5865/906.pdf>

³⁶ National Service Center for Environmental Publications P.O. Box 42419 Cincinnati ,OH 45242 # 100K09001

In Phase I of ToxCast™, the Agency obtained high-throughput screening data on 320 chemicals with known toxicological profiles. More than 600 endpoints for each chemical were obtained using high-throughput screening assays. Data collection for Phase I was completed in FY 2009, although analysis of the unique data resource continues. 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 Center³⁷.

Phase II of ToxCast consists of efforts to profile the activities of up to 700 additional compounds in order to broaden the diversity of chemicals tested and evaluate the predictive nature of bioactivity signatures. One unique aspect of Phase II is a partnership with Pfizer that will provide more than 100 chemicals proven toxic to humans in clinical trials. This information will allow for direct comparison of ToxCast™ results with effects in humans. 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).

In FY 2011, the CTRP will increase funding for research using next-generation tools to speed and facilitate implementation of the Agency's Endocrine Disruptor Screening Program (EDSP). The application of these tools will introduce a potentially more efficient approach to identifying potential endocrine disruptors and apply this information across the life cycle of a chemical, for example by using the 2006 Information Update Rule (IUR) and Toxics Release Inventory (TRI). Given the thousands of chemicals in use and the potential risks to human health and the environment, this research is critical to help the Agency meet its priority of strengthening chemicals management and risk assessment.

Continuing from FY 2010 into FY 2011, EPA is launching ExpoCast™. The initiation of the ExpoCast™ program will ensure that the required exposure science and computational tools are ready to address global needs for rapid characterization of exposure potential arising from the manufacture and use of tens of thousands of chemicals. Outcomes of the program also will meet challenges posed by new toxicity testing approaches. The overall goal of this project is to develop novel approaches and tools for screening, evaluating and classifying chemicals, based on the potential for biologically-relevant human exposure, to inform prioritization and toxicity testing. An emphasis will be placed on conducting research to mine and translate scientific advances and tools in a broad range of fields to provide information that can be used to support enhanced exposure assessments for decision making and improved environmental health. ExpoCast™ will provide an overarching framework for the science required to characterize biologically-relevant exposure in support of the Agency computational toxicology program. ExpoCast™ is expected to require several years of investment to be fully operational but, like ToxCast™, it will have interim milestones. By FY 2011, EPA expects to have the first relational databases of exposure studies available through EPA's ACToR system (see description below).

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

³⁷ Collins et al., 2008, *Science*; <http://www.sciencemag.org/cgi/reprint/319/5865/906.pdf>

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 databases and management applications. The Aggregated Computational Toxicology Resource project (ACToR)³⁸, is a Web-based public resource that currently has information from over 200 sources on over 500 thousand chemicals and other substances. ACToR organizes information from various data generation efforts including:

- EPA's ToxCast™ and ExpoCast™ programs,
- EPA's Toxicology Reference Database (ToxRefDB)³⁹,
- EPA's Distributed Structure Searchable Toxicity (DSSTox) Database Network⁴⁰, and
- The Tox21 high-throughput screening collaboration of EPA and NIH.

The CTRP will significantly expand data generation and management systems throughout the next several years as more data sources (e.g., those covering exposure analyses) and user functionality (e.g., bulk searching) are added in quarterly updates.

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 2011, this research will continue to:

- Provide standards for developing, documenting, archiving, and accessing quantitative mathematical models;
- Utilize systems-modeling approaches for the latest biological, chemical, and exposure data for quantitative risk assessment;
- Develop guidance on best practices for the construction, analysis and reporting of toxicological models that link pharmacokinetic information with the dynamic responses of target organs; and
- 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.

Performance Targets:

Work under this program supports EPA Strategic Objective 4.4: Enhance Science and Research. Specifically, the program identifies and synthesizes the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions with a focus on human, community, and ecosystem health. Currently, there are no formal external performance measures for this specific program, however, the program has annual research milestones that are included in the multi-year research plans for Human Health and Pesticides and Toxics. The CTRP tracks and manages performance through the timely completion of these milestones.

³⁸ <http://actor.epa.gov/actor/faces/ACToRHome.jsp>

³⁹ <http://www.epa.gov/ncct/toxrefdb/>

⁴⁰ <http://www.epa.gov/ncct/dsstox/index.html>

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$2,000.0) This reflects an increase for next-generation tools to speed and facilitate implementation of the Agency's Endocrine Disruptor Screening Program (EDSP). The application of these tools will introduce a more efficient approach to identifying potential endocrine disruptors and apply this information across the life cycle of a chemical. This research is critical to help the Agency meet its priority of strengthening chemicals management and risk assessment.
- (+\$285.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR 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 2011 budget is enacted, when the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (-\$28.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$473.0) 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.
- (+\$23.0 \ +1.9 FTE) This increase reflects the net result of realignments of resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, including 1.9 FTE with associated payroll of \$251.0. Realignments of these resources are based on FTE allocations as well as scientific equipment needs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$9,948.7	\$11,355.0	\$17,378.0	\$6,023.0
Total Budget Authority / Obligations	\$9,948.7	\$11,355.0	\$17,378.0	\$6,023.0
Total Workyears	50.6	50.1	44.2	-5.9

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 Amendments⁴¹ 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 contributes to the scientific foundation for the Agency’s actions to protect Americans against unreasonable risk from exposure to toxicants that interfere with the endocrine system and supports the Administrator’s priorities for assuring the safety of chemicals, protecting America’s waters and building strong state and Tribal partnerships. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

Research is guided by the Endocrine Disruptors Research Plan (EDRP) which was developed with participation from major research clients and stakeholders to outline research needs and priorities.⁴² The Agency also maintains a multi-year plan (MYP)⁴³ for Endocrine Disruptors research that outlines steps for meeting these needs, as well as annual performance goals and key research outputs for evaluating progress.

41 SDWA Section 1457.

42 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>.

43 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>.

Scientific review of the EDRP is conducted by EPA's Board of Scientific Counselors (BOSC), a Federal advisory committee composed of independent expert scientists and engineers. In April 2008, a BOSC subcommittee evaluated the EDRP and its progress on implementation of the recommendations from previous BOSC program reviews. The subcommittee commended the progress and direction of the research⁴⁴ and rated the overall progress of the EDRP program as "*exceeds expectations.*"

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 recommendations⁴⁵ 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 2011 Activities and Performance Plan:

In FY 2011, 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 has developed and refined assays and improved other screening tools using new molecular capabilities so that the Agency has the necessary protocols for use in the Endocrine Disruptors Screening program. Using genomics and related approaches to develop 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.⁴⁶

In FY 2011, the research program will continue:

- Finalizing Tier 2 testing 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

44 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>.

45 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>.

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

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
- Applying its multidisciplinary expertise to better characterize the impact on environmental media and aquatic organisms of real world releases of endocrine active compounds (including natural hormones, pesticides, industrial chemicals, and pharmaceuticals) from wastewater treatment plants, CAFOs, and drinking water plants and developing risk management and mitigation strategies.

The FY 2011 request includes significant additional funding to award research grants to academia under the Science to Achieve Results (STAR) grant program, complementing the Agency's intramural research effort on EDCs. The additional resources will allow for an acceleration in the application of the latest state of the art technologies and innovations to advance the assessment and management of environmental endocrine disruptors and other emerging contaminants of concern, in order to better ensure rapid, agile, and accurate protection of human health and wildlife. EPA anticipates that these activities will directly benefit the Endocrine Disruptor Screening Program (EDSP) in the Office of Prevention, Pesticides and Toxic Substances.

Researchers in the Endocrine Disruptors, the Pesticides and Toxics, and Human Health research programs will work together on integrated, goal oriented issues, and will plan and execute work to develop high capacity decision support tools for managing contaminants across their life-cycles. This research will build upon and expand the activities conducted within the Computational Toxicology Program and its partnerships with the National Institute of Environmental Health Sciences and the NIH Chemical Genomics Center. The program will provide partners, such as EPA's Program and Regional Offices, other federal agencies, international agencies, and the general scientific community, with a more efficient means of assessing exposure and hazards of chemicals. Partners will be able to efficiently evaluate the impact of large numbers of chemicals in everyday commerce on human health (individual and susceptible populations) facilitating prioritization for further chemical research, management, and product design decisions. 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.

Currently, there are no annual performance measures for this program project. The program's long-term performance measures are: (1) to provide 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 Prevention, Pesticides and Toxic Substances program will validate for use in evaluating the potential for chemicals to cause endocrine-mediated effects.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$7,000.0) This increase funds additional Science to Achieve Results (STAR) Grants. Additional research funding will award grants to academia through ORD's STAR program, complementing the Agency's intramural research effort on endocrine disrupting chemicals (EDCs). This will allow for an acceleration of applying the latest state of the art technologies and innovations to advance the assessment and management of environmental endocrine disruptors and other emerging contaminants of concern.
- (+\$37.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (-\$43.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$770.0 \ -4.3 FTE) This reflects the net result of realignments of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, and includes a reduction of 4.3 FTE with decreased associated payroll of \$576.0. Realignments are based on FTE allocations as well as scientific equipment needs.
- (-\$415.0 \ -1.6 FTE) This represents a net realignment of FTE and resources for research to address exposure issues related to potential chemical and/or pesticide stressors to better reflect program support needs, and includes a reduction of 1.6 FTE with decreased associated payroll of \$214.0. This change reflects EPA's workforce management strategy that will help the agency better align resources, skills and Agency priorities.
- (+\$214.0) 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	\$5,760.7	\$11,083.0	\$17,286.0	\$6,203.0
Total Budget Authority / Obligations	\$5,760.7	\$11,083.0	\$17,286.0	\$6,203.0
Total Workyears	6.2	2.6	5.0	2.4

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. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering. To help achieve excellence in science and technology education in these and other areas, 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 entitled *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. The following are EPA’s current fellowships programs:

*Science to Achieve Results (STAR Fellowship Program)*⁴⁷ 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;
- Provide a focus for future research and technology development in science, engineering, or modeling approaches for assessing and managing environmental risks; or
- Focus on the potential of the research outputs to have broader societal impacts.

⁴⁷ For more information, see <http://epa.gov/ncer/fellow>.

On average, approximately ten 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, health and social sciences, and engineering. At least one student from each of the 50 states, the District of Columbia, and Puerto Rico has received an EPA STAR Fellowship.

*Greater Research Opportunities (GRO) Undergraduate Fellowship Program:*¹ EPA's GRO Undergraduate 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 technology 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:*⁴⁸ In conjunction with the American Association for the Advancement of Science (AAAS), 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 policymakers 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:*⁴⁹ To enhance the training of highly qualified and motivated public health professionals, EPA, in conjunction with the Association of Schools of Public Health (ASPH), 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.

⁴⁸ For more information, see http://fellowships.aaas.org/01_About/01_Partners.shtml#EPA.

⁴⁹ For more information, see http://www.asph.org/document.cfm?page=751&JobProg_ID=1.

*EPA Marshall Scholarship Program:*⁵⁰ 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, 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 multilateral 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 composed 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.”⁵¹

FY 2011 Activities and Performance Plan:

One of the Administration's top priorities in 2011 is strengthening science, technology, engineering, and mathematics education at every level (from pre-college to post-graduate to lifelong learning). This program supports that priority by helping to ensure the Nation has a diverse workforce to meet the scientific, technological, and engineering challenges of tomorrow. It is an investment in EPA's future and our ability to ensure that science remains the backbone of EPA for years to come. The FY 2011 budget request would provide more than a 75 percent increase for fellowships. New fellowships will be awarded through nationwide competition in academic areas that are top priorities for EPA including nanotechnology, climate and clean air issues, and green infrastructure. EPA will award approximately 240 new STAR fellowships in addition to providing support for an estimated 120 continuing STAR fellows. Fellowship recipients will complete progress and exit reports, and the Agency will maintain contact

⁵⁰ For more information, see <http://www.marshallscholarship.org/applications/epa>.

⁵¹ 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>.

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 Impacts Criteria” into its STAR and GRO Undergraduate Fellowship programs. Broader Impacts 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 supply of diverse persons going into environmentally-related fields.

Performance Targets:

Work under this program supports EPA's Objective 4.4: Enhance Science and Research. Currently, there are no external performance measures for this specific program. However, EPA’s Research and Development program will likely begin an external evaluation of the Fellowships program in FY 2011.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$6,000.0) This request reflects a more than 75 percent increase for science and engineering fellowships under the Science to Achieve Results (STAR) Graduate Fellowship program, including \$2 million for nanotechnology fellowships. The increase also supports the Administration’s priorities for investing in a diverse science, technology, engineering, and mathematics workforce.
- (-\$314.0) 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.
- (+\$353.0 / +2.4 FTE) This increase reflects the net result of realignments of resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, including 2.4 FTE with associated payroll of \$343.0. Realignments of these resources are based on FTE allocations as well as scientific equipment needs. This change reflects EPA’s workforce management strategy that will help the Agency better align resources, skills and Agency priorities.
- (+\$164.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$155,752.0	\$159,511.0	\$154,093.0	(\$5,418.0)
Total Budget Authority / Obligations	\$155,752.0	\$159,511.0	\$154,093.0	(\$5,418.0)
Total Workyears	492.5	484.9	475.3	-9.6

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 and supports the Administrator’s priorities for improving air quality, assuring the safety of chemicals and protecting America’s waters. The Agency conducts integrated research on human health and ecosystems to identify and characterize environment-related human health problems, determine exposures to and sources of agents responsible for these health concerns, use public health indicators to evaluate the effectiveness of risk management decisions, 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). The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

The Human Health Research Program (HHRP) continues to characterize and reduce uncertainties in risk assessment within the framework of “developing and linking indicators of risk” along the potential source-to-exposure-to-effects-to-disease continuum. The program is evolving from a single chemical approach to one that addresses the cumulative risk of multiple chemicals in the context of community settings. Advanced exposure models and information about key molecular events in toxicity pathways are being used to illuminate potential risks of environmental contaminants in real world settings where chemical and non-chemical stressors interact to impact human health. Tools and indicators are being developed and verified to help decision makers measure and demonstrate reductions in environmental-related human disease incidence or severity that results from their risk management actions. The program addresses limitations, gaps, and challenges articulated in EPA’s *Report on the Environment* (2008) and is responding to recommendations in the National Research Council’s reports “*Toxicity Testing in the 21st Century: A Vision and a Strategy*” (2007) and “*Science and Decisions: Advancing Risk Assessment*” (2009).

In FY 2009, the Ecosystem Services research program (ESRP) fully transitioned to its new focus on conserving and protecting ecosystem services through proactive decision making⁵². 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"⁵³ and the "Ecological Research Strategy,"⁵⁴ which were developed in collaboration with major clients and stakeholders (e.g., EPA's program and Regional Offices). These strategies outline research needs and priorities. In addition, multi-year plans (MYPs)⁵⁵ (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.

In December 2009, an evaluation by EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee composed of independent expert scientists and engineers—concluded that the HHRP exceeds expectations in the area of developing tools to evaluate risk, while meeting expectations in all other areas. The BOSC report⁵⁶ noted that HHRP is much more integrated since the previous review. Also, there is considerably more emphasis on human health and human health-related issues, as well as movement toward more of a public health-themed program. The BOSC also stated that "[t]he HHRP, as a whole, appears to be robust and responsive to emerging issues," and that "[t]here appears to be good evidence for strong scientific productivity and a formidable impact of the work produced by the program overall."

The ESRP has been 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 being⁵⁷. In 2007, the mid-cycle BOSC review of the ESRP resulted in a rating of "Meets Expectations" for work completed to date.⁵⁸ A full program review by the BOSC will take place in FY 2011.

In 2008, EPA's Science Advisory Board's (SAB) Ecological Processes and Effects Committee (EPEC) stated in its review of the program that:

⁵² The ESRP name came from a recommendation by the SAB Ecological Processes and Effects Committee 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.

⁵³ 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

⁵⁴ For more information, see <http://www.epa.gov/ord/htm/documents/eco.pdf>.

⁵⁵ For more information, see <http://www.epa.gov/ord/htm/multi-yearplans.htm>.

⁵⁶ U.S. EPA, Board of Scientific Counselors. Review of the Office of Research and Development's Human Health Research Program at the U.S. Environmental Protection Agency. (Washington: EPA, 2009). Available at: <http://www.epa.gov/osp/bosc/pdf/hh0912rpt.pdf>.

⁵⁷ BOSC 2007 <http://www.epa.gov/osp/bosc/>.

⁵⁸ 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/>.

“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 sound foundation for environmental decisions and regulation based on the dependence of humans on ecological conditions and processes.”⁵⁹

The program was again reviewed in July 2009, and the final report⁶⁰ was released in September. The SAB found that the ESRP is "bold, innovative, and necessary", and "because it is taking an integrated multidisciplinary approach to addressing multiple stressors acting within and across media, the research program has the potential, with appropriate support, to transform the way environmental decisions are made within and outside of EPA."

EPA and its external reviewers, including the EPA Science Advisory Board and National Science Foundation, have recognized that a statute-specific research approach is limited in its potential for solving modern environmental problems. While the Human Health and the Pesticides and Toxics research programs have made many important contributions to EPA decision making and have worked to integrate various disciplines throughout the programs, they could benefit by building upon important synergies and emerging tools to address these evolving environmental problems. Therefore, moving in that direction, portions of the Human Health research program are being aligned with related aspects of the Pesticides and Toxics research program. The result will be a more holistic research program that maximizes responsiveness to the rapidly changing needs of EPA’s program and Regional Offices and other critical partners.

FY 2011 Activities and Performance Plan:

Human Health Research

In FY 2011, EPA’s research under this program will continue to identify indicators of exposure, effects, and susceptibility that the Agency needs to evaluate and manage health risks of chemical contaminants for individuals, communities and populations while considering susceptibility at all stages of the human life cycle. Increased emphasis is being placed on refining advanced modeling tools to estimate human exposures and using 21st Century molecular and cellular tools to identify key steps in chemically-induced toxicity. These tools will be applied in community settings to manage risks of complex exposures and factor in non-chemical stressors that interact with chemical stressors to impact health. Furthermore, research will identify and validate public health indicators needed to demonstrate the benefits of regulatory decisions and actions and to identify communities at highest risk. Of the total \$154.1 million requested in FY 2011 for Human Health and Ecosystems research, \$80.1 million is requested for research in this area.

⁵⁹ EPA-SAB-08-011

⁶⁰[http://yosemite.epa.gov/sab/sabproduct.nsf/WebReportsLastFiveBOARD/91190EEC56A44B3F85257641006BB7D7/\\$File/EP-A-SAB-09-019-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/WebReportsLastFiveBOARD/91190EEC56A44B3F85257641006BB7D7/$File/EP-A-SAB-09-019-unsigned.pdf)

EPA will continue to support research on modes of action of priority chemicals and build models for cumulative risk assessments with the ultimate goal of basing regulatory decisions and rules on sound science rather than relying on default assumptions. Such research will inform EPA's evaluations of acceptable levels of arsenic and its metabolites in drinking water and the cancer and non-cancer effects of conazoles and structurally related fungicides. In addition, mode of action, exposure, and dose modeling research on pyrethroid pesticides and disinfection byproducts will inform upcoming cumulative risk assessments by the Prevention, Pesticides, and Toxic Substances program and the Water program in EPA. New research efforts guided by the National Research Council's report, "Toxicity Testing in the 21st Century: A Vision and a Strategy" (2007), will apply molecular and genomic information to identify key events in specific toxicity pathways and to develop virtual organ models of predictive toxicity in collaboration with the Computational Toxicology research program.

In addition, FY 2011 research will focus on developing tools for identifying communities (e.g. localities, populations, groups) at disproportionate risk from exposure to multiple chemicals, identifying and quantifying the factors influencing these exposures, and developing and implementing appropriate risk reduction strategies. Cumulative risk research will develop and refine models for analyzing complex exposures and for predicting exposures. For example, the Stochastic Human Exposure and Dose Simulation (SHEDS) multimedia model is EPA's state-of-the-science probabilistic model for simulating pesticides, metals, and persistent bioaccumulative toxins. At the community level, tools are being developed for linking various exposure databases for use by communities and EPA's regional offices in characterizing risks. Research will also develop methods for reconstructing exposures based upon biomarker and biomonitoring data generated in large scale exposure and epidemiological studies. This research will enable EPA to link such exposures to their primary sources, and facilitate use of exposure, biomarker, and pharmacokinetic data in cumulative risk assessments. It will also help EPA to address recent GAO recommendations in its report, *Biomonitoring. EPA needs to coordinate its research strategy and clarify its authority to obtain biomonitoring data* (GAO 09-353). New efforts will begin to identify non-chemical stressors in community settings and define the extent to which they may modify an individual's response to a chemical stressor, possibly resulting in disproportionate risk.

A major focus of HHRP is directed at protecting vulnerable populations and life stages, particularly children. In 2011, EPA will continue to co-fund the Children's Environmental Health and Disease Prevention Centers (Children's Centers) with NIEHS. 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 multiple years to consider the full range of health effects resulting from exposure to environmental chemicals, as summarized in the EPA report "A Decade of Children's Environmental Health" (2007).

Additionally, HHRP research will examine the factors that impact children's exposures in specific environments encountered by very young children and by school aged children. Research will focus on the impact and relationship between environmental factors and sustainable building practices. The information obtained will help school systems verify and

implement best practices to optimize healthy learning environments. An early product will be new information about sources of persistent bioaccumulative toxins in schools related to its previous use in caulking, and possible engineering solutions for reducing exposures to children and teachers. Research also will provide fundamental information about the inherent biological, developmental and genetic factors that determine children's susceptibility to chemically-induced insults, including the potential of very early exposure (e.g. during pregnancy and infancy) to contribute to the development of chronic diseases later in life such as asthma, hypertension, and obesity. The Agency needs this information to ensure adequate protection of children and other vulnerable groups in all its regulatory actions. Emerging risks of long term health effects such as obesity and hypertension resulting from early life exposures are being examined in laboratory animal models and children's cohort studies. Information gained from this research and from the Children's Centers is informing the conduct of the National Children's Study (NCS), a longitudinal study funded by the National Institute of Health (NIH). EPA is an active partner in this interagency study, and will continue to provide advice and expertise to NCS, including collaborative research to help optimize methods and interpret results.

In FY 2011, 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 results 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 be reported. 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 Science to Achieve Results (STAR) grant program. This research, which assists EPA in evaluating the impact of its risk management decisions, received a 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. The STAR program has funded and will continue to fund an array of outstanding grants that fill unique needs for community-based participatory research on environmental public health outcomes of great concern, especially for vulnerable populations like children and Tribal communities. For example, the program will continue to fund research to develop and validate predictive bioindicators of exposure and effects that are needed to develop approaches to assess public health impacts of regulatory decisions, including developing environmental health outcome indicators. Given the heightened interest in documenting the benefits of sustainable building practices, the program also will create opportunities to examine the impact of school facility features, building maintenance and operation practices on the health and performance of students and teachers.

Researchers in the Human Health and Pesticides and Toxics research programs will work together on integrated, goal oriented issues, and will plan and execute work to develop high capacity decision support tools for managing contaminants across their life-cycles. EPA will provide decision makers and partners with a more efficient means of assessing exposure and hazards of chemicals. Partners will be able to efficiently evaluate the impact of large numbers of

chemicals in everyday commerce on human health (individual and susceptible populations) facilitating prioritization for further chemical research, management, and product design decisions.

A 2009 performance review of the “Human Health Research” program found that it has “matured” since the 2005 review to become better integrated and that the “scientific content is excellent.” The BOSC subcommittee, in its December 2009 report, commended the scientific leadership “for their attempts to enhance the coordination and communication efforts with program offices and through interagency collaborations.” The BOSC also commended “the utilization of the combined strengths on both the intramural and extramural fronts” and noted that “the HHRP is well organized and clearly defines its priorities and outcomes.” Overall, the BOSC indicated that the program responds to changing priorities and areas of need and has demonstrated “significant progress” and “managed resources efficiently for achieving its [long term goals].” The BOSC’s evaluation and recommendations are being used to help plan, implement, and strengthen the program over the next five years.

Researchers in the Human Health and Pesticides and Toxics research programs will work together on integrated, goal oriented issues, and will plan and execute work to develop high capacity decision support tools for managing contaminants across their life-cycles. EPA will provide decision makers and partners with a more efficient means of assessing exposure and hazards of chemicals. Partners will be able to efficiently evaluate the impact of large numbers of chemicals in everyday commerce on human health (individual and susceptible populations) facilitating prioritization for further chemical research, management, and product design decisions.

Ecosystem Services Research

In FY 2011, the total level of funding requested for Ecosystems research is \$74.0 million. The Ecosystems Services Research Program (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, 1997⁶¹; MA, 2005⁶²; BOSC, 2005⁶³; EPA Stewardship Initiative, 2006⁶⁴; EBASP, 2006⁶⁵; Restoring Nature’s Capital, 2007⁶⁶). The Millennium Assessment (MA) is one of the most comprehensive reports to date, and documented declines in 15 of 24 ecosystem services worldwide.

The Ecosystem Services Research program is aimed at transforming the way decision makers understand how their environmental management decisions affect the type, quantity, magnitude and sustainability of the goods and services nature provides us. The research complements

⁶¹ "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>

⁶² <http://www.millenniumassessment.org>

⁶³ BOSC 2005 <http://www.epa.gov/osp/bosc/pdf/eco0508rpt.pdf>

⁶⁴ www.epa.gov/epainnov/pdf/rpt2admin.pdf

⁶⁵ US EPA. 2006. Ecological Benefits Assessment Strategic Plan. EPA-240-R-06-001. U.S. Environmental Protection Agency, Office of the Administrator, Washington, DC.

⁶⁶ Restoring Nature’s Capital: An Action Agenda to Sustain Ecosystem Services, 2007," available at http://pdf.wri.org/restoring_natures_capital.pdf.

EPA's regulatory efforts by providing for a systems approach that will enable routine investments from the private and public sectors to create new financial, social, and natural capital (i.e., enhanced ecosystem services). For example, in FY 2010, the ESRP is conducting a scoping study to assess the extent to which ecosystem service markets and incentives could make a cost-effective contribution to the restoration of the Chesapeake Bay. The focus of this new regional study will be to demonstrate how the concept of ecosystem services can be used to achieve reductions in nutrients beyond today's regulatory framework, using existing information and knowledge of ecosystem services. In addition to a demonstration of the concept, the study will include developing guidelines to provide ways to systematically assess economic, financial, and environmental effects of decisions; compare environmental and social trade-offs. This project builds on the results of other ESRP regional projects in the Upper Midwest, coastal Carolinas, Tampa Bay, western Oregon, and the arid Southwest, and on national efforts focusing on nitrogen and wetlands. This work will complement and substitute for more costly infrastructure approaches to nutrient load reduction such as publicly owned treatment works, upgrades and storm water management systems.

Businesses, municipalities, landowners, and states will realize multiple environmental and financial benefits, including diversified revenue streams, by strategically modifying existing expenditures for environmental management, and creating opportunities to develop appropriately designed new markets for ecosystem services. This approach builds upon the Agency's historic emphasis on minimizing the impacts of pollutants (i.e., negative externalities); it creates new ways to enhance the services we receive from functioning ecosystems, in ways that create new economic wealth and better address social equity (i.e., positive externalities). One of the goals of this new balanced approach is to "create demand" for ecological integrity by rewarding stewardship and by connecting with the public on issues of social well being and equity.

In FY 2011, the ESRP will provide research critical to improving the policy and management decisions that affect the type, amount, quality and sustainability of benefits and services provided by ecosystems. The 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:

- 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 decision support tools that enable decision makers to integrate, visualize, and maximize diverse data, 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 2011 the ESRP will examine ecosystem services from three distinct perspectives:

- *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 NO_x/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.
- *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.
- *Regional* assessments at six locations: the Willamette River Basin, OR; Tampa Bay, FL; the Coastal Carolinas; the upper Midwest U.S., an arid-land area in the Southwest U.S., and the Chesapeake Bay. These regional 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 2011 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 rulemaking;
- 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, identify 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 generates decision-support information to promote the safe development, use, and disposal/recycling of products that contain engineered nanoscale materials ("nanomaterials"). Based on analyses by EPA's Office of Research and Development and the Organization for Economic Cooperation and Development (OECD) as to which nanomaterials are most likely to present near- to medium-term human and ecological exposure, the EPA research program focuses on five types of nanomaterials: carbon tubes and fullerenes, cerium oxide, iron, silver, and titanium dioxide. The FY 2011 nanotechnology budget request is \$20 million, including \$3.7 million in the Land research program, \$13.9 million in the Human Health and Ecosystem research program, \$2 million in the Fellowships program, and \$0.23 million in both the Clean Air and Sustainability research programs.

Guided by EPA's Nanomaterial Research Strategy, the program utilizes in-house research and the STAR grants program⁶⁷ to examine nanomaterials from two interrelated perspectives: (1) whether these materials present the potential for hazard or exposure over their life cycles, and (2) how these materials, as used in products, may be modified or managed to avoid or mitigate potential human health or ecological impacts. The program also is coordinated nationally as part of the National Nanotechnology Initiative,⁶⁸ and internationally through the OECD's Working Party on Manufactured Nanomaterials.⁶⁹ EPA's Nanotechnology Research Program supports the regulatory activities of the Prevention, Pesticides, and Toxic Substances program, as well as remediation strategies developed by the Solid Waste and Emergency Response program and implemented through EPA's Regional Offices.

In FY 2011, EPA's Nanomaterial research program will continue source-to-dose research (releases/emissions; fate, transport, and transformation; and exposure) to identify which of the five material types, in what forms, may become present in biological systems at concentrations of potential concern. The program will investigate and evaluate approaches to detect, measure and characterize nanomaterials in environmental media. Results expected from this research in FY 2011 include reports on laser detection of nanomaterials, electrochemical detection methods, and screening methods for metal-containing nanoparticles in water. The program also will evaluate existing applications and new methods to understand behavior of nanomaterials in the environment, with published reports including nanomaterial deposition on mineral and organic surfaces. In FY 2011, EPA expects to release a report on observed toxicities and the possibility of using existing test methods to predict toxicities in freshwater, marine and terrestrial systems. The program will publish state-of-the-science reports for nanoscale silver and titanium dioxide. Source-to-dose research will enable risk assessments that better reflect actual nanomaterial forms and their concentrations in air, water, and soil; and how people or wildlife may be exposed to them.

FY 2011 funding will continue support for green nanotechnology research to link exposure and effects research with green chemistry and life-cycle assessment research. Research will identify how nanomaterial properties may be modified or exposure controls implemented to minimize

⁶⁷ For more information, see: <http://www.epa.gov/ncer/nano/>

⁶⁸ For more information, see <http://www.nano.gov/>

⁶⁹ For more information, see http://www.oecd.org/site/0,3407,en_21571361_41212117_1_1_1_1_1,00.html

and manage the potential of risk from products containing nanomaterials and minimize inputs, including energy usage, during the production of nanomaterials.

In 2011 EPA will develop a screening-level life cycle assessment for nanoscale silver and strategies for eco-friendly synthesis of nanomaterials. The advancement of safer nanomaterial production with a smaller environmental footprint, through green nanotechnology research, will benefit both producers and consumers.

EPA also will continue to develop comprehensive environmental assessment and decision analytic approaches to support long term as well as near to medium term needs for evaluating potential impacts of nanomaterials, particularly in the absence of adequate information for conventional risk assessment methodologies. A case study prioritizing research needed to support a comprehensive environmental assessment of selected applications of nanoscale silver will be released in FY 2011. Developing these new analytical approaches will enable decision makers to make better decisions, sooner, with a broader appreciation for where in a nanomaterial's life cycle there exists the greatest potential to avoid or manage risks.

Report on the Environment

In FY 2011, EPA will improve the utility of the Report on the Environment (ROE) by fine-tuning indicators (revising, adding, deleting), integrating conceptual diagrams, and including supplemental information to fill identified data gaps. EPA will also explore the feasibility of adding energy and climate chapters. The ROE will continue to play 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 intra-agency and interagency partnerships with active participation from EPA 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 of Agency senior managers who provide guidance and feedback to the ROE.

EPA's 2008 Report on the Environment was released in May 2008 as a scientific document that presents the condition of and trends in the nation's environment and human health. The ROE uses data from state and federal agencies for over half of the indicators (e.g. USDA, CDC, DOI). EPA released an interactive public website (the "eROE") to provide greater transparency on how EPA can improve its ability to assess the nation's environmental quality and human health, and how EPA uses that knowledge to better manage measurable environmental results. The eROE is updated quarterly with the most recent environmental indicator data and enhancements at 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 2011, the Advanced Monitoring Initiative (AMI) will work with EPA programs, offices, and Regional Offices 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 support 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 collection and management with an Agencywide effort to provide a "knowledge base," and the tools to access and utilize it effectively.

In FY 2011, 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. EPA also will focus on environmental technology project performance, which will be further strengthened through a rigorous quality assurance and performance based management process.

In addition, to respond to U.S. environmental technology needs, EPA USGEO’s approach is to integrate 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, including its sources, control and treatment, environmental fate and behavior, impacts on ecological resources, and potential effects on human health. In FY 2011, the mercury program will discontinue research to evaluate the transport of mercury from power plant stacks, including plume transport and ultimate deposition (e.g. mercury “hot spots”) analyses. This discontinuation will minimize the impact to the highest priority work in the human health and ecosystems research program, such as ecosystem services and children's health research. The program will release a report of mercury “hot spots” research completed in previous fiscal years. In FY 2011, research to support implementation of revised regulations to control mercury and co-pollutants from coal-fired utility boilers and other combustion sources will be discontinued. Studies to develop or evaluate the cost and performance of emissions control technologies capable of reducing mercury and co-pollutants will be curtailed, resulting in more limited data for inclusion in planned products and reports.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Ecological Research publications rated as highly-cited publications.	21.4	Data Avail 2010	No Target Established	22.4	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Ecological research	21.3	Data Avail	No Target Established	22.3	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	publications in "high-impact" journals.		2010			

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of public health outcomes long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of mechanistic data long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of aggregate and cumulative risk long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of human health program publications rated as highly cited papers.	No Target Established	Biennial	26.5	No Target Established	Percent

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 2011, the Human Health Research program plans to accomplish its goals of completing and delivering 100 percent of its planned outputs. The program also is targeting increases in the percentage of its peer reviewed risk assessments which are cited as supporting a decision to either 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. The program will conduct a retrospective analysis over the last ten years, because it can take many years for the development of regulatory documents. This can result in a long lag time between publication of research results and their being cited by EPA.

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 2011, the ESRP intends to meet 100 percent of its planned outputs in support of each long term goal while increasing program efficiency. 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, EPA is engaging its BOSC to evaluate whether the Agency's research and development programs are "doing the right research and doing it well."

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,254.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (+\$800.0) This increase reflects a redirection of resources to the Human Health and Ecosystems program to fund ECOTOX, which is a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife. Various programs have contributed to needed access and updates, and maintaining them.
- (+\$500.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a web or video conference format. In order to be successful, strategic investments in video/web conferencing capabilities are

necessary. Funds will support the creation of multi-use conference rooms in selected locations, as well as the needed internet capacity.

- (-\$326.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and video conferencing.
- (+\$576.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$1,787.0 \ -6.5 FTE) This decrease reflects the net result of realignments of FTE and resources such as equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities and includes a reduction of 6.5 FTE and decreased associated payroll of -\$877.0. The FTE reduction includes 5.0 FTE for the Ecosystem Services STAR grants program. Realignments are based on FTE allocations as well as scientific equipment needs.
- (-\$1,000.0) This decrease reflects administrative savings in the Human Health and Ecosystems program that are being reinvested in STAR fellowships.
- (-\$2,435.0 \ -3.1 FTE) This reflects a reduction to the mercury research program and includes a reduction of 3.1 FTE and decreased associated payroll of \$418.0. The program will discontinue research examining mercury "hot spots" evaluating mercury emission measurement/control technologies, and assessing the impact of different coals and technology configurations on coal combustion residues. The program will use data already generated to produce final products and reports.
- (-\$3,000.0) This reduction is the result of an increase included in the FY 2010 Appropriation providing an additional \$3 million for children's environmental health research in FY 2010, of which \$2 million was directed to the new centers of excellence on children's environmental health, with at least one of these centers to focus on child care settings, and \$1 million to accelerate research on the effects of environmental chemicals and toxins on children. This increase is not included in the FY 2011 budget request.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$11,696.8	\$14,111.0	\$13,800.0	(\$311.0)
Leaking Underground Storage Tanks	\$424.1	\$345.0	\$457.0	\$112.0
Oil Spill Response	\$382.8	\$639.0	\$689.0	\$50.0
Hazardous Substance Superfund	\$19,010.1	\$21,191.0	\$19,069.0	(\$2,122.0)
Total Budget Authority / Obligations	\$31,513.8	\$36,286.0	\$34,015.0	(\$2,271.0)
Total Workyears	141.4	154.7	150.7	-4.0

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 and supports the Administrator's priorities for assuring the safety of chemicals and cleaning up our communities. Research under this program has been evolving from waste treatment to beneficial reuse, avoidance of more toxic materials, and operation of waste management facilities to conserve capacity and produce energy. Research addresses resource conservation and material reuse issues, as well as the application of alternative landfill covers and the benefits of landfill bioreactors. To address emerging material management issues, the program made a strategic shift to focus on nanomaterial fate and transport and associated risk management issues.

Research efforts are guided by the Land Research Program Multi-Year Plan (MYP),⁷⁰ developed with input from across the Agency. The MYP outlines steps for meeting the needs of the Research and Development program's clients and stakeholders and for evaluating progress through annual performance goals and measures. Research under this program supports human health risk and exposure assessments and methods, which are conducted under the Human Health Risk Assessment program. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

The Land Protection and Restoration research program has taken a number of steps to improve effectiveness and demonstrate results. To enhance communication with customers, the program has developed a Land Research program Web site⁷¹ that includes a description of the program;

⁷⁰ 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>.

⁷¹ For more information, see www.epa.gov/landscience.

fact sheets (science issues, research activities, and research impacts); research publications and accomplishments; and links to tools and models. In addition, the program continues to leverage external evaluations by a subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee composed of independent, expert scientists and engineers. In their most recent report to EPA in FY 2009, building on the full program evaluation in FY 2006, the BOSC found that 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 BOSC recommendations and “exceeds expectations” in achieving its program goals.⁷²

FY 2011 Activities and Performance Plan:

In FY 2011, 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. These bioreactors will contribute to resource conservation by accelerating waste decomposition not only for preservation of disposal capacity, but more importantly for methane capture and energy recovery. 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. Research will continue on management options for construction and demolition debris including materials such as drywall.

The Land research program also will continue methamphetamine lab clean up studies in response to the Methamphetamine Remediation Research Act,⁷³ which requires EPA to evaluate clean up techniques and exposure risks. EPA will collaborate on methamphetamine lab clean up studies with the National Institute of Standards and Technology (NIST).

As part of the Land Research program, EPA conducts integrated scientific studies that support site-specific arsenic bioavailability and the development of in-vitro methods and speciation methods. The bioavailability of metals in soils, sediments, and materials for reuse is an important issue in reuse assessments, and research products will provide critical information to support reuse risk assessments. Improving the bioavailability estimate may substantially reduce the cost of soil remediation.

Research directly supporting regulation of coal combustion residues (CCR) management is a high priority in FY 2011. Planned research products will continue to assess CCR leaching potential to support risk assessments. Researchers will also continue to develop a decision support tool for decision makers to evaluate management methods for coal ash for disposal or beneficial reuse.

⁷² BOSC Land Restoration and Preservation Research Mid-Cycle Subcommittee Report. For more information, see <http://www.epa.gov/osp/bosc/pdf/landmc0901rpt.pdf>.

⁷³ For more information, see P.L. 110-143 at <http://thomas.loc.gov/>.

Under EPA's nanomaterial research program, described in more detail in Research: Human Health and Ecosystems, the Land Research program addresses the fate and transport research theme. The FY 2011 nanotechnology budget request is \$20 million, including \$3.7 million in the Land research program, \$13.9 million in the Human Health and Ecosystem research program, \$2 million in the Fellowships program, and \$0.23 million in both the Air and Sustainability research programs. The program's goal is to lead the Federal government in addressing key science questions on the persistence and movement of nanomaterials in the environment. In FY 2011, the program will:

- Publish research, begun in FY 2007, on the detection and measurement of nanomaterials. This research will support investigation of environmental fate, transport and characterization in the environment.
- Develop predictive tools to characterize nanomaterials in multiple media.
- Produce a report evaluating the properties of nanomaterials that affect fate, transport, reactivity, and bioavailability.
- Publish a report on the state-of-the-science for sampling and measurement of nanomaterials in environmental media.
- Utilize nanoscale materials to effect remediation of contaminants, notably the use of zero-valent iron to degrade organic contaminants. This research is applicable to contaminated sediment and ground water sites but in FY 2011 the program plans to expand to explore other nanomaterials and contaminants in other media, such as air and drinking water.
- Conduct research on greener synthesis of nanomaterials to provide industry with a model for more benign manufacturing.
- Life cycle assessment and supporting research across media will improve our understanding of where nanomaterials enter the environment, how they result in human or ecological exposures, and identify where management techniques could be applied if controls are necessary.

Performance Targets:

Work under this program supports EPA's Objective 3.3: Enhance Science and Research. Specifically, the program provides and applies sound science for protecting and restoring land by conducting leading-edge research, which, through collaboration, leads to preferred environmental outcomes.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$10.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.

- (-\$31.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$27.0 \ +0.5 FTE) This reflects the net result of realignment of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, including an increase of .5 FTE with associated payroll of \$68.0. Realignment of these resources are based on FTE allocations as well as scientific equipment needs.
- (-\$335.0 \ -2.0 FTE) This reflects a redirection of resources to Drinking Water research, reflecting the natural evolution in research direction from groundwater remediation issues to groundwater protection issues related to carbon sequestration. This reduction includes 2.0 FTE with decreased associated payroll of \$270.0.
- (+\$18.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

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

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$19,445.7	\$27,287.0	\$25,292.0	(\$1,995.0)
Hazardous Substance Superfund	\$96.0	\$73.0	\$0.0	(\$73.0)
Total Budget Authority / Obligations	\$19,541.7	\$27,360.0	\$25,292.0	(\$2,068.0)
Total Workyears	64.7	70.8	70.7	-0.1

Program Project Description:

EPA’s Science and Technology for Sustainability (STS) Research program provides information and tools for Agency program and Regional Offices as well as external stakeholders to promote sustainable approaches to address environmental problems affecting health and the environment. EPA’s focus on and commitment to promoting sustainability—achieving economic prosperity while protecting natural systems and quality of life for the long term—is rooted in the Pollution Prevention Act of 1990. The STS Research program provides the scientific foundation for the Agency’s advancement of sustainability through systems research and integrated analysis of air, water, and land resources, and of changes in traditional methods of producing and distributing goods and services. Adoption of sustainability concepts in environmental management will rely heavily on scientific advances that provide technologies and decision tools to inform future risk management decisions. As decision makers adopt these new sustainable approaches, they will need appropriate metrics to measure the impacts of public and private actions in the context of sustainability. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

In a 2007 review of the STS Research program, the EPA’s Board of Scientific Counselors (BOSC) concluded that the STS program had significantly responded to its recommendations and that it “exceeds expectations” in achieving long term goals for the adoption of technology and tools⁷⁴. The BOSC suggested the STS program apply its tools and approaches to key national issues. Subsequently, the STS program has focused a significant part of its efforts on research aimed at sustainable biofuel production. In July 2009, the BOSC conducted an evaluation and determined that the STS program “exceeds expectations with respect to progress and responsiveness to the 2007 review.” STS will continue implementing BOSC recommendations.

⁷⁴ For more information, see <http://www.epa.gov/osp/bosc/pdf/sust0803rpt.pdf>.

The STS Research program provides scientific and technical support to regional and national sustainability policies and initiatives. To this end, the STS program has established three areas of emphasis:

- *Sustainability Metrics:* As sustainable solutions to environmental problems are developed and implemented, the progress and impact of these efforts needs to be measured. STS research in this area provides the underlying science needed to develop, apply, and implement these metrics. The STS Research program focuses its efforts 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 can move a region towards sustainability.
- *Decision Support Tools:*⁷⁵ This research creates tools, models, and methods that provide information to decision makers on ways to evaluate, from a systems perspective, environmental management issues in order to achieve sustainable outcomes. This research is built on the foundation of life cycle 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 consumer products, municipal solid waste management, biofuel production, chemical production, and energy generation.
- *Technologies:* This research emphasizes the development and testing of technologies that facilitate sustainable outcomes. An example of ongoing technical work is the development and evaluation of a new membrane technology that can recover biofuel from biomass streams at higher purity levels using 50 percent less energy and at lower cost than current technology. An external collaborator, Membrane Technology & Research, has further developed this technology and applied for two patents listing EPA as co-inventor.⁷⁶ Programs such as the Small Business Innovation Research (SBIR) program and the People, Prosperity, and Planet (P3) student design competition emphasize finding solutions to client-driven problems while promoting sustainable design and implementation practices that 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.

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

⁷⁵ For more information, see <http://www.epa.gov/ord/NRMRL/std/sab> .

⁷⁶ For more information, see Section II – Page 184 of EPA’s FY 2009 Performance and Accountability Report at http://www.epa.gov/cfo/par/2009par/par09_goal5.pdf .

FY 2011 Activities and Performance Plan:

The STS program will continue development and implementation of systems metrics, which represent the measurement of overall system function and health on a broad regional scale. In partnership with the Forest Service and many state and local stakeholders in the San Luis Valley of Colorado, the STS program worked in FY 2010 to develop four system-based sustainability metrics (ecological and economic) to be used by environmental managers in supporting sustainable outcomes. In FY 2011, the program will validate and apply these metrics. The program also will begin research to apply sustainability metrics to management of regional ecosystems in Puerto Rico. This study will enhance the robustness of the metrics effort by applying the metrics to different types of regional ecosystems (e.g. more urban development and industrial activity). Additionally, research will continue to develop tools and data that will be used to evaluate the sustainability of different pathways to produce, distribute, and use biofuels.

In support of one of the Administrator's top priorities, assuring the safety of chemicals, the STS program will initiate a new research effort in FY 2011 to mitigate human exposure and environmental releases from the recycling and disposal of electronic waste. Through new design methods, EPA will work with industry to promote changes to manufacturing and other processes, such as refurbishing and recycling aiming to reduce adverse human health and environmental impacts and decrease the volume of unwanted electronic devices. Lifecycle analyses of electronic devices will develop tools and methods to assess the environmental impacts of the production, use, and end-of-life management of electronic devices and electronic device components.

As part of the Agency's Clean Energy and Climate Change initiative, the STS program will continue to support the biofuels research initiative started in FY 2010 to help decision makers better understand the risk tradeoffs associated with biofuels use and production. The STS program is coordinating the preparation of EPA's Report to Congress, mandated under the Energy Independence and Security Act 2007 (EISA) Section 204, on the current and anticipated future environmental impacts due to expanded biofuel production in the U.S. Such assessments are due every three years. The first report to Congress is due December 2010 and will be followed by a research workshop in 2011. Research in support of EISA will examine proposed feedstocks and assess their potential impacts on the environment, aiding the development of approaches that provide for sustainable production of biofuels.

Research also will continue for other decision support tools, including efforts to further develop a streamlined in-house life cycle assessment methodology and to incorporate material flow concepts into existing tools. The STS program will continue work on a water use model and will complete a model for assessing environment impact for land use. STS research will also continue to evaluate an auction-based management approach to wet weather flow management in urban watersheds using the Cincinnati and Cleveland metropolitan areas as case studies.

Finally, the STS program will maintain funding for the development of new innovative technologies through the People, Prosperity and Planet (P3) program. This program advances the development of environmental technology testing protocols and a global environmental technology network, encourages innovation in environmental stewardship, and provides educational opportunities in the fields of science, technology, engineering, and mathematics.

In FY 2011, the STS Program will deliver several tools, models, guidance, and reports to inform state and Federal regulatory decision makers. In order to evaluate the sustainability of biofuel 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 the local level with recommendations on the effectiveness of a small-parcel approach incorporating best management practices for managing urban watersheds.

The STS program is taking steps to improve performance through the development of a revised Science and Technology for Sustainability Multi-Year Plan (MYP) by 2010, a key recommendation from the BOSC. The STS program also continues to measure performance through several annual output and long term outcome measures. The next BOSC review is expected to occur in 2013.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-developed decision support tools and methodologies.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of STS's goal that decision makers adopt innovative technologies developed or verified by ORD.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Science and Technology for Sustainability (STS) publications in "high impact" journals.	35.3	35.4	No Target Established	36	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of STS's goal that decision makers	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	adopt ORD-identified and developed metrics to quantitatively assess environmental systems for sustainability.					

Work under the STS Research program supports EPA's Strategic Plan Objective 5.4: Enhance Science and Research. The STS program measures and manages performance through the timely completion of research milestones and the citation rates of research publications. In FY 2011, the program plans to continue making progress toward its long term objective of providing information and tools for Agency program and Regional Offices as well as external stakeholders to promote sustainable approaches to address environmental problems affecting health and the environment.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,000.0) This reflects a new research focus on design methods and management strategies for electronic devices to mitigate human exposure and environmental releases from the recycling and disposal of electronic waste. This research supports the Agency's priority for assuring the safety of chemicals.
- (+\$295.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$60.0 \ -0.1 FTE) This decrease reflects the net result of realignments of resources such as equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities and includes a reduction of .1 FTE with decreased associated payroll of \$13.0. Realignments of these resources are based on FTE allocations as well as scientific equipment needs. This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.
- (-\$47.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$3,183.0) This reflects an adjustment for Small Business Innovation Research (SBIR). Enacted funding levels for SBIR 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, and the exact amount of the mandated requirement is known, the funds will be transferred to the SBIR program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Science & Technology</i>	\$28,200.0	\$27,347.0	\$27,645.0	\$298.0
Total Budget Authority / Obligations	\$28,200.0	\$27,347.0	\$27,645.0	\$298.0
Total Workyears	135.2	137.4	136.3	-1.1

Program Project Description:

The Pesticides and Toxics Research program conducts integrated multidisciplinary research to provide the scientific foundation for the Agency’s actions to protect human health and the environment against unreasonable risks from exposure to pesticides and toxic chemicals. 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, communities, and ecosystems, with a focus on pesticides and toxic chemicals. This research complements work conducted under the Human Health and Ecosystem Research, the Human Health Risk Assessment, and the Endocrine Disruptors Research programs and supports the Administrator’s priorities for assuring the safety of chemicals. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

Research to develop and validate methods and models and assessments for predicting risks from pesticides and toxic substances 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 and pesticides.

Research is guided by the Biotechnology Research Strategy⁷⁷ and the Wildlife Research Strategy,⁷⁸ which were developed with broad participation from major clients and stakeholders (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)⁷⁹ outlines specific steps for meeting these needs, as well as annual performance goals and measures for evaluating progress.

77 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.

78 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.

79 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>.

The program primarily focuses on developing methods, models, and data for use in decisions by EPA's Prevention, Pesticides and Toxic Substances program and other organizations. The research program has three major goals:

- Provide predictive tools to prioritize testing requirements; enhance interpretation of data to improve human health and ecological risk assessments; and inform risk management decision-making regarding high priority pesticides and toxic substances;
- Develop probabilistic risk assessment methods and models to better protect natural populations of birds, fish, other wildlife, and non-target plants; and
- Provide the tools necessary to make risk management decisions related to products of biotechnology. However, in FY 2010 and FY 2011, the program will phase out biotechnology work.

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.⁸⁰ The BOSC stated that "SP2 [Safe Pesticides and Safe Products] 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."

EPA and its external reviewers, including the EPA Science Advisory Board and National Science Foundation, have recognized that a statute-specific research approach is limited in its potential for solving modern environmental problems. While the Pesticides and Toxics research program and Human Health research program have both made many important contributions to EPA decision-making and have worked to integrate various disciplines throughout the programs, these external reviews have noted that EPA could benefit by building upon important synergies and emerging tools to address evolving environmental problems. Therefore, moving in that direction, portions of the Pesticides and Toxics research program are being integrated with related aspects of the Human Health research program. The result is a more holistic research program that maximizes responsiveness to the rapidly changing needs of EPA's program and Regional Offices and other critical partners. In mid-2010, the BOSC will review the progress of the SP2 research program in implementing the BOSC's previous recommendations.

FY 2011 Activities and Performance Plan:

In FY 2011, 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

⁸⁰ 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>.

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 proteomic, metabolomic, and transcriptomic biomarkers and other approaches for assessing toxicity in fish;
- Developing alternative test methods for the hazard identification of potential human developmental neurotoxicants;
- Developing a database of metabolic maps for use in prioritization and chemical risk assessment;
- Characterizing the toxicity and pharmacokinetics of certain perfluorinated chemicals (PFCs); and
- Developing sampling and analytical methods and evaluating the fate and transport of certain PFCs in soil and wastewater.

Research conducted in FY 2011 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; for example, developing tools to characterize fate and transport through wastewater treatment plants of certain pharmaceuticals and their impact on aquatic organisms;
- 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 obligations under the Endangered Species Act to ensure that regulated use of pesticides will not harm listed species or their critical habitat.

Researchers in the Pesticides and Toxics and Human Health research programs will work together on integrated, goal-oriented issues, and will plan and execute work to develop high capacity decision support tools for managing contaminants across their life-cycles. The program will provide partners with a more efficient means of assessing exposure and hazards of chemicals. Partners will be able to efficiently evaluate the impact of large numbers of chemicals in everyday commerce on human health (individual and susceptible populations) facilitating prioritization for further chemical research, management, and product design decisions.

In coordination with the Endocrine Disruptors research program, portions of the Pesticides and Toxics research program will be aligned with portions of the Human Health research program to

focus on high-priority problems affecting management of contaminants. This base shift will improve our ability to develop tools that improve chemical management, one of EPA's top priorities.

The Pesticides and Toxics Research program continues to implement key improvement steps. The program developed a formal response to the BOSC report and is addressing action items and making progress toward long-term and annual targets.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of SP2 publications in "high impact" journals.	No Target Established	Biennial	37.2	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of SP2 publications rated as highly cited publications.	No Target Established	Biennial	24.2	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of the SP2 program's long-term goal three.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of the SP2 program's long-term goal one.	100	100	100	100	Percent

The research conducted under this program supports EPA Strategic Objective 4.4. Specifically, the program identifies and synthesizes the best available scientific information, models, methods,

and analyses to support Agency guidance and policy decisions related to the health of people, community, and ecosystems, with a focus on pesticides and toxic chemicals. A key focus for FY 2011 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 in order to inform risk assessment/management decisions.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,251.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$510.0 \ +2.0 FTE) This reflects an increase for research to address exposure issues related to potential chemical and/or pesticide stressors and realignment of FTE to better reflect the programs they support and includes 2.0 FTE with associated payroll of \$258.1. This change reflects EPA's workforce management strategy that will help the agency better align resources, skills and Agency priorities.
- (-\$287.0 \ -2.2 FTE) This reflects the net result of realignments of FTE and resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities, and includes a reduction of 2.2 FTE with decreased associated payroll of \$283.9. Realignments of these resources are based on FTE allocations as well as scientific equipment needs. This change reflects EPA's workforce management strategy that will help the agency better align resources, skills and Agency priorities.
- (+\$16.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (-\$50.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$1,142.0 \ -0.9 FTE) This reflects a reduction to research supporting the development of scientific tools for biotechnology and includes a reduction of .9 FTE with decreased associated payroll of \$116.2. The program will reduce research into refining the use of remote sensing as a tool for the management of insect resistance in genetically modified crops, also known as Plant Incorporated Pesticides (PIP) crops. The program has completed research on decision support systems to identify insect infestations that would indicate the development of insect resistance.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$98,250.4	\$102,224.0	\$105,328.0	\$3,104.0
<i>Science & Technology</i>	<i>\$3,359.7</i>	<i>\$3,637.0</i>	<i>\$3,827.0</i>	<i>\$190.0</i>
Total Budget Authority / Obligations	\$101,610.1	\$105,861.0	\$109,155.0	\$3,294.0
Total Workyears	565.9	589.4	589.1	-0.3

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. The Center also:

- 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 Regional Offices 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.⁸¹

FY 2011 Activities and Performance Plan:

In FY 2011, the drinking water technical support program will:

⁸¹ For additional program information see

<http://www.epa.gov/safewater>

<https://www.cfda.gov/index?s=program&mode=form&tab=step1&id=63cecb6866ee587d2bfafc7b77c3563c&cck=1&au=&ck>

- 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 laboratories that analyze drinking water samples. Through this program, EPA also will conduct three Regional program reviews during FY 2011. TSC visits each Regional Office on a triennial basis and evaluates their oversight of the state laboratories 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 2011, EPA will have worked with four Regional offices and 24 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 the review, validation and analysis of data from the second round of contaminant monitoring conducted under the UCMR. The monitoring period for UCMR2 is January 2008 to December 2010. These monitoring results, used in concert with health effects information and other occurrence data, contribute significantly to the regulatory determination process. UCMR2 data reporting by public water systems will continue through mid-FY 2011. In addition, in FY 2011, EPA will propose the third round of unregulated contaminant monitoring (UCMR3) and review the comments received on the proposed UCMR3 as the agency prepares the final UCMR3 for publication in FY 2012. 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. EPA is required by Section 1452(o) of the Safe Drinking Water Act (SDWA), as amended, to annually set-aside \$2 million of State Revolving Funds to pay the costs of small system monitoring and sample analysis for contaminants for each cycle of the UCMR;
- Support the Partnership for Safe Water, a national collaborative effort between the water industry and EPA to pursue optimization of the drinking water treatment infrastructure to maximize public health protection; and
- 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	90	89.1	90	90	Percent Systems

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 including effective treatment & source water protection.	90	92.1	90	91	Percent Population

* Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$190.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

SDWA.

**Environmental Protection Agency
2011 Annual Performance Plan and Congressional Justification**

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**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

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

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management				
<i>Budget Authority</i>	\$2,405,796.7	\$2,993,779.0	\$2,891,036.0	(\$102,743.0)
<i>Recovery Act Budget Authority</i>	\$12,463.2			
Total Dollars	\$2,418,259.9	\$2,993,779.0	\$2,891,036.0	(\$102,743.0)
Total Workyears	10,565.8	10,925.3	11,066.5	141.2

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 \$9,000 for official reception and representation expenses, [\$2,993,779,000] \$2,889,536,000, to remain available until September 30, [2011] 2012[: Provided, That of the funds included under this heading, not less than \$608,441,000 shall be for the Geographic Programs specified in the explanatory statement accompanying this Act].(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010.)

**Program Projects in EPM
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Air Toxics and Quality				
Clean Air Allowance Trading Programs	\$20,336.2	\$20,791.0	\$21,178.0	\$387.0
Federal Stationary Source Regulations	\$29,494.5	\$27,158.0	\$34,991.0	\$7,833.0
Federal Support for Air Quality Management				
Clean Diesel Initiative	\$238.1	\$0.0	\$0.0	\$0.0
Federal Support for Air Quality Management (other activities)	\$93,462.6	\$99,619.0	\$134,634.0	\$35,015.0
Subtotal, Federal Support for Air Quality Management	\$93,700.7	\$99,619.0	\$134,634.0	\$35,015.0
Federal Support for Air Toxics Program	\$24,168.0	\$24,446.0	\$0.0	(\$24,446.0)

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Radiation: Protection	\$9,962.0	\$11,295.0	\$11,439.0	\$144.0
Radiation: Response Preparedness	\$2,672.6	\$3,077.0	\$3,088.0	\$11.0
Stratospheric Ozone: Domestic Programs	\$5,961.8	\$5,934.0	\$5,711.0	(\$223.0)
Stratospheric Ozone: Multilateral Fund	\$9,697.0	\$9,840.0	\$9,865.0	\$25.0
Subtotal, Air Toxics and Quality	\$195,992.8	\$202,160.0	\$220,906.0	\$18,746.0
Brownfields				
Brownfields	\$23,793.1	\$24,152.0	\$27,397.0	\$3,245.0
Climate Protection Program				
Climate Protection Program				
Energy STAR	\$39,085.5	\$52,606.0	\$55,475.0	\$2,869.0
Methane to markets	\$3,847.3	\$4,569.0	\$4,591.0	\$22.0
Greenhouse Gas Reporting Registry	\$5,163.1	\$16,685.0	\$20,750.0	\$4,065.0
Climate Protection Program (other activities)	\$49,089.8	\$39,184.0	\$42,234.0	\$3,050.0
Subtotal, Climate Protection Program	\$97,185.7	\$113,044.0	\$123,050.0	\$10,006.0
Subtotal, Climate Protection Program	\$97,185.7	\$113,044.0	\$123,050.0	\$10,006.0
Compliance				
Compliance Assistance and Centers	\$24,996.0	\$25,622.0	\$0.0	(\$25,622.0)
Compliance Incentives	\$8,710.0	\$9,560.0	\$0.0	(\$9,560.0)
Compliance Monitoring	\$98,457.1	\$99,400.0	\$110,467.0	\$11,067.0
Subtotal, Compliance	\$132,163.1	\$134,582.0	\$110,467.0	(\$24,115.0)
Enforcement				
Civil Enforcement	\$138,113.2	\$146,636.0	\$187,755.0	\$41,119.0
Criminal Enforcement	\$45,527.6	\$49,637.0	\$51,312.0	\$1,675.0
Enforcement Training	\$3,110.6	\$3,278.0	\$0.0	(\$3,278.0)
Environmental Justice	\$5,460.3	\$7,090.0	\$7,317.0	\$227.0
NEPA Implementation	\$15,249.8	\$18,258.0	\$18,524.0	\$266.0
Subtotal, Enforcement	\$207,461.5	\$224,899.0	\$264,908.0	\$40,009.0
Environmental Protection / Congressional Priorities				
Congressionally Mandated Projects	\$4,983.5	\$16,950.0	\$0.0	(\$16,950.0)
Geographic Programs				
Great Lakes Restoration	\$0.0	\$475,000.0	\$300,000.0	(\$175,000.0)

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Geographic Program: Chesapeake Bay	\$26,317.8	\$50,000.0	\$62,957.0	\$12,957.0
Geographic Program: Great Lakes	\$22,026.9	\$0.0	\$0.0	\$0.0
Geographic Program: San Francisco Bay	\$4,922.0	\$7,000.0	\$5,000.0	(\$2,000.0)
Geographic Program: Puget Sound	\$11,256.6	\$50,000.0	\$20,000.0	(\$30,000.0)
Geographic Program: South Florida	\$2,279.6	\$2,168.0	\$2,148.0	(\$20.0)
Geographic Program: Mississippi River Basin	\$0.0	\$0.0	\$12,400.0	\$12,400.0
Geographic Program: Long Island Sound	\$3,072.9	\$7,000.0	\$3,000.0	(\$4,000.0)
Geographic Program: Gulf of Mexico	\$4,837.5	\$6,000.0	\$4,515.0	(\$1,485.0)
Geographic Program: Lake Champlain	\$3,147.5	\$4,000.0	\$1,434.0	(\$2,566.0)
Geographic Program: Other				
Lake Pontchartrain	\$970.0	\$1,500.0	\$978.0	(\$522.0)
Community Action for a Renewed Environment (CARE)	\$2,842.1	\$2,448.0	\$2,448.0	\$0.0
Geographic Program: Other (other activities)	\$1,411.1	\$3,325.0	\$1,261.0	(\$2,064.0)
Subtotal, Geographic Program: Other	\$5,223.2	\$7,273.0	\$4,687.0	(\$2,586.0)
Regional Geographic Initiatives	\$32.5	\$0.0	\$0.0	\$0.0
Subtotal, Geographic Programs	\$83,116.5	\$608,441.0	\$416,141.0	(\$192,300.0)
Homeland Security				
Homeland Security: Communication and Information	\$6,983.0	\$6,926.0	\$4,324.0	(\$2,602.0)
Homeland Security: Critical Infrastructure Protection				
Decontamination	\$122.6	\$99.0	\$0.0	(\$99.0)
Homeland Security: Critical Infrastructure Protection (other activities)	\$6,714.6	\$6,737.0	\$2,415.0	(\$4,322.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	\$6,837.2	\$6,836.0	\$2,415.0	(\$4,421.0)
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	\$1,194.1	\$3,423.0	\$2,012.0	(\$1,411.0)
Homeland Security: Preparedness, Response, and Recovery (other activities)	\$1,860.0	\$0.0	\$0.0	\$0.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	\$3,054.1	\$3,423.0	\$2,012.0	(\$1,411.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	\$6,648.8	\$6,369.0	\$6,391.0	\$22.0
Subtotal, Homeland Security	\$23,523.1	\$23,554.0	\$15,142.0	(\$8,412.0)
Indoor Air				
Indoor Air: Radon Program	\$5,347.1	\$5,866.0	\$5,615.0	(\$251.0)

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Reduce Risks from Indoor Air	\$24,335.2	\$20,759.0	\$22,156.0	\$1,397.0
Subtotal, Indoor Air	\$29,682.3	\$26,625.0	\$27,771.0	\$1,146.0
Information Exchange / Outreach				
Children and Other Sensitive Populations: Agency Coordination	\$6,832.4	\$7,100.0	\$10,159.0	\$3,059.0
Environmental Education	\$8,762.9	\$9,038.0	\$6,448.0	(\$2,590.0)
Congressional, Intergovernmental, External Relations	\$48,743.0	\$51,944.0	\$57,473.0	\$5,529.0
Exchange Network	\$17,440.8	\$17,024.0	\$18,702.0	\$1,678.0
Small Business Ombudsman	\$2,623.3	\$3,028.0	\$3,040.0	\$12.0
Small Minority Business Assistance	\$2,319.6	\$2,350.0	\$2,358.0	\$8.0
State and Local Prevention and Preparedness	\$12,152.1	\$13,303.0	\$13,529.0	\$226.0
TRI / Right to Know	\$15,409.5	\$14,933.0	\$16,494.0	\$1,561.0
Tribal - Capacity Building	\$13,174.7	\$12,080.0	\$15,005.0	\$2,925.0
Subtotal, Information Exchange / Outreach	\$127,458.3	\$130,800.0	\$143,208.0	\$12,408.0
International Programs				
US Mexico Border	\$5,621.8	\$4,969.0	\$4,979.0	\$10.0
Commission for Environmental Cooperation	\$396.4	\$0.0	\$0.0	\$0.0
Environment and Trade	\$371.1	\$0.0	\$0.0	\$0.0
International Capacity Building	\$1,072.1	\$0.0	\$0.0	\$0.0
POPs Implementation	\$94.9	\$0.0	\$0.0	\$0.0
International Sources of Pollution	\$6,836.1	\$8,628.0	\$8,759.0	\$131.0
Trade and Governance	\$5,413.2	\$6,227.0	\$6,202.0	(\$25.0)
Subtotal, International Programs	\$19,805.6	\$19,824.0	\$19,940.0	\$116.0
IT / Data Management / Security				
Information Security	\$4,565.3	\$5,912.0	\$7,030.0	\$1,118.0
IT / Data Management	\$90,809.5	\$97,410.0	\$98,060.0	\$650.0
Subtotal, IT / Data Management / Security	\$95,374.8	\$103,322.0	\$105,090.0	\$1,768.0
Legal / Science / Regulatory / Economic Review				
Administrative Law	\$4,584.8	\$5,275.0	\$5,332.0	\$57.0
Alternative Dispute Resolution	\$1,280.5	\$1,147.0	\$1,390.0	\$243.0
Civil Rights / Title VI Compliance	\$11,898.0	\$12,224.0	\$12,366.0	\$142.0
Legal Advice: Environmental Program	\$41,917.2	\$42,662.0	\$44,002.0	\$1,340.0
Legal Advice: Support Program	\$14,236.7	\$14,419.0	\$15,735.0	\$1,316.0

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Regional Science and Technology	\$3,311.4	\$3,271.0	\$3,283.0	\$12.0
Regulatory Innovation	\$21,827.7	\$18,917.0	\$19,828.0	\$911.0
Regulatory/Economic-Management and Analysis	\$17,677.1	\$19,404.0	\$22,640.0	\$3,236.0
Science Advisory Board	\$5,052.1	\$6,278.0	\$5,902.0	(\$376.0)
Subtotal, Legal / Science / Regulatory / Economic Review	\$121,785.5	\$123,597.0	\$130,478.0	\$6,881.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	\$155,471.0	\$157,040.0	\$169,915.0	\$12,875.0
Utilities	\$6,585.1	\$13,514.0	\$13,409.0	(\$105.0)
Security	\$24,545.2	\$27,997.0	\$30,901.0	\$2,904.0
Facilities Infrastructure and Operations (other activities)	\$116,343.3	\$116,687.0	\$115,606.0	(\$1,081.0)
Subtotal, Facilities Infrastructure and Operations	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
Central Planning, Budgeting, and Finance	\$89,875.3	\$82,834.0	\$86,039.0	\$3,205.0
Acquisition Management	\$31,332.7	\$32,404.0	\$33,934.0	\$1,530.0
Financial Assistance Grants / IAG Management	\$26,422.9	\$25,487.0	\$26,466.0	\$979.0
Human Resources Management	\$43,373.2	\$42,447.0	\$44,842.0	\$2,395.0
Subtotal, Operations and Administration	\$493,948.7	\$498,410.0	\$521,112.0	\$22,702.0
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide Risk	\$60,952.3	\$62,944.0	\$64,666.0	\$1,722.0
Pesticides: Protect the Environment from Pesticide Risk	\$42,531.0	\$42,203.0	\$43,031.0	\$828.0
Pesticides: Realize the Value of Pesticide Availability	\$12,772.7	\$13,145.0	\$14,156.0	\$1,011.0
Science Policy and Biotechnology	\$2,084.4	\$1,840.0	\$1,850.0	\$10.0
Subtotal, Pesticides Licensing	\$118,340.4	\$120,132.0	\$123,703.0	\$3,571.0
Resource Conservation and Recovery Act (RCRA)				
RCRA: Waste Management	\$67,198.4	\$68,842.0	\$67,911.0	(\$931.0)
RCRA: Corrective Action	\$38,451.0	\$40,029.0	\$40,003.0	(\$26.0)
RCRA: Waste Minimization & Recycling	\$13,680.9	\$14,379.0	\$14,822.0	\$443.0
Subtotal, Resource Conservation and Recovery Act (RCRA)	\$119,330.3	\$123,250.0	\$122,736.0	(\$514.0)
Toxics Risk Review and Prevention				

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Endocrine Disruptors	\$10,937.0	\$8,625.0	\$8,601.0	(\$24.0)
Toxic Substances: Chemical Risk Review and Reduction				
HPV/VCCEP	\$10.0	\$0.0	\$0.0	\$0.0
Toxic Substances: Chemical Risk Review and Reduction (other activities)	\$48,259.9	\$54,886.0	\$55,820.0	\$934.0
Subtotal, Toxic Substances: Chemical Risk Review and Reduction	\$48,269.9	\$54,886.0	\$55,820.0	\$934.0
Pollution Prevention Program	\$19,958.8	\$18,050.0	\$15,419.0	(\$2,631.0)
Toxic Substances: Chemical Risk Management	\$6,802.7	\$6,025.0	\$6,260.0	\$235.0
Toxic Substances: Lead Risk Reduction Program	\$14,260.7	\$14,329.0	\$14,413.0	\$84.0
Subtotal, Toxics Risk Review and Prevention	\$100,229.1	\$101,915.0	\$100,513.0	(\$1,402.0)
Underground Storage Tanks (LUST / UST)				
LUST / UST	\$13,581.6	\$12,424.0	\$14,647.0	\$2,223.0
Water: Ecosystems				
Great Lakes Legacy Act	\$32,782.7	\$0.0	\$0.0	\$0.0
National Estuary Program / Coastal Waterways	\$27,082.7	\$32,567.0	\$27,233.0	(\$5,334.0)
Wetlands	\$23,124.1	\$25,940.0	\$28,231.0	\$2,291.0
Subtotal, Water: Ecosystems	\$82,989.5	\$58,507.0	\$55,464.0	(\$3,043.0)
Water: Human Health Protection				
Beach / Fish Programs	\$3,102.2	\$2,944.0	\$2,974.0	\$30.0
Drinking Water Programs	\$98,250.4	\$102,224.0	\$105,328.0	\$3,104.0
Subtotal, Water: Human Health Protection	\$101,352.6	\$105,168.0	\$108,302.0	\$3,134.0
Water Quality Protection				
Marine Pollution	\$13,064.7	\$13,397.0	\$13,590.0	\$193.0
Surface Water Protection	\$200,635.0	\$208,626.0	\$226,471.0	\$17,845.0
Subtotal, Surface Water Protection	\$200,635.0	\$208,626.0	\$226,471.0	\$17,845.0
Subtotal, Water Quality Protection	\$213,699.7	\$222,023.0	\$240,061.0	\$18,038.0
Recovery Act Resources				
Recovery Act Resources	\$12,463.2			
TOTAL, EPA	\$2,418,260.9	\$2,993,779.0	\$2,891,036.0	(\$102,743.0)

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$13,174.7	\$12,080.0	\$15,005.0	\$2,925.0
Total Budget Authority / Obligations	\$13,174.7	\$12,080.0	\$15,005.0	\$2,925.0
Total Workyears	83.8	73.1	88.1	15.0

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 (SO₂) and nitrogen oxide (NO_x) emissions from the U.S. electric power generation industry. The program continues to be recognized as a model for flexible and effective air pollution regulation, both in this country and abroad. The SO₂ program uses a market-based approach with tradable units called “allowances” (one allowance authorizes the emission of one ton of SO₂ in a given or later year). The authorizing legislation sets a permanent cap on the total amount of SO₂ that may be emitted annually by affected electric generation units (EGUs) in the contiguous U.S. The program is phased in, with the final SO₂ cap beginning in 2010 set at 8.95 million tons, a level at approximately one-half the amount these sources emitted in 1980. Both the SO₂ and NO_x program components require accurate and verifiable measurement of emissions.

The program also is responsible for implementing U.S. commitments under the US-Canada Air Quality Agreement of 1991 to reduce and maintain lower SO₂ 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/>.

In 2008, total SO₂ emissions from 3,572 affected EGUs were 7.6 million tons, already below the statutory annual permanent cap.¹ Despite this significant achievement, EPA health studies and ecological assessments, analyses by the Interagency National Acid Precipitation Assessment Program (NAPAP),² and data from long-term monitoring networks all indicate that further reductions in SO₂ and NO_x emissions, beyond those specified in Title IV, are necessary to allow sensitive forests and aquatic ecosystems to recover from acidification. The program’s environmental objective to improve affected ecosystems cannot be attained without more reductions in SO₂ and NO_x, the key pollutants involved in the formation of acid rain. These

¹ US EPA, *Acid Rain and Related Programs: 2008 Emission, Compliance, and Market Analysis*, September 2009 (http://www.epa.gov/airmarkwts/progress/ARP_2008_ECM_Analyses.pdf). Page 2.

² *National Acid Precipitation Assessment Program Report to Congress: An Integrated Assessment*. 2005. www.napap.noaa.gov/reports. Pages 65-73.

assessments also show that significant additional reductions in these emissions are needed for many areas in the U.S. to achieve and maintain health-based protective air quality standards for fine particulate matter (PM_{2.5}) and ozone.

At the request of the states, EPA has administered the NO_x Budget Program (NBP), a Regional 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 Memorandum of Understanding among nine states and D.C., in the Northeast Ozone Transport Region (OTR). These states recognized the efficiencies and economies of scale associated with centrally-administered systems for allowance trading, emissions reporting, and true-up/compliance determination, so they sought EPA's expertise to establish and operate these systems for their market-based program. The NBP expanded under the NO_x State Implementation Plan (SIP) call in 2003 and 2004 to add 11 states from the Midwest and Southeast and double the number of affected sources. One more state was added pursuant to the NO_x SIP call in 2007. Affected sources include boilers, turbines, and combined cycle units from a diverse set of industries as well as utility EGUs.

In 2008, total NO_x emissions, during the summer ozone season, from 2,568 NBP units were 481,420 tons--or 62 percent below 2000 levels, 75 percent below 1990 levels, and 9 percent below the 2008 cap (i.e., sum of the state budgets for the program).³ The volume of emissions data processed by EPA has increased almost 300% over the program in 2000, as has the number of end-of-season reconciliations of unit emissions against allowances held. In FY 2009, the NBP transitioned to the CAIR NO_x ozone season program. As part of this process, EPA transferred NBP banked allowances and some previously unallocated allowances held by states to corresponding CAIR accounts. Also, in 2009, approximately 600 units in six additional states, which were not subject to NBP, reported emissions data for compliance with the CAIR NO_x ozone season program and participated in the EPA-administered regional allowance trading program. For additional information on the NBP and CAIR NO_x ozone season program, please visit <http://www.epa.gov/airmarkets/progress-reports.html>.

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 Acid Rain accountability 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 SO₂ 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.

Additional information on the program's annual reports are at:
<http://www.epa.gov/airmarkets/progress/progress-reports/>.

³ US EPA, *The NO_x Budget Trading Program: 2000 Emission, Compliance, and Market Data*. May 2009. www.epa.gov/airmarkets/progress/nbp08.html. Page 1.

FY 2011 Activities and Performance Plan:

In FY 2011, through the Clean Air Allowance Trading Programs, EPA is projected to measure, quality assure, and track emissions for SO₂ and/or NO_x from Continuous Emissions Monitoring systems (CEMs) or equivalent direct measurement methods at over 4,600 EGUs and 300 industrial units. In addition, the program will conduct audits and certify emission monitors. Pursuant to Title IV provisions, the program will continue to track and report annual carbon dioxide (CO₂) emissions and heat input for approximately 3,500 electric utility units in the Acid Rain program. Through the SO₂ Allowance Tracking System and NO_x Ozone-Season Allowance Tracking System, allowance transfers are recorded and reconciled against emissions for all affected sources to ensure compliance. EPA will assist sources in the six new states (Arkansas, Florida, Iowa, Louisiana, Mississippi, and Wisconsin) in the NO_x ozone season program and new sources in all states with program implementation, especially with activities related to allowance trading, monitor certification, and emissions reporting, and seasonal or annual reconciliation of emissions with allowances.

Reducing emissions of SO₂ 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 also can be formed through chemical reactions in the air. Emissions of SO₂ 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 known for their scenic views.

Nitrogen dioxide emissions also contribute substantially to the formation of ground-level ozone. Ozone, when inhaled in sufficient concentrations, can cause serious respiratory problems. 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Tons of sulfur dioxide emissions from electric power generation sources	8,000,000	Data Avail 2010	8,450,000	8,450,000	Tons Reduced

EPA tracks the change in nitrogen deposition and sulfur deposition to assess the effectiveness of the Acid Rain program with performance targets set for every three years.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$387.0) This reflects an increase for payroll and cost of living for existing FTE.

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

Program Area: Air Toxics And Quality

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$29,494.5	\$27,158.0	\$34,991.0	\$7,833.0
Total Budget Authority / Obligations	\$29,494.5	\$27,158.0	\$34,991.0	\$7,833.0
Total Workyears	122.2	105.8	120.8	15.0

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 emission standards for sources of these “criteria” pollutants and air toxics. These national standards form the foundation for air quality management and establish goals that protect public health and the environment.

The CAA established two types of NAAQS: primary standards set limits to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly; and 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 (SO₂), nitrogen dioxide (NO₂), carbon monoxide (CO), and lead. EPA is currently working on a multi-pollutant secondary NAAQS review for NO_x/SO_x.

This program also includes activities directed toward reducing air emissions of toxic pollutants from stationary sources. Specifically, this program provides for 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. The program also includes issuing, reviewing, and periodically revising, as necessary, new source performance standards (NSPS) for criteria and certain listed pollutants, standards to limit emissions of volatile organic compounds (VOC) from consumer and commercial products, and establishing Reasonably Available Control Technology (RACT) through issuance and periodic review and revision of control technique guidelines.

FY 2011 Activities and Performance Plan:

EPA will continue reviewing criteria pollutants in accordance with an aggressive multi-year schedule. The Agency has recently accelerated the schedule for completing NAAQS reviews in order to meet the five-year deadline in the CAA for reviewing the standards for each pollutant. Conducting seven concurrent reviews, under this aggressive schedule, requires substantial investment in highly trained staff and the allocation of significant analytical resources toward the NAAQS review process. Each review involves extensive scientific peer review by EPA scientific and technical experts, the design and conduct of complex risk and exposure analyses, a complete policy assessment, and consultation with external scientific experts at each stage of the review process.

Currently, work is underway to achieve and maintain compliance with the 1978 1-hour ozone standard, the 1997 8-hour ozone standard, the 2008 8-hour ozone standard, the 1997 PM₁₀ and PM_{2.5} standards, the 2006 PM_{2.5} standard, the 2009 lead standard, the 1971 NO₂ standard, the 1971 CO standard, and the 1971 SO₂ standards. In addition, planning has begun for implementation requirements relating to revisions to other NAAQS under review, such as NO₂ and SO₂. EPA also is responding to the Court remand of the 2006 PM standards and EPA proposed tighter ozone standards in January 2010 after reconsidering the March 2008 ozone standards.

EPA will continue to pursue opportunities to meet multiple CAA requirements for stationary sources in more integrated ways. For example, where the CAA requires that the Agency take multiple regulatory actions that affect the same industry, the Agency will consider aligning the timing of these rulemaking actions to take advantage of synergies between the multiple rules, where feasible. Coordinating such actions allows the Agency to meet multiple CAA objectives for controlling both criteria and hazardous air pollutants that can result in greater environmental benefits, helps the Agency realize efficiencies in rule development, and offers opportunities to streamline industry's regulatory requirements. Resources will be devoted to fulfilling our legal and statutory deadline obligations to complete the Area Source program, to revise certain MACT and waste incineration standards, to issue residual risk and technology review standards for MACT categories, to review and revise New Source Performance Standards (NSPS), and to issue control technique guidelines for control of VOCs.

As part of the Agency's efforts to meet the Climate and Clean Energy Challenge and in response to pending legal obligations, EPA requests increased resources to assess and potentially develop NSPS consistent with the requirements of section 111 of the Clean Air Act. These efforts will be complementary to any energy and climate legislation. Using emission inventory data, EPA will identify six to eight source categories where emission control is feasible within a reasonable timeframe, where significant emission reductions could be achieved cost-effectively, where previous regulatory work for non-greenhouse gases has led to the development of considerable background information and industry understanding, and where the Agency is required to undertake activities for other regulated pollutants.

Under this effort, the EPA will undertake numerous analyses to understand approaches for mitigating greenhouse gas emissions in a cost-effective manner. Analyses will include

developing emission estimates, evaluating costs of control, and to the extent possible, quantifying economic, environmental, and energy impacts. EPA anticipates approaching the analyses within a multi-pollutant framework in order to help the Agency identify the most cost-effective options for each industrial sector evaluated

Performance Targets:

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

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	36	Data Avail 2011	36	35	Percent

The performance target for projected reduction of air toxics emissions for FY 2011 is slightly lower than FY 2010 because area source emissions (which are based on population projections) are expected to grow. The Air Toxics Program continues to achieve gross emission reductions, but growth projections are higher, resulting in a net effect of higher overall projected emissions. These projections were estimated before the 2009 recession.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$282.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$7,551.0 / + 15.0 FTE) This funding will support the Agency’s efforts to assess and potentially address major stationary sources using the authorities under the section 111 of the Clean Air Act, including 15.0 FTE and associated payroll of \$1,982.0. These resources and FTE would support the potential development of NSPS for six to eight major-source categories using an integrated approach to identify the most cost-effective means of reducing a range of air pollutants.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$93,700.7</i>	<i>\$99,619.0</i>	<i>\$134,634.0</i>	<i>\$35,015.0</i>
Science & Technology	\$11,395.0	\$11,443.0	\$7,697.0	(\$3,746.0)
Total Budget Authority / Obligations	\$105,095.7	\$111,062.0	\$142,331.0	\$31,269.0
Total Workyears	695.8	714.7	860.5	145.8

Program Project Description:

This 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, including consideration of environmental justice issues, are met and sustained.

For each of the six criteria pollutants, EPA tracks two kinds of air pollution trends: air pollutant concentrations based on actual measurements in the ambient (outside) air at selected monitoring sites throughout the country and emissions based on engineering estimates or measurements of the total tons of pollutants released into the air each year. EPA works with state and local governments to ensure the technical integrity of source controls in State Implementation Plans (SIPs) and assists 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 assist them in addressing pollution sources outside U.S. borders that pose risks to public health and the environment within the U.S. This program also supports the development of risk assessment methodologies for the criteria air pollutants.

Toxic air pollutants are known to cause increased risk of cancer and other serious health effects. This Federal support program assists state, Tribal, and local air pollution control agencies in reducing air toxic emissions through modeling, inventories, monitoring, assessments, strategies, and program development for community-based toxics programs. EPA also supports programs that reduce inhalation risk and deposition to water bodies and ecosystems (e.g., the Great Waters program), facilitate international cooperation to reduce transboundary and intercontinental air toxics pollution, develop and update the National Emissions Inventory (NEI), develop risk

assessment methodologies for toxic air pollutants, and provide 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.

FY 2011 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. Implementation of the PM, Ozone, and Lead NAAQS is among the Agency's highest priorities. EPA will continue to support these standards by taking Federal oversight actions and by 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 and will designate areas as attainment or nonattainment.

While the Clean Air Interstate Rule (CAIR) undergoes revision, EPA will continue implementing Phase I of the existing CAIR to ensure that the Agency maximizes reductions and 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 sulfur dioxide (SO₂) and nitrogen dioxide (NO₂) 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 Clean Air Act (CAA).

EPA will continue implementing recommendations of the National Research Council, including: (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, key reform recommendations of the Clean Air Act Advisory Committee's Subcommittee on Air Quality Management, including 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 potentially propose 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, and urban and regional-scale numerical grid air quality models to assess control strategies (including voluntary measures). Please see <http://www.epa.gov/ttn/> for further details. EPA will maintain these tools (e.g., integrated multiple pollutant emissions inventory and air quality modeling platforms) to provide the technical underpinnings for more efficient and comprehensive air quality management and for 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 that 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. Additionally, EPA will continue participating in negotiations under international treaties (e.g., the U.S.-Canada Agreement, Convention on Long Range Transboundary Air Pollution and Stockholm Convention on Persistent Organic Pollutants (POPs) and will lead and participate in partnerships (e.g., the Global Mercury Programme partnerships) to address fine particles, ozone, mercury, and POPs; assess trends and impacts on U.S. air quality using sophisticated models; and build capacity to reduce transboundary air pollution in key Regional Offices 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 with 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 operate and maintain the new emissions inventory system (EIS), a database for current and historical emissions inventory data that is used to store emissions information and generate NEI reports. The NEI will be used by EPA, states, and others to analyze the public health risks from air toxics and to develop strategies to manage those risks and support multi-pollutant analysis covering air toxics, NAAQS pollutants, and greenhouse gases. EPA will maintain the in-use version of the NEI and accept and perform data quality and initial analytical work on state national inventory files for use in updating the 2008 NEI. These files will be submitted via the new EIS. Please see <http://www.epa.gov/ttn/chief/net/neip/index.html> for additional information.

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 and to take appropriate action to more broadly improve the Title V program. Please see <http://www.epa.gov/air/oaqps/permits/> for further details. Among other areas, EPA will perform monitoring support associated with permit issuance and National Environmental Policy Act evaluation.

EPA will revise or develop New Source Review (NSR) regulations to effectively address sources of criteria pollutants and, as appropriate, greenhouse gases consistent with the requirements of the Clean Air Act and in response to pending legal obligations. EPA will also continue to work with state and Tribal governments to implement revisions to the Prevention of Significant Deterioration (PSD) 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. In addition, EPA will continue to work with states and industries on NSR applicability issues.

During FY 2010, EPA expects to determine the ways in which the Title V operating permits and PSD programs relate to greenhouse gases (GHGs). EPA will define when and how permitting is triggered, and will issue policy and guidance on GHG-related issues in these programs. While initial rules and guidance will be issued during FY 2010, EPA anticipates that increased resources will be needed for permitting in FY 2011.

At the national level, EPA will develop sector- and source-specific guidance that will help permitting authorities and affected sources better understand program requirements for GHGs, GHG emissions for the selected source categories, methods for estimating those emissions, control strategies for GHG emissions, and available GHG measurement and monitoring techniques. EPA also will address complex national policy questions that are likely to arise as new requirements are implemented.

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 to identify and evaluate needed improvements that are beyond current statutory authority. EPA will continue to develop measures of permit program efficiency and make program adjustments.

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 NATTS, designed to capture the impacts of widespread pollutants, is comprised of 27 permanent monitoring sites, and the LSMs are comprised of scores of short-term monitoring projects, each designed to address specific local issues. Please see <http://www.epa.gov/ttn/amtic/airtoxpg.html> for additional information.

With requested FY 2011 funding, EPA will continue working on improving monitoring systems to fill data gaps and get a better assessment of actual population exposure to toxic air pollution. EPA also will continue updating the National Air Pollution Assessment (NAPA), an analytical effort designed to provide nationwide information on ambient levels of criteria and toxics air pollutants. Through enhancing such tools, EPA will support expanded analyses and information access.

In addition to meeting CAA requirements, EPA will continue building on its multi-pollutant and sector pilot efforts by constructing and organizing initiatives around industrial sectors. The focus

of these efforts is to address an individual sector's emissions comprehensively and to prioritize regulatory efforts on the pollutants of greatest concern. EPA looks at all pollutants in an industrial sector and identifies ways to take advantage of the co-benefits of pollution control. In developing sector and multi-pollutant approaches, EPA evaluates several approaches currently used in pollution control (e.g., cap and trade, opt-in, and plant-wide programs) and seeks innovative solutions that address the differing nature of the various sectors.

EPA will provide information and training to states and communities through case studies, 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.

EPA will consider the climate impacts of short-lived climate forcers that are traditional air pollutants like black carbon (a constituent of particulate matter) and ozone. Current research suggests reducing emissions of these pollutants may reduce climate change in the near-term and have benefits for sensitive regions, such as the Arctic. Substantial work will be required to complete several assessment efforts, the most significant being the Black Carbon Report to Congress, which must be completed by April 2011, but also parallel assessments by the Arctic Council, the Convention on the Long Range Transport of Air Pollutants, and the United Nations Environment Program, all of which have substantial EPA involvement.

EPA will work with its state, local, and Tribal partners to ameliorate the impacts of air toxics emissions on sub-populations and communities, particularly disadvantaged groups, in a coordinated manner. This will be accomplished through reducing exposures and risks from high priority air toxics emissions sources by deploying emissions monitoring, analytical techniques, control technology expertise, and enforcement resources, and by working directly with specific communities. Key to the process will be preparing outreach materials, developing websites, and performing other community outreach activities. In communities with large English as a Second Language (ESL) populations, outreach materials will be developed in other languages, as appropriate.

In FY 2011, the Agency will conduct integrated pilots to evaluate and, if applicable, reduce risks from air toxics through regulatory, enforcement, and voluntary efforts. Working with the Regional Offices and other partners, EPA will select communities for the pilots in separate regions of the U.S. Factors that may influence the selection of communities include: (1) available information indicating the likely presence of high exposures to air toxics, (2) community characteristics indicative of high potential benefit from emission reductions coupled with less capability at the community level to independently act on such exposures, and (3) the presence of established community organizations that we can work with effectively.

Once the communities are selected, the participating Regional Offices (potential pilot communities could involve more than one Regional Office) will develop regional pilot teams responsible for community activities such as monitoring, outreach, inspections, and enforcement. Headquarters will coordinate this effort across multiple Regional Offices, providing technical support and guidance, as needed. Regional staff will deploy emissions monitoring, analytical

resources, control technology expertise, and enforcement resources, and conduct outreach and communication activities within the communities. In addition, Regional staff will collect performance measure data that will demonstrate if this approach is successful at reducing exposure from air toxics at the community level. The communication materials and websites developed by Headquarters will assist the regions in performing various community outreach activities, including:

- Developing communication plans and preparing materials in *plain English* and other languages for specific community groups.
- Conducting community focus groups and listening sessions to measure comprehension of materials developed.
- Training communities on innovative approaches to reduce pollution.
- Educating residents on ways to protect public health and the environment.
- Creating a community website providing updates on progress with the toxics initiative.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Cumulative percent reduction in the number of days to process State Implementation Plan revisions, weighted by complexity.	2.4	Data Avail 2010	2.9	3.1	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percent reduction in the average number of days during the ozone season that the ozone standard is exceeded in non-attainment areas, weighted by population.	23	Data Avail 2010	26	29	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of new Title V operating permits issued within 18 months of receiving a complete permit application.	95	Data Avail 2010	99	99	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline.	10	Data Avail 2010	11	12	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	5	Data Avail 2010	6	6	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of major NSR permits issued within one year of receiving a complete permit application.	78	Data Avail 2010	78	78	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application.	100	Data Avail 2010	100	100	Percent

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 dates, ranging from FY 2009 - FY 2024.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$2,935.0) This reflects an increase for payroll and cost of living for existing FTE.

- (+\$24,446.0 / + 140.4 FTE) This represents the incoming transfer of resources, including 140.4 FTE with associated payroll of \$18,620.0 and travel of \$345.0, from the Federal Support for Air Toxics program. The Federal Support for Air Toxics Program has been consolidated with this program in support of a sector-based multi-pollutant approach to air quality management.
- (+\$2,255.0 / + 6.5 FTE) As part of the Healthy Communities Initiative, this reflects an increase to support the Agency's efforts to improve its air toxic monitoring capabilities on both source-specific and ambient bases, including 6.5 FTE and associated payroll of \$775.0. These resources and FTE will support expanded analyses and information access by enhancing tools such as the National Air Pollution Assessment (NAPA), National Air Toxic Assessment (NATA), BenMAP, and Air Facility System (AFS).
- (+\$4,864.0 / + 25.0 FTE) This represents an increase for Clean Air Act Permitting activities, including 25.0 FTE and associated payroll of \$3,241.0 and travel of \$69.0. These resources and FTE will support expanded PSD and Title V permit review by the Regional Offices and sector- and source-specific guidance from headquarters, including guidance on significant national policy issues.
- (-\$485.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+ 2.1 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities in support of air toxics work.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$24,168.0	\$24,446.0	\$0.0	(\$24,446.0)
Science & Technology	\$2,052.4	\$2,398.0	\$0.0	(\$2,398.0)
Total Budget Authority / Obligations	\$26,220.4	\$26,844.0	\$0.0	(\$26,844.0)
Total Workyears	136.1	145.8	0.0	-145.8

Program Project Description:

The Federal Support for Air Toxics Program assists state, Tribal, and local air pollution control agencies and communities with modeling, inventories, monitoring, assessments, strategies, and program development of community-based toxics programs, including the assessment of air toxics outside schools. EPA also provides support for programs that reduce inhalation risk or deposition to water bodies and ecosystems, international cooperation to reduce transboundary and intercontinental air toxic pollution, National Emissions Inventory development and updates, risk assessment methodologies for toxic air pollutants, Persistent Bioaccumulative Toxics activities, and training of air pollution professionals. In addition, the program includes activities for implementation of Federal air toxics standards and the triennial National Air Toxics Assessments.

FY 2011 Activities and Performance Plan:

All activities in this program will be assumed by the Federal Support for Air Quality Management Program to support the conversion to a sector-based multi-pollutant approach to air quality management.

Performance Targets:

- There are no FY 2011 performance targets associated with this Program Project because the funds are transferred to the Federal Support for Air Quality Management Program.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$24,446.0 \ -140.4 FTE) This represents a transfer of funding and program responsibilities, including 140.4 FTE with associated payroll of \$18,620.0, to the Federal Support for Air Quality Management Program in support of a sector-based multi-pollutant approach to air quality management.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$9,962.0</i>	<i>\$11,295.0</i>	<i>\$11,439.0</i>	<i>\$144.0</i>
Science & Technology	\$2,484.4	\$2,095.0	\$2,127.0	\$32.0
Hazardous Substance Superfund	\$2,299.2	\$2,495.0	\$2,593.0	\$98.0
Total Budget Authority / Obligations	\$14,745.6	\$15,885.0	\$16,159.0	\$274.0
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 used by EPA to develop radiation protection and risk management policy, guidance, and rulemakings.

FY 2011 Activities and Performance Plan:

EPA will continue to implement its regulatory oversight responsibilities for the Department of Energy (DOE) activities at the WIPP facility, as mandated by Congress in the WIPP Land Withdrawal Act of 1992. EPA also will continue its oversight work to ensure the permanent and safe disposal, consistent with EPA standards,⁵ of all radioactive waste shipped to WIPP. This includes conducting inspections of waste generator facilities and evaluating DOE's compliance with applicable environmental laws and regulations every five years.

EPA will continue protecting public health and the environment from harmful and avoidable exposure to radiation by providing information about radiation and hazards from radioactive material. EPA will continue to provide technical assistance to tribes to locate and clean up

⁴ Additional information at: <http://www.epa.gov/radiation/assessment/index.html>

⁵ Additional information at: <http://www.epa.gov/radiation/wipp/background.html>

radioactive wastes produced from uranium mining that contaminate Tribal land and water resources with radionuclides and heavy metals. This includes consulting with tribes on water quality issues such as radioactivity levels in the waters; and providing radiation training and educational materials for these at-risk communities. EPA, in partnership with other Federal agencies, will continue to promote the management of radiation risks in a consistent and safe manner at water treatment facilities, and during cleanups at Superfund, DOE, Department of Defense (DOD), state, local and other Federal sites. EPA will continue to conduct risk assessments on radiation, including radon, and provide technical tools.

In 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’ *Biological Effects of Ionizing Radiation (BEIR) VII* report. 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 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*, to more specifically address sensitive population groups such as infants, women, and the elderly. 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. Risk managers at all levels of government use this information to assess health risks from radiation exposure and to determine appropriate levels for clean-up of radioactively contaminated sites. EPA’s radiation science is widely relied on and is the objective foundation for EPA, other Federal agencies and states to develop radiation risk management policy, standards, and guidance.

EPA 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of most populous US cities with a RadNet ambient radiation air monitoring system, which will provide data to assist in protective action determinations.	90	Data Avail 2010	95	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Time to approve site changes affecting	53	Data Avail	53	53	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP.		2010			

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Population covered by Radiation Protection Program monitors per million dollars invested.	5,254,000	Data Avail 2010	5,779,000	5,779,000	Population

EPA is 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$32.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$172.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$4.0) This increased contract funding will support the issuance of radiation protection guidance material.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$2,672.6	\$3,077.0	\$3,088.0	\$11.0
Science & Technology	\$3,497.5	\$4,176.0	\$4,263.0	\$87.0
Total Budget Authority / Obligations	\$6,170.1	\$7,253.0	\$7,351.0	\$98.0
Total Workyears	40.2	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 2011 Activities and Performance Plan:

In FY 2011, 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 will continue to develop and maintain Protective Action Guides (PAGs) for use by Federal, state, and local responders. Additionally, 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/>

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 development of their own preparedness programs.

EPA 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 that provide a benchmark to assist in the development of the outyear targets.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Level of readiness of radiation program personnel and assets to support federal radiological emergency response and recovery operations.	90	Data Avail 2010	90	90	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Average time before availability of quality assured ambient radiation air monitoring data during an emergency.	0.8	Data Avail 2010	0.7	0.7	Days

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Level of readiness of national environmental radiological laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for emergency response and recovery decisions.	50	Data Avail 2010	60	70	Percent

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 material and to minimize impacts to public health from radiation exposure.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$16.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$6.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$1.0) This increase in contract funding will support preparedness outreach.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$5,961.8	\$5,934.0	\$5,711.0	(\$223.0)
Total Budget Authority / Obligations	\$5,961.8	\$5,934.0	\$5,711.0	(\$223.0)
Total Workyears	23.7	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 and contribute to climate change.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 U.S. 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 U.S. alone, the worldwide phaseout of ODS will avert millions of deaths from melanoma and non-melanoma skin cancer, millions of cases of non-fatal skin cancer and millions of cases of cataracts, between 1990 and 2165.¹⁰ Cataracts are the leading cause of blindness worldwide and in the U.S., a significant source of cost to the Medicare budget. EPA's estimates are based on the assumption that international ODS phaseout targets will be achieved, allowing the ozone layer to recover later 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 in the stratosphere.¹¹

EPA's Stratospheric Ozone Protection Program implements 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

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.

substances also provide significant benefits for climate protection by reducing potential use and emissions of greenhouse gases. The Act provides for a phaseout of production and consumption of ODS and requires controls on their use, including banning certain emissive uses, requiring labeling for consumer choice, and requiring sound servicing practices for the use of ODS in various products (e.g., air conditioning and refrigeration). The Act also prohibits venting ODS or their substitutes, including other F-gases such as hydrofluorocarbons (HFCs). As a signatory to the Montreal Protocol, the U.S. is committed to ensuring that our domestic program is at least as stringent as international obligations and to regulating and enforcing its terms domestically.

With 196 Parties and virtually universal participation, the Montreal Protocol is the most successful international environmental treaty in existence¹². With U.S. leadership, the Parties to the Montreal Protocol agreed in 2007 to a more aggressive phaseout for ozone-depleting hydrochlorofluorocarbons (HCFCs). This adjustment to the Montreal Protocol requires dramatic HCFC reductions during the period 2010-2040, equaling a 47-percent reduction in overall emissions compared to previous commitments under the Protocol.

The Stratospheric Ozone Protection Program also works with the supermarket industry through the GreenChill Advanced Refrigeration Partnership.¹³ An EPA cooperative alliance with the supermarket industry and other stakeholders, GreenChill promotes advanced technologies, strategies, and practices that reduce refrigerant charges and emissions of ozone-depleting substances and greenhouse gases. The program now includes more than 6,500 stores in 47 states. In 2008, partners reduced their aggregate total emissions by 8.5 percent.

EPA's Responsible Appliance Disposal (RAD) Program¹⁴ is a partnership program that protects the ozone layer and reduces emissions of greenhouse gases through the recovery of ozone-depleting chemicals from old refrigerators, freezers, air conditioners, and dehumidifiers. RAD Partners will dispose of more than 1 million refrigerant-containing appliances annually; this will result in ozone-depleting substance emission reductions of over 550 ODP-weighted tons.

While the Stratospheric Ozone Protection Program continues to heal the ozone layer and garner climate co-benefits, EPA also works to improve public health by sharing information to help the public make better decisions about health and the environment. Because people will live under a compromised ozone layer until the middle of this century, the SunWise Program¹⁵ helps educate children about the importance of UV protection. SunWise has grown from 25 schools to over 22,000 since 1999. It is now relied on by public and private schools in every U.S. state, and in several states, SunWise partner schools amount to a quarter of the entire number of schools in the state. According to a study published in *Pediatrics*,¹⁶ every Federal dollar invested in SunWise results in a \$2-\$4 savings in health care, years of productive life lost and Medicare costs.

¹² See: http://ozone.unep.org/Publications/MP_Key_Achievements-E.pdf, http://www.eoearth.org/article/Montreal_Protocol_on_Substances_that_Deplete_the_Ozone_Layer, <http://ozone.unep.org/highlights.shtml> (Nov 2, 2009 entry)

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

¹⁴ For more information, see: www.epa.gov/ozone/partnerships/rad

¹⁵ For more information, see: www.epa.gov/sunwise

¹⁶ *Pediatrics*. 2008 May;121(5):e1074-84. Economic evaluation of the US Environmental Protection Agency's SunWise Program: Sun Protection Education for Young Children. Kyle JW, Hammitt JK, Lim HW, Geller AC, Hall-Jordan LH, Maibach EW, De Fabo EC, Wagner MC.

FY 2011 Activities and Performance Plan:

In carrying out the requirements of the Act and the Montreal Protocol in FY 2011, EPA will continue to implement the domestic rulemaking agenda for reduction and control of ODS. EPA will provide compliance assistance and enforce rules controlling ODS production, import, and emission.

In FY 2011, EPA will focus its work to ensure that ODS production and import caps under the Montreal Protocol are met. Given that the ODS cap was lowered in 2010, EPA is responding to an increased number of ODS substitute applications, many of which represent lower GHG options. Under the Significant New Alternatives Policy (SNAP) program,¹⁷ EPA will review alternatives to ODS to assist the market's transition to alternatives that are safer, especially for the climate system. The purpose of the program is to allow a safe, smooth transition away from ozone-depleting compounds by identifying substitutes that offer lower overall risks to human health and the environment. 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, as it has done for the 400 applications already reviewed. Under the National Recycling and Emission Reduction Program, required by Section 608 of the Act, venting of ODS and ODS Substitutes like HFCs 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.

Children growing up in America will be exposed to higher levels of UV radiation for many years because the chemicals that damage the ozone layer have a long atmospheric residence time. Scientists do not expect the ozone layer to recover completely until later this century. Recognizing this, EPA will continue to inform the public about simple steps that parents, children and caregivers can take to reduce children's lifetime risks associated with UV radiation exposure. Encouraging sun safety behaviors to reduce risk is a proven and cost-effective approach.

The Clean Air Act requires reductions and a schedule for phasing out the production and import of ODS. These requirements correspond to the domestic consumption cap of class II HCFCs, as set by the Parties to the Montreal Protocol. Each ODS is weighted based on the damage it does to stratospheric ozone layer -- this is the ozone depletion potential (ODP). Beginning on January 1, 1996, the cap for HCFC consumption 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 1989.¹⁸

The next significant reduction in production and import of class II HCFCs that the U.S. is required to meet is no more than 3,810 ODP-weighted metric tons starting in 2010. Further incremental reductions are required through 2020, until all ODS production and import is phased out, except for exempted amounts.

¹⁷ For more information, see: www.epa.gov/ozone/snap/

¹⁸ Consumption equals production plus import minus export.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Remaining US Consumption of Class II ODS, measured in tons of Ozone Depleting Potential (ODP).	<9,900	Data Avail 2010	<3,811	<3,811	ODP tons

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$22.0) 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.
- (-\$197.0) This request reduces funding for the SunWise program. As a result, schools that rely on continuing support in the form of an updated website offering internet-based materials for use, additional related printed curriculum and information on sun safety, will receive reduced support. Additionally, this reduction would reduce the program's ability to continue to serve new partner schools, jeopardizing EPA's ability to serve more than about 20 percent of the nation's K-8 population of school children.
- (-\$8.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$4.0) This increase in funding will support the review of ODS alternatives.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$9,697.0	\$9,840.0	\$9,865.0	\$25.0
Total Budget Authority / Obligations	\$9,697.0	\$9,840.0	\$9,865.0	\$25.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The ozone layer in the stratosphere 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.¹⁹ Increased levels of UV radiation due to ozone depletion have contributed to increased incidence of skin cancer, cataracts, and other health effects.²⁰ Skin cancer is the most common type of cancer, accounting for at least half of all cancers.²¹ 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.

EPA estimates that in the U.S. alone, the worldwide phaseout of ODS will avert millions of non-fatal and fatal skin cancers and cataracts between 1990 and 2165.²² This estimate is based on the assumption that international ODS phaseout targets will be achieved through full participation by all countries (both industrialized and developing), allowing the ozone layer to recover. If developing countries go back to using ODS, at even 70 percent of historic rates, within 20 years the environmental gains to date would be negated, as would billions of dollars spent. According to current research, the ozone layer is expected to recover later this century, due to the very long atmospheric lifetimes of ODS.²³ Ending the production and use of ODS not only saves the ozone layer but reduces the climate impact of these potent greenhouse gases.

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 in developing countries to eliminate the production and use of ODS. Currently, only one country in the world has not ratified the treaty. The U.S. contribution to the Multilateral Fund, which is split between EPA and the Department of State, is 22 percent of the total based on the U.N scale

¹⁹ World Meteorological Organization (WMO). Scientific Assessment of Ozone Depletion: 2006. Geneva, Switzerland. 2007.

²⁰ 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.

²¹ 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=..

²² 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.

²³ WMO, 2007.

of assessment. The Multilateral Fund draws heavily on U.S. expertise and technologies, and the permanent seat of the U.S. on the Executive Committee ensures cost-effective assistance. Negotiated text supporting the 2007 Adjustment to the Protocol commits donor countries, including the U.S., to “stable and sufficient” funding to the Multilateral Fund. The Parties to the Montreal Protocol agreed in the 2007 Adjustment to a more aggressive phaseout for ozone-depleting hydrochlorofluorocarbons (HCFCs), which involves dramatic HCFC reductions during the period from 2010-2040, equaling a 47-percent reduction in overall emissions. Because the ODS are also in most cases strong greenhouse gases (GHGs), this faster phaseout also will result in large reductions in GHG emissions.

FY 2011 Activities and Performance Plan:

EPA’s contributions to the Multilateral Fund in FY 2011 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 supports over six thousand activities in 148 countries that 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:

Performance measures associated with this program are included in Stratospheric Ozone: Domestic Program under Environmental Programs and Management.

The Clean Air Act requires reductions and a schedule for phasing out the production and import of ODS. These requirements correspond to the domestic consumption cap of class II HCFCs, as set by the Parties to the Montreal Protocol. Each ODS is weighted based on the damage it does to stratospheric ozone layer—this is the ozone depletion potential (ODP). Beginning on January 1, 1996, the cap for HCFC consumption 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 1989.²⁴

The next significant reduction in production and import of class II HCFCs that the U.S. is required to meet is no more than 3,810 ODP-weighted metric tons starting in 2010. Further incremental reductions are required through 2020, until all ODS production and import is phased out, except for exempted amounts.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$25.0) Increased funding will support the Multilateral Fund.

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.

²⁴ Consumption equals production plus import minus export.

Program Area: Brownfields

Brownfields

Program Area: Brownfields

Goal: Healthy Communities and Ecosystems

Objective(s): Communities

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$23,793.1</i>	<i>\$24,152.0</i>	<i>\$27,397.0</i>	<i>\$3,245.0</i>
Total Budget Authority / Obligations	\$23,793.1	\$24,152.0	\$27,397.0	\$3,245.0
Total Workyears	121.9	125.9	146.9	21.0

Program Project Description:

The Brownfields program is designed to help states, tribes, local communities, and other stakeholders in economic redevelopment to work together to plan, inventory, assess, safely cleanup, and reuse brownfields. 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. Revitalizing these once productive properties helps communities by removing blight, satisfying the growing demand for land, helping limit urban sprawl, fostering ecologic habitat enhancements, enabling economic development, and maintaining or improving quality of life. This program comprises 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 Brownfields redevelopment. EPA's Brownfields program funds research efforts, clarifies liability issues, enters into Federal, state, Tribal, 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) technical outreach support to address environmental justice issues and support Brownfields research.

EPA's enforcement program develops guidance 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 also can provide direct support to facilitate transactions by parties seeking to reuse contaminated properties.

The Brownfields program supports EPA's EPA Smart Growth²⁵ program which 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 standards that affect the viability of Brownfields redevelopment and by creating cross-cutting solutions that improve the economic, regulatory, and institutional climate for Brownfields redevelopment.

²⁵ For more information please refer to <http://www.epa.gov/livability/>

FY 2011 Activities and Performance Plan:

In addition to supporting the operations and management of the Brownfields program, funds in FY 2011 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 affecting 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's Brownfields program manages a significant workload of assessment, cleanup, Revolving Loan Fund (RLF), and job training cooperative agreements. The FY 2011 request includes additional FTE as part of the new Healthy Communities initiative to help provide the needed support in the planning, expeditious award, and performance management of more than 1,550 existing cooperative agreements and an anticipated 600 newly awarded cooperative agreements in FY 2010 and 2011. The additional FTE in this program will enable the Agency to effectively and efficiently support the Brownfields activities in the Healthy Communities initiative.

EPA Brownfields grants are in the form of cooperative agreements, which requires considerable Agency staff involvement, to ensure that sites are properly assessed and cleaned up consistent with the applicable requirements (e.g., Voluntary Cleanup Program (VCP)). Current Agency guidelines recommend an average of no more than 11 cooperative agreements per project officer. However, in many areas of the country (including areas with many disadvantaged communities and "cities in transition") the average is as high as 30 grants per project officer. This greatly compromises the ability to effectively and efficiently manage these grants for the benefit of the affected communities.

Increases in Regional staff will also facilitate a more effective and efficient delivery of new resources by assisting at a greater level with the negotiation and award of the technical assistance and related cooperative agreements. The award of this funding will allow the communities to initiate the assessment, cleanup, and redevelopment of these underutilized sites.

EPA will provide technical assistance to communities that were awarded funding to combine Smart Growth policies with Brownfields redevelopment. EPA also will conduct further research on incentives for cleanup that encourage Brownfields redevelopment, pilot additional techniques to accomplish redevelopment within communities, identify new policy and research needs, and highlight best practices that can be copied in other communities.

EPA's enforcement program will work collaboratively with our partners on innovative approaches to help achieve the Agency's land reuse priorities. EPA's enforcement program will develop guidance and tools to provide greater certainty and comfort regarding potential liability concerns for parties seeking to reuse these properties.

The Smart Growth program will address critical issues for Brownfields 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. The best practices, tools, and lessons learned from the Smart Growth program will directly inform and assist EPA's efforts to increase area-wide planning for assessment, cleanup, and redevelopment of Brownfields sites. Requested funding for the Smart Growth program is \$1.3 million under Brownfields programs and \$9.9 million under the Regulatory Innovation program.

Work under this program project supports the Agency's new High Priority Performance Goal (HPPG), addressing the environmental health of our communities.

Performance Targets:

Work under this program supports performance results in the STAG: Brownfields Program Projects and can be found in the Performance Four Year Array.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$693.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$81.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$405.0/ -1.0 FTE) This change reflects a decrease in resources supporting the National Brownfields conference due to enhanced administrative efficiencies, which include 1.0 FTE and associated payroll of \$131.0.
- (+\$1,733.0/ +12.0 FTE) This funding will provide technical assistance and support in the planning, award, and performance management of additional cooperative agreements awarded for the Healthy Communities initiative. These resources include 12.0 FTE and associated payroll of \$1,651.0.
- (+\$1,305.0/ +10.0 FTE) This funding provides support for Regional projects officers to more effectively and efficiently negotiate and award cooperative agreements, including 10.0 FTE and associated payroll of \$1,305.0. This funding will allow the communities to initiate the assessment, cleanup, and redevelopment of underutilized sites.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$97,184.7</i>	<i>\$113,044.0</i>	<i>\$123,050.0</i>	<i>\$10,006.0</i>
Science & Technology	\$15,880.0	\$19,797.0	\$16,940.0	(\$2,857.0)
Total Budget Authority / Obligations	\$113,064.7	\$132,841.0	\$139,990.0	\$7,149.0
Total Workyears	223.9	226.0	259.0	33.0

Program Project Description:

EPA’s Climate Protection Program includes efforts to reduce greenhouse gas emissions through voluntary programs, and supports the Administration’s priority of taking action on climate change. 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 (GHG) emissions from power plants, mobile sources, and various other sources.

EPA’s Climate Protection Program has achieved real reductions of carbon dioxide (CO₂) and other greenhouse gases, such as methane, nitrous oxide and fluorinated greenhouse gases – including hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆). EPA’s climate change programs promote energy efficiency and emissions reductions of non-CO₂ greenhouse gases. Actions taken today will continue to deliver environmental and economic benefits for many years to come, since the investments made by EPA partners as a result of EPA programs often have lifetimes of ten years or more. 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 CO₂), delivered more than \$75 in energy bill savings, and facilitated more than \$15 in private sector investment.²⁶ This is based upon cumulative reductions since 1995.

EPA manages a number of voluntary efforts, such as the ENERGY STAR program, SmartWay Transport Partnership, clean energy partnerships, and multiple programs on non-CO₂ greenhouse gases, 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 and deployment of GHG reduction measures such as: lack of clear, reliable information on technology opportunities; lack

²⁶ Climate Protection Partnerships Division, U.S. Environmental Protection Agency. 2007
http://www.energystar.gov/ia/partners/publications/pubdocs/Annual%20Report_122309_to%20EPA_Web.pdf

of awareness of energy efficient products, services, and transportation choices; and the need for additional incentives for manufacturers to invest in efficiency research and development.

EPA works with the Department of Energy (DOE) on the ENERGY STAR program. Consistent with a new Memorandum of Understanding (MOU) signed on September 30, 2009, EPA will manage the specification process for more than 60 product categories, the new and existing homes programs, and the commercial and industrial programs. This MOU shifts all brand management responsibility to EPA and clarifies the lines of responsibility between EPA and DOE, building upon their respective areas of expertise. The ENERGY STAR program continues to yield significant results. In 2008 alone, Americans, with the help of ENERGY STAR, prevented more than 45 million metric tons of carbon equivalent (MMTCE), saving \$18 billion on their annual utility bills. ENERGY STAR is on track to meet its goal of avoiding 52 MMTCE of greenhouse gases in 2012.²⁷

EPA also manages the implementation of the Methane to Markets Partnership – a US-led, international initiative that brings together 31 Partner governments and over 900 public and private sector organizations to advance methane recovery and use as a clean energy source. Methane to Markets builds on the success of EPA’s domestic methane voluntary programs and focuses on advancing project development at agriculture operations, coal mines, landfills, and oil and gas systems. As of 2009, the US is supporting over 170 projects around the world and has leveraged over \$278 million in public and private sector investments. These projects are expected to reduce emissions by 61 million metric tons of CO₂ equivalent (MMTCO₂E) annually²⁸

EPA’s SmartWay Partnership Program works with transportation technology and freight industry partners (shippers, carriers, logistics companies) to accelerate the deployment of fuel saving, low emission technologies and to promote best practices across the global supply chain. The SmartWay program started in February 2004 with 15 partners, and in June 2009, it passed 2,000 partner mark. On an annual basis, SmartWay partners commit to achieve reductions of 568 million gallons of diesel fuel, nearly 6.3 million tons of CO₂, 37,000 tons of NO_x, and over 2,000 tons of PM. This accounts for an estimated annual fuel savings of nearly 1.5 billion dollars. 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 is its established goal for 2012. At the same time, the program will result in fuel savings of up to 150 million barrels of oil annually.²⁹

SmartWay has established a benchmark for clean, efficient freight goods movement globally. Twelve nations participated in an International SmartWay Summit in 2008. As a result, a SmartWay “green truck” project is underway in China, and Australia and the European Union are evaluating SmartWay as a model for freight transport efficiency programs. To respond to this international growth, SmartWay is developing a new supply chain model, working with several universities including the Massachusetts Institute of Technology and the University of Michigan.

²⁷ Additional information at: www.energystar.gov

²⁸ Additional information at: www.epa.gov/methanetomarkets/ and www.methanetomarkets.org

²⁹ Additional information at: www.epa.gov/smartway

The SmartWay brand continues to be a mark of excellence for heavy duty commercial trucks. All the major class 8 truck and trailer manufacturers now offer at least one SmartWay model, with many tire and aerodynamic manufacturers designing new components targeted to meet the SmartWay specification, and EPA is conducting tests to expand its technical verification capacity under SmartWay.

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 GHG reduction strategies. The Clean Energy-Environment State and Local Program provides assistance to local and state governments for improving their facilities, and leading 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 pursuing all cost-effective energy efficiency.

In addition to EPA's voluntary climate change programs, 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 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 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 2011 Activities and Performance Plan:

- EPA will continue to implement its government/industry partnership efforts to achieve greenhouse gas reductions. In addition to reducing 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.
- EPA will continue to implement the ENERGY STAR program across the residential, commercial, and industrial sectors consistent with the new EPA/DOE MOU:

- Enhancing the use of the ENERGY STAR label on products including adding products to the program, accelerating the rate that product specifications are updated in terms of stringency, and developing a comprehensive product certification and verification initiative for ENERGY STAR qualifying products.
- Expanding the Home Performance with ENERGY STAR program, leveraging alternative, market-based models for delivery, to increase the number of homes retrofitted each year.
- Expanding ENERGY STAR programs that improve the installation of products such as heating and cooling equipment whose efficiency is greatly affected by installation practices.
- Expanding efforts to promote improvement of commercial buildings and industrial facilities through EPA’s ENERGY STAR tools, resource, and outreach campaigns.

The FY 2011 Budget Request for the ENERGY STAR program totals \$55.5 million.

Energy Star Program Funding				
Dollars in Millions				
	FY 2008 Enacted	FY 2009 Enacted	FY 2010 Enacted	FY 2011 Request
Energy Star Total:	\$48.2	\$49.7	\$52.6	\$55.5
-Residential	\$24.0	\$25.0	\$25.9	\$26.2
-Commercial and Institutional	\$21.7	\$22.2	\$24.2	\$26.8
-Industrial	\$2.5	\$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 expand its efforts to:
 - develop GHG measurement protocols for heavy-duty diesel trucks and 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 Energy Independence and Security Act (EISA) section 141 Federal vehicle purchase requirements.

The FY 2011 Budget Request for the Smartway Transport Partnership program totals \$2.7 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 2011 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 monitor, report and verify greenhouse emissions and sequestration through cost-effective measures and assist in the fulfillment of the U.S. obligations under the U.N. Framework Convention on Climate Change (UNFCCC).
- Produce measurable international greenhouse gas emission reductions through clean industrialization partnerships with key developing countries, including China, Mexico, India, and South Korea.
- In FY 2011, EPA will work to address several critical air and climate-related issues related to commercial scale deployment of carbon capture and sequestration (CCS) technology. These issues and related activities include, but are not limited to: determining the applicability of the Clean Air Act, and other environmental statutes, to the capture, transport, and storage components of a CCS project; evaluating technical and economic implications of applying carbon dioxide capture to currently regulated industry sectors, including the potential for increases or decreases in emissions of other criteria pollutants resulting from CCS retrofits; and, developing a framework for the permitting of the carbon dioxide capture component of a CCS project.
- EPA will continue to implement the Greenhouse Gas Reporting Rule, finalized in September, 2009, and provide technical expertise in analyzing proposed GHG limiting legislation. These efforts will be supported by both headquarters and Regional offices. The first annual reports from the largest GHG emitting facilities, covering calendar year 2010, will be submitted to EPA on March 31, 2011. In order to prepare for this, focus areas in FY 2011 for the GHG Reporting Rule will include:
 - completion of the database management systems;
 - ongoing guidance and training to affected facilities to ensure that they report in an accurate and timely manner;
 - verification of the reported data, through a combination of electronic reviews and on-site audits; and
 - development of mechanisms to share the reported data within the Federal government, with state and local governments, and with reporting entities to support improved understanding of both emission levels and opportunities for GHG reductions.

The funding request for the Greenhouse Gas Reporting Rule is \$20.8 million.

- In 2011, developing comprehensive market-based legislative options will be a focus of efforts to reduce greenhouse gases. For example, cap and trade legislation can meet environmental goals efficiently and with flexibility for affected entities to ensure reductions are achieved at the lowest possible costs. The Administration supports efforts to design an

effective climate policy in cooperation with the Congress. EPA also will focus on key analytical and implementation issues related to the use of offsets in a GHG trading system and the analysis of allowance rebate programs for internationally competitive industries.

Work under this program project supports the Agency's new High Priority Performance Goal (HPPG), addressing measuring and controlling Greenhouse Gases (specified in full in Appendix A).

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the buildings sector.	35.5	Data Avail 2010	39	42.2	MMTCE

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the industry sector.	72.9	Data Avail 2010	82.9	92.8	MMCTE

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	2.6	Data Avail 2010	4.3	7.2	MMTCE

There are over 20 climate change programs that 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$277.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$4,065.0 \ +20.0 FTE) Additional resources are requested to support the Greenhouse Gas Reporting Rule, including 20.0 FTE with associated payroll of \$2,901.0. Of the 20 FTE, 10 FTE will handle the general reporting and verification workload across the many industry sectors and emission sources and 10 FTE will work with states and follow-up on specific issues. The funding will enable EPA to receive, quality-assure, and verify data

submitted electronically from 10,000-15,000 covered facilities. In addition it will fund guidance and support of the first year of reporting, including technical support meetings and documents, trainings, and workshops.

- (-\$105.0) This reflects a reduction in funding for other, non-priority programs.
- (+\$500.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a Web or video conference format. In order to be successful, strategic investments in video/Web conferencing capabilities are necessary. Funds will support the creation of multi-use conference rooms in selected locations, as well as the needed Internet capacity.
- (-\$100.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$2,869.0 \ +11.0 FTE) Additional resources are requested to expand the ENERGY STAR program across the residential, commercial, and industrial sectors, including 11.0 FTE with associated payroll of \$1,498 and \$43.0 for travel. Key investments in EPA's energy efficiency programs will expand their reach and make an important contribution to advancing the Administration's climate change objectives.
- (+\$2,000.0 \ +2.0 FTE) Additional resources are requested to analyze the applicability of Clean Air Act authority, and conduct further analyses related to carbon capture and sequestration (CCS) technology as it relates to EPA's mission to protect public health and the environment, including associated payroll of \$280.0 and \$7.0 for travel.
- (+\$500.0) Funds are requested for the development of Web tools and the enhancement of EPA's information access and technology infrastructure in support of the Agency's efforts to meet the Climate and Clean Energy Challenge.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$24,996.0	\$25,622.0	\$0.0	(\$25,622.0)
Leaking Underground Storage Tanks	\$802.4	\$797.0	\$0.0	(\$797.0)
Oil Spill Response	\$293.5	\$269.0	\$0.0	(\$269.0)
Hazardous Substance Superfund	\$22.0	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$26,113.9	\$26,688.0	\$0.0	(\$26,688.0)
Total Workyears	179.8	173.7	0.0	-173.7

Program Project Description:

EPA’s Compliance Assistance and Centers program provides 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 2011 Activities and Performance Plan:

The Compliance Assistance and Centers program is being streamlined and merged with the Compliance Monitoring and Civil Enforcement programs in FY 2011. The FY 2011 enforcement and compliance assurance budget reflects changes in how the Agency accomplishes its mission, a new cycle of national priorities and outcomes, and the program’s evolving role vis-à-vis the states. Specifically, EPA is merging the historical tool-based program project activities for compliance assistance and incentives into the Civil Enforcement and Compliance Monitoring programs. Achieving compliance with environmental laws requires a focus on outcomes using a mix of assistance, incentives, and enforcement actions, often in combination to achieve environmental and public health protections. The program is currently re-evaluating the best balance of investment across the various activities that the EPA enforcement program carries out - oversight of state performance, direct implementation activities where states are not authorized, and the implementation of national priorities. The changes support the Agency’s emphasis on pragmatic and more nimble approach to enforcement - using the right tools at the right level of government to achieve compliance and deterrence from violations of our laws - both civil and criminal.

Performance Targets:

The performance measures previously supported by this program project are now addressed in the Civil Enforcement and Compliance Monitoring program projects, where these resources have been realigned.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$24,905.0/ -162.5 FTE) This reduction reflects the Agency's proposal to integrate the tool-based program project activities for Compliance Assistance into the Civil Enforcement and Compliance Monitoring programs, including associated payroll of \$21,905.0.
- (-\$717.0/ -4.6 FTE) This is a reduction to Compliance Assistance Centers and tool development, reflecting a greater reliance on electronic means for disseminating assistance information. This change, including associated payroll of \$621.0, reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NEPA; CERCLA; NAAEC; LPA-US/MX-BR; EPAAct.

Compliance Incentives

Program Area: Compliance

Goal: Compliance and Environmental Stewardship

Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$8,710.0</i>	<i>\$9,560.0</i>	<i>\$0.0</i>	<i>(\$9,560.0)</i>
Hazardous Substance Superfund	\$129.3	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$8,839.3	\$9,560.0	\$0.0	(\$9,560.0)
Total Workyears	58.7	62.5	0.0	-62.5

Program Project Description:

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 2011 Activities and Performance Plan:

In FY 2011, the Compliance Incentives program, which encourages internal audits of environmental compliance and subsequent correction of self-discovered violations, will be shifted to the Civil Enforcement program as part of the enforcement and compliance assurance program's realignment effort.

The Agency's FY 2011 Enforcement and Compliance Assurance budget reflects changes in how the Agency accomplishes its mission, a new cycle of national priorities and outcomes, and the program's evolving role vis-à-vis the states. Specifically, EPA is merging the historical tool-based program activities for Compliance Assistance and Centers and Compliance Incentives into the Civil Enforcement and Compliance Monitoring programs. This reflects our integrated work on strategic problems under the EPA Strategic Plan and our sharpened focus on environmental and compliance results. Achieving compliance with environmental laws requires a focus on outcomes using a mix of assistance, incentives, and enforcement actions, often in combination to achieve environmental and public health protections. The FY 2011 budget also provides a more flexible enforcement program as the Agency re-evaluates the best balance of investment across the various activities that the EPA enforcement program carries out - oversight of state performance, direct implementation activities where states are not authorized, and the implementation of national priorities. The changes support the Agency's pragmatic and flexible approach to enforcement - using the right tools at the right level of government to achieve compliance and deterrence from violations of our laws - both civil and criminal.

Performance Targets:

The performance measures previously supported by this program project are now addressed in the Civil Enforcement program project, where these resources have been realigned.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$9,560.0/ -62.5 FTE) This shift of resources, including associated payroll of \$8,672.0, reflects the integration of enforcement tool-based activities by realigning the Compliance Incentives program into the Civil Enforcement program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$98,457.1</i>	<i>\$99,400.0</i>	<i>\$110,467.0</i>	<i>\$11,067.0</i>
Oil Spill Response	\$0.0	\$0.0	\$139.0	\$139.0
Hazardous Substance Superfund	\$1,265.2	\$1,216.0	\$1,220.0	\$4.0
Total Budget Authority / Obligations	\$99,722.3	\$100,616.0	\$111,826.0	\$11,210.0
Total Workyears	613.6	612.3	632.5	20.2

Program Project Description:

The Compliance Monitoring program's overarching goal is to protect human health and the environment by targeting inspections and other compliance monitoring activities according to the degree of health and environmental risk in order to promote compliance with Federal environmental statutes and regulations. Compliance monitoring involves all activities to determine whether regulated entities are in compliance with applicable laws, regulations, permit conditions, and settlement agreements. In addition, these activities are conducted to determine whether conditions exist that may present imminent and substantial endangerment to human health and the environment. Compliance monitoring activities include data collection, analysis and review, on-site compliance inspections/evaluations, investigations, and reviews of facility records and monitoring reports. EPA's Compliance Monitoring program includes the management of compliance and enforcement data and information systems, and the use of the data to target and manage the compliance and enforcement program.³⁰ The program also responds to information requests and tips and complaints from the public. 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.

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 (RCRA) regulations.³¹

EPA conducts compliance monitoring activities, as well as coordinates with, provides support to, and oversees the performance of states, local agencies, and Tribal governments that conduct compliance monitoring activities. EPA's activities target areas that pose significant risks to human health or the environment, display patterns of noncompliance, or involve disproportionately exposed populations. The Agency's Compliance Monitoring program also

³⁰ For more information, refer to: www.epa.gov/compliance/monitoring/index.html.

³¹ For more information about the Import/Export program, refer to: www.epa.gov/compliance/international/importexport.html.

provides technical assistance and training to Federal, state and Tribal inspectors. 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 2011 Activities and Performance Plan:

In FY 2011, the Agency is merging the Compliance Assistance and Centers and Compliance Incentives programs primarily into the Civil Enforcement program with a small amount of assistance activities moving into the Compliance Monitoring program. Under the current structure, the program is bound by a rigid, pre-established allocation of resources for individual enforcement tools. The new model allows us to focus on outcomes, tailoring our approach to address the unique characteristics and requirements of individual cases. This new model will also allow us to be flexible in our relationship with the states, refining our role as state capabilities evolve to best support the national enforcement program. Merging the Compliance Assistance and Compliance Incentives programs into the enforcement program affords the Agency the necessary flexibility to pursue the most effective work and communicates our commitment to vigorous enforcement, making the threat of Federal enforcement more credible.

In FY 2011, the compliance monitoring program will emphasize the core programs and national priority activities identified in the Enforcement and Compliance Assurance's FY 2011-2013 National Program Manager's Guidance as well as supporting and overseeing authorized state/Tribal programs.³² The priority selection process is currently underway for the FY 2011–2013 cycle, which may lead to changes in where EPA focuses its compliance monitoring efforts. Certain existing national priorities remain complex and challenging problems including Clean Water Act “Wet Weather” discharges, violations of the Clean Air Act New Source Review/Prevention of Significant Deterioration requirements and Air Toxics regulations, and RCRA violations at mineral processing facilities. Information on priorities, regulatory requirements, compliance monitoring activities and tools, and EPA results will be made available to the public and the regulated community through EPA's Web sites.

To ensure the quality of compliance monitoring activities, EPA is continuing to develop national policies, update inspection manuals, provide required training for inspectors, and issue inspector credentials. EPA 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, as well as authorizing states/tribes employees to conduct inspections and evaluations on EPA's behalf. EPA works across the Agency and with states and tribes to build capacity, share tools and approaches, and develop networks of professionals that can share and help build expertise.

³² For more information, refer to: www.epa.gov/ocfopage/npmguidance/index.htm.

EPA monitors the quality of laboratory data which is required to be reported to the Agency by the regulated community. The Agency will continue efforts to improve its efficiency by integrating technology and electronic reporting 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.

Compliance monitoring includes EPA's management and use of data systems to run its compliance and enforcement programs under the various statutes and programs that EPA enforces. The Agency will continue its multi-year project to modernize its national enforcement and compliance data system, called the Integrated Compliance Information System (ICIS), which supports both compliance monitoring and civil enforcement. ICIS is in the second of three phases of development:

- Phase I of ICIS established a multi-media Federal enforcement and compliance database in FY 2002.
- 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. As of January 2010, the total number of states using ICIS-NPDES is 31. Also in 2009, a Net Discharge Monitoring Report tool was deployed that allows facilities to report their discharge monitoring reports directly to ICIS, with the potential of saving the regulated community, states and EPA millions of dollars. The work necessary to complete Phase II will start FY 2010 and continue in FY 2011.
- Phase III of ICIS expands the system to include the unique requirements of the Clean Air Act stationary sources compliance and enforcement program through the modernization of the Air Facility System (AFS). In FY 2011, as part of the Healthy Communities Initiative, EPA will utilize new resources to incorporate work done to date on system design, detailed business requirements, and alternatives analyses into ICIS-CAA system development. More specifically, EPA will begin work on the AFS modernization by building an Air Toxics module in ICIS to manage information for these sources. This information will be integrated with existing ICIS capabilities for tracking inspections, compliance status, and enforcement actions. In addition, the AFS information will be added to our targeting tools and made publicly available through the Agency's Enforcement and Compliance History On-line (ECHO) web site, with easy-to-use tools added to assist the public in understanding and using the data.

As part of the Healthy and Sustainable Communities Initiative, the Agency also will help improve the health of children by assessing how noncompliance contributes to significant health risks in schools, and target compliance and enforcement actions to reduce risks to children. In addition, the enforcement program will consolidate the resources for implementing the Chesapeake Bay Executive Order 13508 in the Geographic Program: Chesapeake Bay program while resources supporting the Mississippi River Basin Initiative will remain in the Compliance Monitoring program. Both of these initiatives will support the Agency's priority to restore the Chesapeake Bay and the Mississippi River Basin by providing information about wet weather

sources of pollution. This will also ensure that the Initiatives result in an increase in knowledge, use, transparency, and public access to data about wet weather sources through: 1) building an electronic reporting module for getting non-major permit data into ICIS-NPDES to pilot with states in the Chesapeake Bay and the Mississippi River Basin; 2) building and deploying targeting tools to help identify the most significant sources of noncompliance and discharges of pollutants most responsible for the impairment of these important water bodies; and 3) making all non-enforcement confidential data available, with easy-to-use tools to aid in the public's ability to use and understand the data.

EPA is committed to making meaningful facility compliance information available and accessible to the public using 21st century technologies. EPA will continue to increase the transparency of EPA's monitoring and enforcement program by making multi-media compliance monitoring information available to the public through the ECHO Internet website during FY 2011. 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 75,000 queries per month.

The Pollution Prosecution Act of 1990 directed the Agency to create the National Enforcement Training Institute (NETI) to provide environmental enforcement and compliance training nationwide to all levels of government. In FY 2011, NETI will be streamlined to enhance efficiencies in enforcement training across the Agency, taking advantage of web-based tools. In addition, the Enforcement Training program will be consolidated into the Compliance Monitoring program which houses other training activities. Thus, resources supporting the following NETI activities will move to the Compliance Monitoring program: 1) the central coordination role for training that is planned and conducted by EPA offices; 2) the grant management for cooperative agreements that provide training in the compliance and enforcement areas to state programs; 3) the Legal Intern program; and 4) the lead role in conducting web-based enforcement training.

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 2009, EPA responded to 1,381 notices representing 615 import notices and 766 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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	127	Entities

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 water as a result of EPA enforcement and compliance actions.			608	608	Entities

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 land as a result of EPA enforcement and compliance actions.			213	213	Entities

Results will first become available for these measures at the end of FY 2010, and will be reported in the FY 2010 Performance and Accountability Report (PAR) and the FY 2012 Congressional Justification.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$2,850.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$2,374.0/ +10.2 FTE) This increase, including associated payroll of \$1,347.0, reflects the Agency's efforts to realign the enforcement program. Specifically, the Agency's FY 2011 enforcement and compliance assurance budget reflects changes in how the Agency will accomplish its mission, a new cycle of national priorities and outcomes, and the program's evolving role vis-à-vis the states. EPA will merge the historical tool-based program project activities for Compliance Assistance and Compliance Incentives into the Civil Enforcement and Compliance Monitoring programs to enhance flexibility, better focus on outcomes, and communicate clearly that we are committed to a vigorous enforcement program.
- (+\$1,906.0/ +8.0 FTE) This increase transfers resources, including associated payroll of \$1,056.0, from the Enforcement Training program for the National Enforcement Training Institute's (NETI) support for web-based training, cooperative agreements for the four Regional State Environmental Enforcement Associations, and EPA's legal intern program.
- (+\$1,540.0/ +1.0 FTE) This increase includes \$132.0 in associated payroll and will allow EPA to begin modernizing the AFS by building an Air Toxics module in ICIS to manage information for these sources pursuant to the Healthy Communities Initiative. This information will be integrated with existing capabilities to track inspections, compliance status, and enforcement actions and added to our targeting tools. The information will be made public through the Agency's ECHO web site, with easy-to-use tools added to assist the public in understanding and using the data.
- (+\$13.0/ +0.1 FTE) This change reflects a Regional realignment of resources to enhance improvements in NPDES data quality and the ability of the states data systems to interface effectively with ICIS.
- (+\$600.0) This increase in resources is part of the Agency's Mississippi River Basin Initiative, the Compliance Monitoring program will do the following: 1) build an electronic reporting module for getting non-major permit data into ICIS-NPDES to pilot with states in the Mississippi River Basin; 2) build and deploy targeting tools to identify the most significant sources of noncompliance and discharges of pollutants responsible for the impairment of this water body; and, 3) make all non-enforcement confidential data available, with easy-to-use tools to aid in the public's ability to use and understand the data.
- (+\$2,000.0) This increase will be divided into two related activities: EPA will use \$800.0 to design and develop the necessary functionality in ICIS-NPDES to enable the electronic (batch) transfer of NPDES data from full batch states' system to ICIS-NPDES via the Environmental Exchange Network. In addition, EPA will provide \$1,200.0 in assistance to the full batch states to help them modify their own state

systems to electronically flow data to ICIS-NPDES via the Environmental Exchange Network.

- (-\$216.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$138,113.2</i>	<i>\$146,636.0</i>	<i>\$187,755.0</i>	<i>\$41,119.0</i>
Leaking Underground Storage Tanks	\$0.0	\$0.0	\$847.0	\$847.0
Oil Spill Response	\$2,060.5	\$1,998.0	\$2,559.0	\$561.0
Hazardous Substance Superfund	\$167.2	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$140,340.9	\$148,634.0	\$191,161.0	\$42,527.0
Total Workyears	949.5	988.5	1,229.3	240.8

Program Project Description:

The Civil Enforcement program’s overarching goal is to protect human health and the environment through targeting enforcement actions according to the degree of health and environmental risk in order to promote compliance with Federal environmental statutes and regulations. The program collaborates with the Department of Justice and states, local agencies and Tribal governments to ensure consistent and fair enforcement of all environmental laws and regulations. The program seeks to aggressively pursue violations that threaten communities, level the economic playing field by ensuring that violators do not realize an economic benefit from noncompliance, and deter future violations. The Civil Enforcement program develops, litigates, and settles administrative and civil judicial cases against serious violators of environmental laws.

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 which apply in various combinations to a universe of approximately 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 the selection of these priorities with programs and Regions within EPA, and with states, local agencies, and tribes, in addition to soliciting public comment.

EPA uses a variety of integrated tools to maximize compliance with the nation’s environmental laws. This includes assistance to regulated entities to ensure fair notice and to make clear how to comply with often complex regulations; compliance monitoring (i.e., monitoring compliance status, identifying violations through on-site inspections, investigations, and collection and analysis of compliance data); compliance incentives to motivate regulated facilities/companies to

identify, disclose, and correct violations; and administrative, civil, and criminal enforcement. In addition to utilizing these tools, the enforcement program provides oversight of state and delegated local agency performance to ensure that national environmental laws are enforced in a consistent, equitable manner that protects public health and the environment. EPA also works directly with Tribal governments to build their capacity to implement environmental enforcement programs.

FY 2011 Activities and Performance Plan:

In FY 2011, the Agency is merging the Compliance Assistance and Centers and Compliance Incentives program activities primarily into the Civil Enforcement program. Under the current structure, individual enforcement tools are emphasized over addressing environmental problems in the most effective way. The new model will allow us to focus on outcomes, tailoring our approach to address the unique characteristics and requirements of individual cases. This new model also will allow us to better integrate our efforts with the states, refining our role as state capabilities evolve to best support the national enforcement program. Merging the Compliance Assistance and Compliance Incentives programs within the enforcement program allows the Agency to pursue the most effective approach and communicates our commitment to vigorous enforcement.

In FY 2011, the Agency will aggressively implement its Civil Enforcement program, including the national compliance and enforcement priorities established for FY 2011-2013. In FY 2009, through its efforts in the core program and national priorities, EPA achieved more than \$5 billion in future pollution controls and pollution reduction commitments totaling nearly 600 million pounds. The priority selection process is currently underway for the new cycle, which may lead to changes in where EPA focuses its compliance and enforcement efforts. Certain existing national priorities remain complex and challenging problems including Clean Water Act “Wet Weather” discharges, violations of the Clean Air Act New Source Review/Prevention of Significant Deterioration requirements and Air Toxics regulations, and Resource Conservation and Recovery Act (RCRA) violations at mineral processing facilities. Information on priorities, regulatory requirements, enforcement alerts, and EPA results will be made available to the public and the regulated community on EPA’s Web sites.

The Agency will collaborate with states, tribes, and communities to aggressively reduce air toxics pollution within at-risk communities. In FY 2011, EPA will select pilot communities to evaluate whether they are at risk and reduce risks through regulatory, enforcement, and voluntary efforts. The Enforcement and Compliance Assurance program will target air monitoring, inspections, and enforcement activities in pilot communities in support of this initiative. The results from these pilots can then be adapted for widespread air toxic emission reductions in communities through the country.

In addition, the Agency’s enforcement program has consolidated its resources implementing the Chesapeake Bay Executive Order 13508 into the Geographic Program: Chesapeake Bay program project. These resources will be used to target inspection and enforcement activities at key regulated sectors (e.g., CAFOs, stormwater point sources, air deposition sources, etc.) identified

as contributing significant amounts of nutrients, sediment, and other contaminants to impaired watersheds in the Bay.

The Energy Independence and Security Act (EISA) of 2007 requires increased use of renewable fuels. In FY 2011, the Civil Enforcement program will help the regulated community understand their statutory obligations under the EISA; inspect renewable fuel production facilities; monitor compliance with renewable fuel requirements; monitor and enforce the credit trading program; and, undertake administrative and judicial enforcement actions against violators.

EPA's Civil Enforcement program will continue to rely heavily on the Integrated Compliance Information System to manage its compliance and enforcement activities by tracking the status of all civil judicial and administrative enforcement actions, as well as compliance and enforcement results.

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 Federal Facilities Enforcement program will continue to expeditiously pursue enforcement actions at Federal facilities where violations are discovered with a specific focus on non-compliance.

Finally, as part of a President's SAVE award initiative, EPA plans to continue to update the penalty inflationary rule on a regular basis in a timely fashion.

Work under this program project supports the Agency's new High Priority Performance Goal, addressing water quality (specified in full in Appendix B).

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Reduce, treat, or eliminate air pollutants through concluded enforcement actions.			480	480	Million Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Reduce, treat, or eliminate water pollutants through concluded enforcement actions.			320	320	Million Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.			3.8	3.8	Million Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Reduce, treat, or eliminate hazardous waste through concluded enforcement actions.			6,500	6,500	Million Pounds

Results will first become available for these measures at the end of FY 2010, and will be reported in the FY 2010 Performance and Accountability Report (PAR) and the FY 2012 Congressional Justification.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$4,222.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$34,714.0/ +228.1 FTE) This increase reflects the Agency's efforts to realign the enforcement program including 158.7 FTE from the Compliance Assistance program and 69.4 FTE from the Compliance Incentives program, along with associated payroll of \$31,913.0. The Agency's FY 2011 Enforcement and Compliance Assurance budget reflects changes in how the Agency will accomplish its mission, a new cycle of national priorities and outcomes, and the program's evolving role vis-à-vis the states.
- (+\$2,160.0/ +6.5 FTE) This increase supports the enforcement component of an Agencywide effort to reduce air toxics pollution within at-risk communities and around schools and other places where children may be exposed. These resources, including 6.5 FTE and associated payroll of \$910.0, will be used to assess compliance with existing air toxics emission rules and pursue enforcement actions, as appropriate, as part of the Healthy Communities Initiative.
- (+\$70.0/ +0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities to improve National Pollutant Discharge Elimination System Compliance data.
- (+\$375.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a web or video conference format. In order to be successful, strategic investments in video/web conferencing capabilities are

necessary. Funds will support the creation of multi-use conference rooms in selected locations, as well as the needed internet capacity.

- (-\$377.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$45.0) This reflects a realignment of Agency IT and telecommunications resources for Computer Security Incident Response Center from across programs to Information Security program.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA; SBLRBREERA; 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$45,527.6</i>	<i>\$49,637.0</i>	<i>\$51,312.0</i>	<i>\$1,675.0</i>
Hazardous Substance Superfund	\$9,058.1	\$8,066.0	\$8,142.0	\$76.0
Total Budget Authority / Obligations	\$54,585.7	\$57,703.0	\$59,454.0	\$1,751.0
Total Workyears	271.5	291.8	291.8	0.0

Program Project Description:

EPA’s Criminal Enforcement program investigates and helps prosecute environmental violations which seriously threaten public health and the environment. 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 EPA special agents serving as key witnesses in the proceedings.

The program also participates in task forces with state and local law enforcement, and provides specialized training at the Federal Law Enforcement Training Center (FLETC) in Glynco, GA. FLETC provides one of the few opportunities for state, local, and Tribal environmental enforcement professionals to obtain criminal investigation training.³³

FY 2011 Activities and Performance Plan:

In FY 2011, 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 cases across all pollution statutes. The program will have completed its three-year hiring strategy to increase the number of special agents to 200 by the

³³ For more information visit: <http://www.epa.gov/compliance/criminal/index.html>.

end of FY 2010. These resources will allow the program to maximize its capacity in supporting efforts to address complex environmental cases in FY 2011.

The Criminal Enforcement program is developing a methodology to “tier” significant cases based upon categories of human health and environmental impacts (e.g., death, serious injury, human exposure, remediation), release and discharge characteristics (e.g., hazardous or toxic pollutants, continuing violations), and subject characteristics (e.g., national corporation, recidivist violator). Working with its international, 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 that allow 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 2011, the program will continue to use data from the electronic Criminal Case Reporting System (CCRS). 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 and continue to use the Fugitive Website to enlist the public and law enforcement agencies to help apprehend defendants who have fled the country or are in hiding rather than face prosecution for alleged environmental crimes or sentencing for crimes for which they have been found guilty. During FY 2009, three fugitives were captured, and two more surrendered to law enforcement authorities.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of recidivism.			<1	<1	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of closed cases with criminal enforcement consequences (indictment, conviction, fine, or penalty).			33	33	Percent

Results will first become available for these measures at the end of FY 2010, and will be reported in the FY 2010 Performance and Accountability Report (PAR) and the FY 2012 Congressional Justification.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,803.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$125.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a web or video conference format. In order to be successful, strategic investments in video/web conferencing capabilities are necessary. Funds will support the creation of multi-use conference rooms in selected locations, as well as the needed internet capacity.
- (-\$74.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$179.0) This decrease represents a modest redirection of contract resources supporting the criminal enforcement program and will not negatively impact the program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$3,110.6	\$3,278.0	\$0.0	(\$3,278.0)
Hazardous Substance Superfund	\$776.9	\$899.0	\$0.0	(\$899.0)
Total Budget Authority / Obligations	\$3,887.5	\$4,177.0	\$0.0	(\$4,177.0)
Total Workyears	22.3	20.8	0.0	-20.8

Program Project Description:

EPA is required by the Pollution Prosecution Act of 1990 to provide environmental compliance and enforcement training nationwide through the National Enforcement Training Institute (NETI). The Enforcement Training program oversees the design and delivery of core and specialized enforcement courses, through NETI³⁴, that sustain a well-trained workforce to carry out the Agency's enforcement and compliance goals. Courses are provided to lawyers, inspectors, civil and criminal investigators, and technical experts at all levels of government.

FY 2011 Activities and Performance Plan:

In FY 2011, NETI will be streamlined to enhance efficiencies in support of coordinating enforcement training across the Agency, taking advantage of web-based tools. In addition, the Enforcement Training program will be consolidated into the Compliance Monitoring program which houses other training activities. Thus, NETI activities and associated resources will move to the Compliance Monitoring program to serve as: 1) the central coordination point for training that is planned and conducted by EPA offices; 2) the grant management for cooperative agreements that provide training in the compliance and enforcement areas to state programs; 3) the Legal Intern program; and 4) the lead source in conducting web-based enforcement training.

Performance Targets:

Currently, there are no specific performance measures for this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$1,372.0/ -7.6 FTE) This reduction streamlines NETI by reducing support for classroom training and increasing web-based training. The reduced resources include 7.6 FTE and associated payroll of \$1,052.0.

³⁴ For more information, refer to: <http://www.epa.gov/compliance/training/neti/index.html>

- (-\$1,906.0/ -8.0 FTE) This reduction transfers the remaining Enforcement Training activities to the Compliance Monitoring program. The transferred resources include 8 FTE and associated payroll of \$1,107.0.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$5,460.3	\$7,090.0	\$7,317.0	\$227.0
Hazardous Substance Superfund	\$624.6	\$795.0	\$806.0	\$11.0
Total Budget Authority / Obligations	\$6,084.9	\$7,885.0	\$8,123.0	\$238.0
Total Workyears	19.6	32.9	32.9	0.0

Program Project Description:

EPA is committed to identifying and addressing the health and environmental burdens faced by communities disproportionately impacted by pollution. This commitment is fulfilled through the Agency’s efforts to give people a voice in decisions that impact their lives and to integrate environmental justice in EPA programs, policies, and activities.

The EPA’s Environmental Justice (EJ) program facilitates EPA efforts to engage communities in key decision-making processes and to integrate environmental justice considerations in EPA programs, policies, and activities. The Agency conducts and supports work to “open its doors” to communities of color, Native Americans, the poor, and other historically underrepresented groups. EPA also promotes the active engagement of community groups, other Federal agencies, states, local governments, and Tribal governments to recognize, support, and advance environmental protection and public health for vulnerable communities. The program guides EPA’s efforts to empower vulnerable communities to protect themselves from environmental harm and to build healthy and sustainable neighborhoods that enable disadvantaged groups to participate in the new green economy through financial and technical assistance. The program partners with other Agency programs to create scientific analytical methods, a legal foundation, and public engagement practices that enable the incorporation of environmental justice considerations in EPA’s regulatory and policy decisions. Finally, the EJ program supports Agency efforts to strengthen internal mechanisms to integrate environmental justice including communication and training, performance management and accountability measures, and workforce diversity.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will continue building strong relationships with historically underrepresented communities, including tribes, communities of color, and the economically distressed to ensure the integration of environmental justice principles in environmental decision-making. The EJ program will convene two full meetings of the National Environmental Justice Advisory Council (NEJAC), the Agency’s Federal Advisory Committee Act (FACA) 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 meeting the Agency's priority of transparency and meaningful public involvement. Not only is the NEJAC charged with providing advice to EPA on broad policy issue areas such as regulatory development, climate change, fostering a green economy, and environmental justice 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. Finally, the EJ program will support the integration of environmental justice issues into the deliberations of other EPA FACA committees.

In FY 2011, the EJ program will work to promote the integration of environmental justice principles in the programs, policies, and activities of other Federal agencies. Pursuant to Executive Order 12898, EPA will continue to convene the Interagency Working Group (IWG) on Environmental Justice and will use this mechanism to provide and foster training and technical assistance to other Federal agencies on the integration of environmental justice 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.

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 nearly \$35 million to more than 1,200 community-based organizations and others supporting efforts to address local environmental and/or health issues.

EPA will develop customized on-line tools to support the integration of environmental justice considerations into the daily work of the Agency. In FY 2011, the EJ program will release a new mapping and public access tool – EJVIEW. Building upon the mapping functionality of the Environmental Justice Geographic Assessment Tool (EJGAT), EJVIEW will enable public access to environmental, public health, demographic, and EPA grant and other environmental justice project information. EJVIEW will enable the public to examine environmental conditions in their communities, track progress of other grant-funded initiatives to address environmental justice issues, and to input information about projects and issues of interest to their local communities. This effort is aligned with a President's SAVE award proposal which in part suggested the use of Geographic Information System for more efficient reporting of enforcement information.

In FY 2011, EPA will intensify its efforts to incorporate environmental justice 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 2011, the EJ program will publish an inventory of data and analytical methods suitable for decision-making with regard to disproportionate environmental health impacts on minority, low-income populations. EPA will also release draft technical guidance to support the integration of environmental justice considerations in analyses that support EPA's actions.

In FY 2011, EPA's EJ program will lead the integration of environmental justice considerations into EPA's planning and performance measurement processes. In FY 2011, the program will

issue guidance that will support Agency efforts to identify disproportionately burdened minority, low income, and Tribal populations; establish commitments to address them; and measure and report progress.

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 environmental justice into its daily work. These plans will strengthen the Agency's environmental justice integration efforts by establishing measurable environmental justice 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 populations. 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.

In FY 2011, 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 online training. Specific topics will include environmental justice integration principles, incorporating environmental justice in regulatory analysis, and discussions of pertinent statutory authorities.

Performance Targets:

EPA's EJ program performance is reflected in other EPA national program results that benefit disproportionately burdened minority, low-income, and tribal populations. Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$256.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (-\$36.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$7.0) This change reflects a modest increase in contracts and grants to support the Agency's Environmental Justice program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$15,249.8</i>	<i>\$18,258.0</i>	<i>\$18,524.0</i>	<i>\$266.0</i>
Total Budget Authority / Obligations	\$15,249.8	\$18,258.0	\$18,524.0	\$266.0
Total Workyears	116.4	117.7	117.5	-0.2

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 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).³⁵

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to work with other Federal agencies to streamline and to improve 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 expansion in Guam; flood control and port development; and management of national forests and public lands. The program will continue to use the web-based NEPAAssist environmental assessment tool, which assists Federal, state, and local agencies

³⁵ For more information, refer to: www.epa.gov/compliance/nepa.

to identify nationally/regionally significant environmental features/resources and streamline their respective environmental review processes. In FY 2011, EPA also will be conducting work related to the Appalachian Coal Mining Interagency Action Plan. In addition, EPA will continue its successful collaboration efforts with Federal land management agencies in the west to ensure the growing number of oil and natural gas development projects in that area do not cause significant adverse air quality impacts.

Special emphasis will continue on implementing EPA's NEPA responsibilities with respect to projects funded under the American Recovery and Reinvestment Act (ARRA). The ARRA increased EPA's involvement with other Federal Agencies (including scoping and collaboration efforts) on Federal projects that required environmental review by EPA pursuant to Section 309 of the Clean Air Act and NEPA. The additional personnel resources provided in FY 2010 will enable EPA to meet these increased environmental review responsibilities, which will help with the expeditious approval and implementation of Federal economic stimulus projects.

The NEPA Implementation program also guides EPA's own compliance with NEPA, other applicable statutes and EOs, and related environmental justice requirements. In FY 2011, at least 90 percent of EPA projects subject to NEPA environmental assessment 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:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$557.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$303.0/ -0.7 FTE) This change, including \$94.0 in associated payroll, represents increases provided in the FY 2010 enacted budget but not maintained in FY 2011. These resources supported the NEPA compliance and Clean Air Act Section 309 review for regulatory efforts and programmatic Environmental Impact Statements associated with the significantly revised policies and approaches to Appalachian coal mining.
- (+\$67.0/ +0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities to support the Agency's energy-related NEPA reviews.
- (-\$55.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

CAA; NEPA; ASTCA; CWA; ESA; NHPA; AHPA; FCMA; FWCA; EO 12898.

Program Area: Geographic Programs

Great Lakes Restoration

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$0.0</i>	<i>\$475,000.0</i>	<i>\$300,000.0</i>	<i>(\$175,000.0)</i>
Total Budget Authority / Obligations	\$0.0	\$475,000.0	\$300,000.0	(\$175,000.0)
Total Workyears	0.0	83.1	83.1	0.0

Program Project Description:

The Great Lakes are the largest system of surface freshwater on earth, containing 20 percent of the world’s surface freshwater and accounting for 84 percent of the surface freshwater in the United States. The watershed includes two 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, as required by the Great Lakes Water Quality Agreement and the Clean Water Act. Extensive work of the Great Lakes Interagency Task Force and its wide variety of stakeholders and non-governmental partners culminated in the 2005 Great Lakes Regional Collaboration Strategy (GLRC Strategy).

In 2009, the President announced a new Great Lakes Restoration Initiative, committing the Federal government to significantly advance Great Lakes protection and restoration pursuant to that work. EPA has led the Interagency Task Force in development of a FY2010-FY2014 Great Lakes Restoration Initiative draft Action Plan (Action Plan). The draft Action Plan, built upon the foundation of the GLRC Strategy and developed with stakeholder input from meetings throughout the Great Lakes, will target the most significant environmental problems in the Great Lakes ecosystem. The Action Plan will be an action driver, articulating the most significant ecosystem problems and efforts to address them in five major focus areas:

- Toxic Substances and Areas of Concern, including pollution prevention and cleanup of the most polluted areas in the Great Lakes;
- Invasive Species, including efforts to institute a “zero tolerance policy” toward new invasions;
- Nearshore Health and Nonpoint Source Pollution, including a targeted geographic focus on high priority watersheds and reducing polluted runoff from urban, suburban, and agricultural lands;
- Habitat and Wildlife Protection and Restoration, including bringing wetlands and other habitat back to life, and the first comprehensive assessment of the entire 530 thousand

acres of Great Lakes coastal wetlands for the purpose of strategically targeting restoration and protection efforts in a science-based manner; and

- Accountability, Education, Monitoring, Evaluation, Communication and Partnerships, including the implementation of goal- and results-based accountability measures, learning initiatives, outreach and strategic partnerships.

EPA will release a final Action Plan in late February 2010.

Pursuant to the Initiative, EPA works 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; and
- 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 programs that are addressed under the Clean Water or Drinking Water State Revolving Fund program). Funding will be distributed directly by EPA via interagency agreements to other Federal agencies for subsequent use and distribution. Grants will generally be issued competitively. Agencies will be expected to maintain their base level³⁶ of Great Lakes activities and to identify new activities and projects that will support the Initiative's environmental outcomes.

Recognizing that results from the first year of funding will not be available immediately, EPA expects to make necessary program adjustments at appropriate times to maximize results. Priority-setting, coordination, and oversight will be done through oversight groups of the Interagency Task Force. Transparency and accountability are priorities of the Initiative. EPA will also ensure appropriate coordination with Canada as required by the Great Lakes Water Quality Agreement.

FY 2011 Activities and Performance Plan:

This second year of the Initiative identifies \$300 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 FY 2011 were selected in a planning process conducted through the Great Lakes Interagency Task Force. Specific efforts

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.

were made to determine how second year funding could accomplish the goals and objectives identified in the Great Lakes Restoration Initiative Action Plan, recognizing each agency's mission and strengths. A specific emphasis has been placed upon implementation. This process includes competitive grant programs to implement the Initiative by funding states, tribes, and other partners. Interagency Task Force members plan to work together to issue requests for proposals as soon as possible in order that some grant awards could be used during the 2011 field season.

EPA has led the Interagency Task Force in development of provisional funding targets. Upon receiving the FY 2011 appropriation for the Initiative, EPA will determine final funding targets and will develop a final 2011 funding plan, including grant programs. Final targets will be informed by experience with FY 2010 funding and needs for priorities such as keeping Asian Carp out of the Great Lakes. EPA, following consultation with members of the Interagency Task Force, will select the programs and projects for funding. Key activities expected to advance environmental progress within each of the Initiative's focus areas are described below.

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 estimated 43 million cubic yards of contaminated sediments. Ongoing sources of persistent toxic substances to the Great Lakes include releases from contaminated bottom sediments, industrial and municipal point sources; nonpoint sources including atmospheric deposition, agricultural and urban runoff; contaminated groundwater; and cycling of the chemicals within the Lakes. 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 (USACOE), habitat enhancements by US Fish and Wildlife (USFWS), and brownfield restoration and green infrastructure developments by the US Forest Service (USFS). FY 2011 funding of these activities is expected over time to result in remediation of 700 thousand cubic yards of contaminated sediments and delisting of 1-2 AOCs;
- **Collections.** EPA will award grants to states, tribes, and local governments to collect up to 5 million pounds of e-waste, 5 million pills of unwanted medicines, and 500 thousand 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 grants to evaluate the net risk and benefits of consuming Great Lakes fish. Long term results are expected to include measurable declines in mercury blood levels;

- **Total Maximum Daily Loads (TMDLs).** EPA will award contracts to support EPA and state efforts to develop toxic TMDLs within the Great Lakes Basin. The TMDLs will define the extent of toxic contamination, including mercury, PCBs, dioxin and mirex throughout the basin. EPA will continue to support Michigan and New York’s efforts to define the extent of mercury, PCB, dioxin, and/or mirex pollution, and its potential sources, in over 200 impaired Great Lakes subwatersheds. Long term results are expected to include TMDLs addressing over 200 impaired watersheds which identify pollutant loading capacities to guide pollutant reduction efforts in support of plans for restoring polluted watersheds; and
- **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 continue to implement 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.

EPA has set targets and will continue to track progress for the following key measures, some of which are cumulative:

Measure	Baseline	2010 Target	2011 Target
Number of Areas of Concern in the Great Lakes where all management actions necessary for delisting have been implemented (cumulative).	Baseline: 1 AOC	1 AOC	3 AOCs
AOC beneficial use impairments removed (cumulative).	Baseline: 11 BUIs	20 BUIs	26 BUIs
Cubic yards (in millions) of contaminated sediment remediated in the Great Lakes (cumulative).	Baseline: 5.5 million cubic yards (2007)	6.3 million cubic yards	7.2 million cubic yards
Cumulative percentage decline for the long term trend in average concentrations of PCBs in Great Lakes fish.	Baseline: Concentrations at U.S. stations in L SU [0.71 ppm], MI [1.5 ppm], HU [.78 ppm], ER [1.2 ppm] and ON [1.2 ppm]. ³⁷	10% decline	14.% decline

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

³⁷ 2000 Baseline.

Initiative, there will be 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.

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.

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 (such as the Asian Carp which is poised to invade the system) 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. The Great Lakes are the aquatic gateway to most of the interior United States. Once invasive species establish a foothold in the Great Lakes, they are virtually impossible to eradicate and have the potential to spread to much of the rest of the country; controlling species in the Great Lakes will slow or eliminate the spread to other regions. Thus, invasive species still need to be controlled to maintain the health of the Great Lakes ecosystem and to reduce risk to the interior U.S. Principal actions proposed to prevent new introductions of non-native invasive species in the Great Lakes basin and stop the further spread of invasives within and out of the Great Lakes basin include:

- **Prevention.** EPA, the U.S. Coast Guard, FWS, NOAA, and the Department of Transportation's Maritime Administration (DOT-MARAD) will fund the further development of up to three ballast water 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. Refinement of sampling methodologies for treated ballast water will also continue. ACOE 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, such as those necessary to prevent Asian Carp from entering the Great Lakes, may be adopted to reduce this risk. NPS will establish boat washing facilities at National Parks and USFS will deploy portable boat washing units to limit the spread of invasive species by recreational boaters; competitive funding available from EPA will help local communities establish similar facilities;

- Early Detection and Control.** EPA, USFWS, DOT-MARAD, USDA-APHIS, and USGS will begin implementation of coordinated monitoring surveys to detect new invaders in Great Lakes locations that have a high probability of invasion. NOAA, EPA, and FWS will identify areas that have a high probability of invasion, which will help managers prioritize locations for targeted EDRR monitoring. USFWS, USGS, and ACOE will refine and pilot promising invasive species control methods, and EPA will establish competitive grant programs for the development of up to three new control technologies. USFWS will support on-the-ground implementation of Aquatic Nuisance Species Management Plans for each Great Lake state, including four rapid response exercises/actions to demonstrate and test multi-agency response capabilities. USFS will lead the establishment of Cooperative Weed (Invasive plant) Management Areas and implement control on 100 acres in the Great Lakes states in coordination with Federal and state agencies and Great Lakes communities. The Great Lakes Fishery Commission (GLFC) will pilot new sea lamprey control methods using pheromones, ensuring that such implementation would not reduce existing sea lamprey control efforts. ACOE will enhance the use of barriers to further reduce Sea Lamprey populations; and
- 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 300,000 Great Lakes users. NOAA and USGS will continue to enhance their existing joint public on-line database, GLANSIS, by adding or enhancing information on ecosystem impacts of over 180 listed invaders and range-expanding invaders, and will begin adding potential high-risk future invaders identified through risk-assessment and niche-matching studies. NPS will work in concert with neighboring communities to prevent the spread of viral hemorrhagic septicemia (VHS) pathogen and other organisms to National Park resources.

EPA has set targets and will continue to track progress for the following key measures, some of which are cumulative:

Measure	Baseline	2010 Target	2011 Target
Number of nonnative species newly detected in the Great Lakes ecosystem.	Baseline: 1.3 species per year	1.1 species per year	1.0 species per year
Acres managed for populations of invasive species controlled to a target level. (cumulative)	Baseline: 0 acres	1,000 acres	1,500 acres
Number of multi-agency rapid response plans established, mock exercises to practice responses carried out under those plans, and/or actual response actions. (cumulative)	Baseline: 0 rapid response exercises/actions	4 rapid response exercises/actions	7 rapid response exercises/actions

The number of newly detected nonnative species in the Great Lakes ecosystem will decrease as a result of prevention efforts. Areas managed for the control and reduction of populations of invasive species will increase. Agencies will work together to develop Aquatic Nuisance Species

management plans with rapid response capabilities and to conduct rapid response exercises and actions.

Nearshore Health and Nonpoint Source Pollution. Great Lakes nearshore water quality has become degraded, as evidenced by eutrophication resulting from excessive nutrients; harmful algal blooms; the green algae *Cladophora* washing ashore to make unsightly, odiferous rotting mats on beaches; outbreaks of avian botulism; and advisories at swimming beaches. 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; shoreline development and 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 been inadequate to deliver the degree of stream and lake restoration necessary for the protection and maintenance of the Great Lakes. However, implementation of agricultural or other watershed best management practices can have multiple benefits, including simultaneous reductions in runoff of soils, nutrients, and pesticides. 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 and Remediate Sources of Impairments to Nearshore Waters.** To contribute to the reduction or elimination of the number and severity of incidences of ecosystem disruptions, including *Cladophora* growth, harmful algal blooms (HABs), botulism, and other issues associated with eutrophication, NRCS, USFS, ACOE, NPS, USGS, and EPA will collaborate to: understand linkages between nearshore impairments and their causal agents; enhance or implement practices to reduce the causal agents, including the export of nutrients and soils to the nearshore waters; establish and implement total maximum daily loads (TMDLs) for phosphorus; and model and evaluate tributary transport of sediments and nutrients;
- **Improve Public Health Protection at Beaches.** To assist local health officials in better protecting beach-goers, NOAA, USGS, and EPA will collaborate with state, local and Tribal governments to: conduct sanitary surveys at beaches that were under advisory or closed 5 or more days in 2008 to identify sources of contamination; remediate identified sources; increase the effectiveness of monitoring for pathogens; model environmental conditions likely to result in elevated levels of bacteria; and enhance communications to the public about daily swimming conditions;
- **Targeted, Watershed Restoration.** NRCS, USFS, ACOE, NPS, and EPA, in close collaboration with state programs, will address high priority watersheds to: strategically target where on-the-ground actions can be most effective; provide supplemental funding to enhance existing conservation programs and management procedures; implement actions to control nonpoint source runoff, erosion and sedimentation or to otherwise improve conditions on a watershed scale; protect forest ecosystem services; and foster green infrastructure projects, especially for stormwater management; and

- **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 groundwater; develop and implement indicators of land use change, agricultural lands, and aquatic nearshore conditions and identify endpoints that reflect watershed stressors; identify and map artificial coastal structures and marinas and evaluate potential contributions to nearshore impairments; and develop education and outreach programs to increase awareness and understanding of various Great Lakes issues.

EPA has set targets and will continue to track progress for the following key measures, some of which are cumulative:

Measure	Baseline	2010 Target	2011 Target
Five year average annual loadings of soluble reactive phosphorus ³⁸ (metric tons per year) from tributaries draining targeted watersheds.	Baseline: 2003-2007 Fox River: 212 Saginaw R: 133 Maumee R: 623 Genesee R: * St. Louis R: * Other TBD: *	0% reduction	0.5% reduction
Percentage of beaches meeting bacteria standards 95% or more of beach days.	Baseline: 86% (2006)	86%	87%
Acres in Great Lakes watershed with USDA conservation practices implemented to reduce erosion, nutrients and/or pesticide loading. ³⁹	Baseline: 165,000 acres	2% increase	8% increase

* Baseline information will be developed.

The Initiative will support restoration efforts (e.g., agricultural best management practices) which will reduce loadings of soluble reactive phosphorus; watersheds for the Maumee River, Fox River, St. Louis, Genesee, and Saginaw River are expected to be among those targeted. To better protect public health at Great Lakes beaches, the Initiative will support efforts to identify sources of beach contamination and to remediate identified sources. To reduce erosion, nutrients, and/or pesticide loading, the Initiative will support an increase in implementation of USDA conservation practices.

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. 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:

³⁸ Total phosphorus will also be measured.

³⁹ This measure reflects annual (not cumulative) implementation of conservation practices (from the Environmental Quality Incentives Program and Conservation Technical Assistance Program) that will contribute to long term improvements of the listed outcomes.

- **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 (ACOE, BIA, EPA, FHWA, FWS, GLFC, NOAA, NPS, NRCS, USFS, USGS) 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 5,000 acres of coastal, upland, and island habitats; improved ecosystem processes and functions; and, enhanced critical migratory bird habitat;
- **Improving Aquatic Ecosystem Resiliency.** USFS, FWS, USGS, ACOE, and NPS 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 50 fish passage barriers; protection and restoration of 2,500 acres of riparian and wetland habitats; and restoration of 500 stream miles for fish passage and stabilization of stream banks;
- **Managing Rare, Threatened and Endangered Species.** FWS, USFS, and USGS will begin implementation of projects directly and through grants and other agreements to benefit rare, threatened and endangered Great Lakes species to address 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; and completion of fisheries population assessments for lake trout and lake sturgeon. BIA, ACOE, and FWS 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 wetlands; and
- **Tracking Progress on Coastal Wetlands Restoration.** EPA, with partners, will collect data for birds, amphibians, fish, invertebrates, plants, wetland extent and type, and water chemistry in 20% of 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 by USGS. NPS and FWS will begin restoration of coastal and inland wetlands.

EPA has set targets and will continue to track progress for the following key measures, some of which are cumulative:

Measure	Baseline	2010 Target	2011 Target
% of populations of native aquatic non-threatened and endangered species self-sustaining in the wild. (cumulative)	Baseline (2009): 27% 39/147* populations	33% 48/147 populations	35% 52/147 populations
Number of acres of wetlands and wetland-associated uplands protected, restored and enhanced. (cumulative)	Baseline: 0	5,000 acres	7,500 acres
Number of species delisted due to recovery.	Baseline (2009): 0 species	0	1
Number of acres of coastal, upland, and island habitats protected, restored and enhanced. (cumulative)	Baseline: 0	15,000 acres	20,000 acres

* Numerator: # of populations of native aquatic non-T&E and non-candidate species that are self-sustaining in the wild.
Denominator: total # of native aquatic non-T&E and non-candidate populations.

Habitat restoration and assessment efforts through the Great Lakes Restoration Initiative, including activities such as fish passage improvements and invasive species management, will be strategically implemented throughout the basin to increase the total number of healthy aquatic populations. As a result of these enhanced efforts, populations of Great Lakes aquatic species, such as lake trout, sturgeon and brook trout, that are currently not self-sustaining in the wild, are expected to achieve self-sustaining status. In 2011, an additional four populations are projected to have the capability of maintaining themselves independently without continued supplementation.

The number of acres of wetlands and wetland-associated uplands and of coastal, upland and island habitats protected, restored and enhanced is dependent on the work of 11 Federal agencies. The agencies will provide funding through competitive grants and contracts for projects to states, tribes, municipalities, non-governmental organizations, universities and for-profit entities. Although the quality of the projects and the quantity of project acres is dependent on who applies for funding and the strength of individual projects, it is expected that 2,5000 wetland and wetland-associated upland and 5,000 coastal, upland and island acres will be protected, restored and enhanced as targeted for FY 2011.

Accountability, Education, Monitoring, Evaluation, Communication, and Partnerships.

Oversight and coordination are critical to the success of the Great Lakes Restoration Initiative, as are a comprehensive and efficient accountability system and establishment of well-defined metrics to track progress. Also critical are activities to fill gaps in baselines, measure and monitor key indicators of ecosystem function, evaluate restoration progress, and provide decision makers with the information they need. This information needs to be based on best available science, and compiled and communicated. Outreach, education, and partnerships are also crucial in the effort to restore the Great Lakes. 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:

- **Develop Great Lakes Restoration Accountability System.** EPA will complete development of and begin implementation of a transparency and accountability system

for the Great Lakes Restoration Initiative, including easy access to information and linkages to planning, budgeting, grant offering, and results;

- **Implement Lakewide Management Plans (LaMPs).** With and through the LaMPs, partner agencies will implement LaMP programs and projects, using public forums to assist with the transfer and dissemination of information;
- **Measure and Evaluate the Health of the Great Lakes Ecosystem using the Best Available Science.** Through direct program implementation, grants, and other agreements, Federal agencies will enhance existing programs that measure and assess the physical, biological, and chemical integrity of the Great Lakes, including the connecting channels. EPA in coordination with other Federal and state agencies will develop and implement a statistically valid assessment, using a probability-based design, of Great Lakes water resources, including the nearshore environment that coincides with intensive coordinated science and monitoring efforts for the lakes and builds on the efforts of EPA's National Coastal Condition Assessment. EPA and USGS will advance development and implementation of science-based indicators to better assess and provide a better measure of accountability of actions to improve the health of the Great Lakes ecosystem. EPA will also initiate a biological assessment of the Great Lakes tributaries. EPA will continue to implement the Coordinated Science and Monitoring Initiative with Environment Canada to address Lake-specific science and monitoring needs and to include critical studies in Lake Superior in 2011, followed by Lakes Huron, Ontario, Erie, and Michigan in consecutive years. 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. USFS will support monitoring and 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 of water levels and flow by ACOE. USGS will develop and implement efforts using remote sensing to obtain the geospatial data that is needed to support science and decision making. NOAA, EPA, USGS, USFWS, NPS, and DOT will implement a coordinated interagency approach for addressing the key scientific priorities needed to fully assess the impacts climate change may have on the Great Lakes ecosystem and to better adapt to those impacts. NOAA, USGS, and EPA will also work closely together to enhance ecosystem and watershed predicative capabilities providing the necessary link between science and management;
- **Support Great Lakes Restoration Education.** EPA will develop the coordination mechanism(s) for Great Lakes restoration education efforts that meet state and other relevant learning standards, including identification of the suite of participating educators and facilities; and
- **Enhance Partnerships.** EPA will lead and support enhanced coordination and collaboration among Great Lakes partners to ensure that Initiative actions, projects, and programs are efficient, effective, and supportive of the US- Canada Great Lakes Water Quality Agreement. The Department of State will support 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 NPS will implement sustainability and stewardship programs for protected areas and gateway communities.

EPA has set targets and will continue to track progress for the following key measures, some of which are cumulative:

Measure (long term)	Baseline	2011 Target
Improvement in the overall aquatic ecosystem health of the Great Lakes using the Great Lakes 40-point scale. ⁴⁰	Baseline: 20 points	23.4 points

The overall Great Lakes ecosystem condition, as measured by a Great Lakes Index, will be reported in 2011. The Great Lakes Index is a Strategic target and long term measure. It uses select Great Lakes ecosystem indicators (i.e., coastal wetlands, phosphorus concentrations, AOC sediment contamination, benthic health, fish tissue contamination, beach closures, drinking water quality, and air toxics deposition) and is based on a 1 to 5 rating system for each indicator, where 1 is poor and 5 is good. Improvements in the index and measures would indicate that fewer toxics are entering the food chain; ecosystem and human health is better protected; fish are safer to eat; water is safer to drink; and beaches are safer for swimming. By 2011, the overall ecosystem health of the Great Lakes as measured by the Great Lakes Index will improve to 23.4 points on a scale of 40 (the current baseline is 20 points).

The following proposed provisional allocations have been developed by EPA in consultation with the Interagency Task Force, subject to factors such as funding availability, statutory authority, agreed-upon overhead provisions, development of appropriate accountability mechanisms, and anticipated adjustments resulting from experience with utilization of FY 2010 funding:

⁴⁰ This is an existing measure under the Government Performance and Results Act.

**Summary of Proposed FY2011 Provisional 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, Education, Monitoring, Evaluation, Communication, and Partnerships	Totals	% Share
DHS-USCG	554	1,663	0	0	0	2,217	0.74%
DOC-NOAA	790	1,197	1,496	8,867	3,076	15,427	5.14%
DOD-USACE	5,492	1,524	7,953	8,147	499	23,615	7.87%
DOI-BIA	0	0	0	2,771	0	2,771	0.92%
DOI-NPS	840	1,623	691	1,108	397	4,660	1.55%
DOI-USFWS	2,993	8,512	0	20,707	277	32,489	10.83%
DOI-USGS	1,352	1,296	1,427	2,217	3,990	10,282	3.43%
DOS-GLFC	0	3,880	0	277	0	4,157	1.39%
DOS-IJC	0	0	0	0	166	166	0.06%
DOT-FHWA	0	0	0	1,386	0	1,386	0.46%
DOT-MARAD	0	2,633	0	0	0	2,633	0.88%
EPA	85,187	17,429	26,129	10,269	30,000	169,014	56.34%
HHS-ATSDR	3,048	0	0	0	0	3,048	1.02%
USDA-APHIS	0	1,663	0	0	0	1,663	0.55%
USDA-NRCS	0	554	16,428	1,108	222	18,312	6.10%
USDA-USFS	1,108	2,757	277	3,519	499	8,161	2.72%
Totals	101,364	43,303	54,402	60,377	40,554	300,000	100%
% Share	33.79%	14.91%	18.13%	20.13%	13.04%	100%	

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of Areas of Concern in the Great Lakes where all management actions necessary for delisting have been implemented (cumulative).			1	3	AOCs

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of nonnative species newly detected in the Great Lakes ecosystem.			1.1	1	Number species

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Acres managed for populations of invasive species controlled to a target level (cumulative).			1,000	1,500	Number of Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of beaches meeting bacteria standards 95 percent or more of beach days.			86	87	Percent Beaches

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of multi-agency rapid response plans established, mock exercises to practice responses carried out under those plans, and/or actual response actions (cumulative).			4	7	Number Responses/Plans

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Five-year average annual loadings of soluble reactive phosphorus (metric tons per year) from tributaries draining targeted watersheds.				0.5	Average Loadings

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Acres in Great Lakes			2	8%	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	watershed with USDA conservation practices implemented to reduce erosion, nutrients, and/or pesticide loading.				increase	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of populations of native aquatic non-threatened and endangered species self-sustaining in the wild (cumulative).			48/147	35%; 52/147 populations	Number of species

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of acres of wetlands and wetland-associated uplands protected, restored and enhanced (cumulative).			5,000	7,500	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of acres of coastal, upland, and island habitats protected, restored and enhanced (cumulative).			15,000	20,000	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Cost per cubic yard of contaminated sediments remediated (cumulative).	200	122	200	200	Dollars/Cubic Yard

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of Beneficial Use Impairments removed within Areas of Concern.	21	12	20	26	BUIs Removed

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic systems.	No Target Established		No Target Established	23.4	Scale

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cubic yards of contaminated sediment remediated (cumulative from 1997) in the Great Lakes.	5.9	6	6.3	7.2	Cubic Yards (million)

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples.	5	6	10	14	Percent Decline

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of species delisted due to recovery.			0	1	Species

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.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$116.0) 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.
- (\$-174,884.0) Program funding has been reduced to provide additional time to absorb the initial influx of FY 2010 funding for the Initiative. Over much of the past year, EPA and other agencies have been working together and with stakeholders to get administrative and accountability functions in place, including the action plan that will guide restoration

efforts. Implementing these critical items now will ease program administration in the future and result in better coordination and results. Consequently, some of the 2010 funding will not outlay until 2011.

- This amount also reflects payroll and cost of living for existing FTE.

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. EPA is again proposing the statutory language pertaining to administrative provisions which was included in 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. Continuation of this 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.

Geographic Program: Chesapeake Bay

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$26,317.8	\$50,000.0	\$62,957.0	\$12,957.0
Total Budget Authority / Obligations	\$26,317.8	\$50,000.0	\$62,957.0	\$12,957.0
Total Workyears	24.4	48.9	48.8	-0.1

Program Project Description:

In May 2009, the Chesapeake Executive Council pledged to put in place by 2025 all Bay management mechanisms necessary to restore the Bay. Part of this new strategy to speed up the pace of Bay restoration and become more accountable included the setting of specific two year milestones for each jurisdiction to reduce pollution to the Bay and its rivers. These milestones will also contain “contingencies” and “consequences” for falling short.

On May 12, 2009, President Obama signed Executive Order (EO) 13508 on Chesapeake Bay Protection and Restoration. The EO has brought the Chesapeake Bay Program to a new level of interagency coordination and cooperation. The EO established a Federal Leadership Committee for the Chesapeake Bay chaired by EPA and including six other Federal agencies. The Chesapeake Bay Program Office is supporting implementation of the new EO.

On November 9, 2009, EPA and the other agencies included in the EO released a draft comprehensive strategy for the protection and restoration of the Chesapeake Bay and its watershed as called for in section 203 of the EO. Also in November 2009, EPA and other agencies released individual reports on specific challenges in the Chesapeake Bay as required under section 202 of the EO. The agencies are engaged in a significant public outreach effort to explain the strategy and reports and to hear directly from members of the public as to their perspectives on the ideas contained in these documents.

EPA’s recommended actions under the EO include:

- Development of watershed implementation plans by the six Bay watershed states and the District of Columbia;
- Requiring the states and District to develop milestones detailing near-term actions and loading reduction targets to evaluate progress toward water quality goals;
- Undertaking new rulemakings to reduce nutrient and sediment loadings to the Chesapeake Bay from concentrated animal feeding operations, stormwater, new or expanding sources of nutrient and/or sediment, and other pollutant sources as EPA deems necessary; and

- Establishing an enhanced partnership with the U.S. Department of Agriculture to accelerate the adoption of conservation practices by agricultural interests in the Bay watershed.

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 3.4 million farmland acres;
- Preserved 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, now practiced on more than 2 million acres;
- Planted 6,172 miles of streamside forested buffers;
- Restored 13,005 acres of wetlands; and
- Removed blockages to more than 2,300 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 38 percent of the nitrogen loads, 45 percent of the phosphorus loads, and over 60 percent 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.

In November 2009, EPA provided the six states in the Chesapeake Bay watershed and the District of Columbia with rigorous expectations for jurisdictions to reduce pollution in streams, rivers and the Bay to meet water quality standards. EPA's expectations fulfill the mandate of the EO, which calls for a new accountability framework that guides Federal, state, and local water quality restoration efforts. The expectations also are a component of the Chesapeake Bay Total Maximum Daily Load (TMDL), which will set pollution limits for point sources and nonpoint sources contributing nitrogen, phosphorus and sediment to the Bay and its tidal creeks, rivers, and embayments. EPA expects the six watershed states and D.C. to identify how they will

reduce pollutant loads to levels necessary to meet water quality standards. EPA expects detailed schedules for implementing cleanup actions and achieving pollution reductions. Progress will be measured through benchmarks every two years.

On December 29, 2009, EPA sent a letter to the Chesapeake Bay states that provided details about the potential Federal consequences for inadequate plans or failure to meet the performance milestones established. The Federal consequences letter, which may be viewed electronically at http://www.epa.gov/region03/chesapeake/bay_letter_1209.pdf, noted that EPA may exercise its discretionary authority to take any or all of the following actions as necessary:

- Expand NPDES permit coverage to currently unregulated sources;
- Object to NPDES permits and increase program oversight
- Require net improvement offsets;
- Establish finer scale wasteload and load allocations in the Bay TMDL;
- Require additional reductions of loadings from point sources;
- Increase and target Federal enforcement and compliance assurance in the watershed;
- Condition or redirect EPA grants based on demonstrated progress; and
- Federal promulgation of local nutrient water quality standards.

FY 2011 Activities and Performance Plan:

EPA's focus in FY 2011 will be to continue to improve the rate of progress in the Chesapeake Bay watershed by meeting the President's expectations as described in E.O. 13508, using the agency's existing statutory authority, developing more rigorous regulations, providing states with the tools necessary for effective regulatory implementation, creating better tools for scientific analysis and accountability, and supporting regulatory compliance and enforcement. The requested increase of \$13 million in FY 2011 will be used to increase state implementation and enforcement grants to \$20 million in total funding and to implement key initiatives under President Obama's Executive Order on Chesapeake Bay Protection and Restoration, including: implementing the Chesapeake Bay total maximum daily load (TMDL); developing new regulations for animal feeding operations and stormwater discharges; deploying technology to integrate discrete Bay data systems and to present the data in an accessible accountability system called ChesapeakeStat; and implementing a Bay-specific enforcement and compliance initiative.

E.O. 13508 establishes a number of expectations that will require EPA resources in FY 2011. Most significant will be the implementation of the new Federal initiatives identified in the final Chesapeake Bay strategy required to be released in May 2010. This document will provide a crucial roadmap for the E.O., and requires the Federal Leadership Committee (FLC) to publish an annual action plan and an annual progress report, the first of which are likely to be published in final form in FY 2011. The E.O. also requires the FLC to support periodic evaluation of progress made toward the goals described in the E.O. The CBP partnership is using independent program performance evaluation to critically review components of the CBP and support enhanced "adaptive management" efforts. A first step in this effort is a National Academies of Science study on how to improve strategic and specific implementation efforts to attain the CBP's nutrient reduction goal for water quality in order to accelerate the protection and restoration goals for the Chesapeake Bay. EPA's General Counsel will provide support for the

development and implementation of the Federal Bay restoration strategy pursuant to E.O. 13508, including programs and the affected Regional offices: the Air program, the Enforcement program, and also legal counsel and the environmental information office.

A centerpiece of EPA's FY 2011 activities is the implementation of the nation's largest and most complex Total Maximum Daily Load (TMDL) for the entire Chesapeake Bay watershed. A TMDL is essentially a plan that defines how much of a particular pollutant may be discharged in to a particular waterbody while allowing the waterbody to meet its water quality standards and designated uses. Through their watershed implementation plans, EPA expects that the Bay states and the District of Columbia will provide specific timelines for enhancing programs and implementing actions to reduce pollution, with all measures needed to reach the TMDL pollution load limits in place no later than 2025. By FY 2011, EPA expects the states and D.C. to divide their allocated pollution reductions to the local level so that counties, municipalities, conservation districts and watershed organizations understand their role in meeting water quality goals. EPA expects that by 2017 pollution controls will be in place that should result in approximately 60 percent of the required reductions.

In FY 2011, EPA will use its technical and scientific analysis capabilities to provide implementation support and guidance to the states and thousands of local governments that will be affected by the TMDL. EPA will assist these jurisdictions in making scientifically informed determinations of the most effective ways to meet their TMDL obligations that will provide individually tailored solutions. EPA's Air program will work with Region 3 and the Chesapeake Bay Program Office to establish air deposition allocations as part of the load allocations for the Bay TMDL and analyze whether additional reductions are needed to meet the air deposition load allocations.

In FY 2011, EPA also will continue the development and implementation of new regulations to protect and restore the Chesapeake Bay. EPA will initiate rulemakings under the Clean Water Act to reduce nitrogen, phosphorus, and sediment pollution in the Bay from concentrated animal feeding operations, stormwater discharges from new and redeveloped properties, new or expanded discharges, and other pollutant discharges as necessary.

EPA will use its resources to develop the scientific underpinnings of the new regulations, which likely will include enhanced understanding of the loads contributed by various pollution sources in specific geographies. EPA's Air and Radiatio program is developing three rules that could affect ambient air levels of NO_x and therefore the deposition of nitrogen in the Chesapeake Bay: 1) a replacement rule for the court-remanded Clean Air Interstate Rule; 2) the reconsideration of the ozone standard that was promulgated in 2008; and 3) a secondary standard for oxides of nitrogen and sulfur.

To ensure that the states are able to meet EPA's expectations under the TMDL and new rulemakings, EPA will continue and in some cases expand its broad range of grant programs. EPA will direct investments toward key local governments and watershed organizations based on their ability to reduce nutrient and sediment loads via key sectors such as development and agriculture in urban and rural areas. Most significantly, EPA will increase the funding for state implementation and enforcement by \$1.2 million over FY 2010 levels, for a total of \$20 million.

This represents a \$12.5 million increase in state implementation and enforcement grants from FY 2009 levels. EPA has developed new guidance for the state implementation grants that ensures a high level of accountability for the use of these resources. These grants are an essential part of achieving the goals established for the Chesapeake Bay and its watershed. EPA's Chesapeake Bay Program has established a high level of accountability and transparency. The next step in meeting that commitment to program partners and stakeholders is the development of the Chesapeake Registry and ChesapeakeStat. The Chesapeake Registry gathers project and resource information from all Bay partners, including non-governmental organizations, to track 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). In FY 2011, EPA will work with key partners to integrate their existing internal partner performance management data systems and refine the Chesapeake Registry to better support state and Federal implementation efforts.

ChesapeakeStat is a key element in the next generation of tools EPA is developing to significantly enhance the accountability of program partners. Currently Federal, state, and local data sources are largely stove-piped and rarely geoenabled. ChesapeakeStat will be a web based, geoenabled tool for performance-based interactive decision making for all Bay partners. The system will allow the public to track progress and become informed and engaged in restoring the Bay. Bay partners will use ChesapeakeStat to develop interactive performance dashboards to 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 restoration activities in those sub-watersheds that will yield the greatest nutrient and sediment reductions and a better understanding of options to accelerate implementation.

A key feature of ChesapeakeStat will be the ability to target resources and activities to ensure that taxpayer dollars are used where they will do most good. ChesapeakeStat will provide an interface for existing discrete systems and a newly deployed enterprise data engine for the Chesapeake Bay. The data engine will serve modeling and science needs; make valuable information exchanges between Federal, state, local, Tribal, and non-governmental partners; and link resource information in the Chesapeake Registry to threats, goals, strategies, and investments. The blueprints and interfaces for this system will be shared with other large aquatic ecosystems such as Puget Sound, the Great Lakes, and the Gulf of Mexico. In FY 2011, the Agency will use its Bay-related resource allocation to fully deploy ChesapeakeStat.

Ensuring that the regulated community complies with the appropriate regulations is an essential responsibility for achieving the goals established for the Chesapeake Bay and its watershed. In FY 2011, the Enforcement and Compliance Assistance program will use its Bay-related resource allocation to focus on sectors contributing significant amounts of nutrients, sediment and other contaminants to impaired watersheds in the Bay, including CAFOs, stormwater point source discharges (including discharges from municipal separate storm, sewer systems, stormwater discharges from construction sites and other industrial facilities), municipal and industrial wastewater facilities, and air deposition sources of nitrogen, including power plants. EPA also will identify appropriate opportunities for compliance and enforcement activities related to dredge and fill operations, Federal facilities, and Superfund sites, including remedial action and removal sites, and Resource Conservation and Recovery Act (RCRA) corrective action facilities.

More specifically, EPA’s compliance and enforcement actions will be focused on the following areas:

- Superfund and RCRA: Elizabeth River; Anacostia River; and Patapsco River (Baltimore Harbor);
- CAFOs: three geographic areas that represent the greatest contributions of manure-based agriculture nutrient loads to the Bay;
- Wastewater: significant wastewater facilities under permit schedules for upgrading treatment;
- Stormwater: permit non-compliance related to municipal separate storm sewer systems (MS4s), construction activity and priority industrial sectors within geographic hot-spots that are critical to restoration of the Bay; and
- Air deposition: stationary sources and mobile sources at port facilities, warehouses, and construction sites within the Chesapeake Bay airshed.

In addition, enforcement resources will support the Agency’s priority to restore the Chesapeake Bay by providing information about wet weather sources of pollution. This will result in an increase in knowledge, use, transparency, and public access to data about wet weather sources through: a) building an electronic reporting module for getting non-major permit data into ICIS-NPDES to pilot with states in the Chesapeake Bay; b) building and deploying targeting tools to help identify the most significant sources of noncompliance and discharges of pollutants most responsible for the impairment of this important water body; and c) making all non-enforcement confidential data available, with easy-to-use tools to aid in the public's ability to use and understand the data.

Work under this program project supports the Agency's new High Priority Performance Goal (HPPG), addressing Chesapeake Bay water quality (specified in full in Appendix A).

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of goal achieved for implementing sediment reduction practices to reduce sediment 1.69M tons from 1985 levels to achieve a 4.15M ton/yr cap load, based on long-term avg. hydrology simulations.	67	64	71	71	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of goal achieved for implementing	64	65	66	70	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	phosphorus reduction practices to reduce phosphorus 14.36M lbs from 1985 levels to achieve a 12.8M lb/yr cap load, based on LT avg. hydrology simulations.					

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of goal achieved for implementing nitrogen reduction practices to reduce nitrogen 162.5M lbs from 1985 levels to achieve a 175M lb/yr cap load, based on long-term avg. hydrology simulations.	50	49	52	56	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of point source nitrogen reduction goal of 49.9 million pounds achieved.	74	70	74	76	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of point source phosphorus reduction goal of 6.16 million pounds achieved.	87	96	89	96	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of forest buffer planting goal of 10,000 miles achieved.	62	62	65	68	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Total nitrogen	49,237	49,660	49,237	48,134	Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	reduction practices implementation achieved a a result of agricultural best management practice implementation per million dollars to implement agricultural BMPs.					

For FY 2011, EPA, along with the other agencies involved in responding to the President’s Executive Order, will be establishing short-term, medium-term, and long-term performance targets for the initiatives taken under the E.O. These targets will relate to the specific actions identified in the final coordinated implementation strategy required to be released in May 2010. The performance targets will be included in the final strategy document. EPA is participating in a sequence of meetings with the other federal agencies working on the E.O. to identify a series of performance targets that not only provide a path forward on the initiatives, but that represent improvements in the Chesapeake Bay and its watershed.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+1,460.0) This reflects an increase for payroll and cost of living for existing FTE.
- (\$11,497.0) This reflects an increase to implement the EPA Executive Order, state nonpoint source program enhancements and EPA Executive Order enforcement activities. This includes an additional \$35.0 in travel and \$275.0 in IT and telecommunications resources.

Statutory Authority:

CWA, RCRA.

Geographic Program: San Francisco Bay

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$4,922.0</i>	<i>\$7,000.0</i>	<i>\$5,000.0</i>	<i>(\$2,000.0)</i>
Total Budget Authority / Obligations	\$4,922.0	\$7,000.0	\$5,000.0	(\$2,000.0)
Total Workyears	0.0	2.5	2.5	0.0

Program Project Description:

The San Francisco Bay-Delta Estuary Program is aimed at protecting and restoring water quality and ecological health of the estuary through partnerships, interagency coordination, and project grants. The San Francisco Estuary is the largest estuary on the west coasts of North and South America. It comprises the 1,153-square mile Sacramento-San Joaquin Delta and the 478-square mile San Francisco Bay and receives runoff from 40 percent of California’s land area. Because of its highly dynamic and complex environmental conditions, it supports many important economic activities including commercial and sport fishing, shipping, industry, agriculture, recreation and tourism. The Delta serves as the major hub of California’s water supply, channeling water to two-thirds of the state’s households and millions of acres of farmland in the Central Valley. EPA has a diverse and active history of working with state, Federal and other stakeholders throughout the entire estuary to protect water quality and ecosystem health. Program priorities include:

- Participation in Federal and state partnerships aimed at resolving the challenges of water quality, ecosystem health and water supplies;
- Water quality improvements through Total Maximum Daily Loads (TMDLs), watershed plans and upgrading aging infrastructure;
- Supporting the San Francisco Estuary Partnership (National Estuary Program) and the implementation of the Comprehensive Conservation and Management Plan (CCMP);
- Protection and restoration of streams and wetlands, and the reuse of dredge material; and
- Predicting, mitigating and adapting to climate change impacts on water quality.⁴¹

⁴¹ For more additional information on program activities see:

http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/strategic_plan/

<http://calwater.ca.gov/index.aspx>

<http://resources.ca.gov/bdcp/>

<http://deltavision.ca.gov/>

FY 2011 Activities and Performance Plan:

In FY 2011, the San Francisco Bay-Delta Estuary Program will focus on the following activities:

- Provide scientific support for Bay-Delta restoration to improve the understanding of :
 - The causes and methods for reversing the decline of pelagic organisms in the Delta;
 - Restoring the health of the San Joaquin River (San Joaquin River Restoration Settlement Act, Public Law 111-11); and
 - Pesticide and mercury pollutant loading;
- Provide leadership in reinvigorated state/Federal partnership to balance the competing water needs between agriculture, urban uses and the environment;
- Continue competitive grant program to implement projects that improve water quality and restore San Francisco Bay watersheds;
- Strengthen ongoing implementation of the San Francisco Estuary Partnership's CCMP by supporting a new strategic plan. Encourage focus on reducing urban runoff impacts on water quality through watershed planning, Low Impact Development (LID) and TMDL implementation;
- Support the California Water Boards in implementing their Bay Delta Strategic Plan, particularly reviewing/improving water quality standards;
- Increase effectiveness of regulatory programs to protect wetlands and streams;
- Continue efforts to support studies that focus on preparing for the effects of climate change;
- Continue to support restoration of wetlands acreage; and
- Strengthen monitoring to assist in Clean Water Act reporting and TMDL implementation, particularly aimed at establishing a San Joaquin Regional Monitoring Program.

Performance Targets:

Work under this program supports the Restore and Protect Critical Ecosystems objective. Currently, there are no performance measures for this specific Program Project.

<http://sfep.abag.ca.gov/>

<https://www.cfda.gov/index?s=program&mode=form&tab=step1&id=838e0a426684b0feb8abf6b8e60cb326>

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$2,005.0) This reduces congressional directed increase in funding in FY 2010 for the San Francisco Bay-Delta Estuary Program.
- (+\$5.0) This reflects an increase for payroll and cost of living of existing FTE.

Statutory Authority:

CWA

Geographic Program: Puget Sound

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$11,256.6</i>	<i>\$50,000.0</i>	<i>\$20,000.0</i>	<i>(\$30,000.0)</i>
Total Budget Authority / Obligations	\$11,256.6	\$50,000.0	\$20,000.0	(\$30,000.0)
Total Workyears	4.6	9.3	8.0	-1.3

Program Project Description:

The Puget Sound program works to protect and restore Puget Sound. Puget Sound has been designated as an estuary of national significance under the CWA National Estuary Program (NEP). EPA efforts are focused on the following high priority environmental activities consistent with the State of 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.

For more information, visit: http://www.psp.wa.gov/aa_action_agenda.php⁴²

FY 2011 Activities and Performance Plan:

In FY 2011, the Puget Sound program will continue efforts to improve water quality and minimize the adverse impacts of rapid development in the Puget Sound Basin. In 2009, EPA approved Puget Sound National Estuary Program’s Comprehensive Conservation and Management Plan (CCMP). EPA worked closely with state and Tribal partners to ensure that the State of Washington’s 2020 Action Agenda met the environmental, regulatory, and performance objectives of the CCMP.

⁴² For additional information please see:
<https://www.cfda.gov/index?s=program&mode=form&tab=step1&id=e7e16b26192b86b4ba1a48f775e6777e>
<https://www.cfda.gov/?s=program&mode=form&tab=step1&id=fe6d95fee9f929947a9876314191fded>
<https://www.cfda.gov/?s=program&mode=form&tab=step1&id=4250c05fcffe055c38486634b6c9cb85>
<https://www.cfda.gov/?s=program&mode=form&tab=step1&id=8bd234e1795d2cc71f81bc4f7a92269a>

The goal of the approved CCMP for the Puget Sound Estuary is to restore and maintain the Puget Sound Estuary's estuarine environment by 2020 so that it will support balanced indigenous populations of shellfish, fish and wildlife, and support the extensive list of recognized uses of Puget Sound. The program will significantly leverage Federal funds with state and local partners to implement the CCMP with special focus 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 2011;
- 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 and protect approximately 750 acres of tidally and seasonally-influenced estuarine wetlands in FY 2011;
- 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;
- Cleaning up known contaminated sediments. EPA's target is to remediate 4 acres in FY 2011;
- Reducing discharges of toxics and nutrient pollution by continuing to implement reduction strategies developed with Federal, state, and local partners;
- 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	600	1,730	1,800	1,925	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Remediate acres of prioritized contaminated sediments.	125	123.1	123	127	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Restore the acres of tidally and seasonally influenced estuarine wetlands.	5,700	5,751	6,500	7,250	Acres

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$26,000.0) This reduces congressional directed increase in funding in the FY 2010 Enacted Budget for the Puget Sound Basin.
- (-\$4,000.0) This reduces congressional directed funding in FY 2010 for the Puget Sound Ecosystem Research Initiative at the University of Washington's College of the Environment.

Statutory Authority:

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. FIFRA; Pollution Prevention Act; Marine Protection, Research, and Sanctuaries Act; National Environmental Education Act.

Geographic Program: South Florida

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$2,279.6	\$2,168.0	\$2,148.0	(\$20.0)
Total Budget Authority / Obligations	\$2,279.6	\$2,168.0	\$2,148.0	(\$20.0)
Total Workyears	3.6	3.9	3.9	0.0

Program Project Description:

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.

For more information, visit: <http://www.epa.gov/Region4/water/southflorida/>

FY 2011 Activities and Performance Plan:

The EPA South Florida program targets efforts to protect and restore various communities and ecosystems impacted by environmental problems. In FY 2011, EPA will focus on 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 stormwater 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;
- Under a consent decree, continue assistance with development of Total Maximum Daily Loads (TMDLs) for South Florida;
- Propose nutrient criteria for the state of Florida in January 2010 for lakes and flowing water and January 2011 for coastal and estuaries, consistent with the schedule set out in EPA's January 2009 determination; and
- 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	At least seventy five percent of the monitored stations in the near shore and coastal waters of the Florida Keys National Marine Sanctuary will maintain Chlorophyll a(CHLA) levels at less than to equal to 0.35 ug l-1 and light clarity(Kd)levels at less than or equal to 0.20 m-1.				75	Percent Stations

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	At least seventy five percent of the monitored stations in the near shore and coastal waters of the Florida Keys National Marine Sanctuary will				75	Percent Stations

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	maintain dissolved inorganic nitrogen (DIN) levels at less than or equal to 0.75 uM and total phosphorus (TP) levels at less than or equal to .25 uM.					

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 ppb total phosphorus criterion throughout the Everglades Protection Area marsh.	Maintain	Not Maintained	Maintain	Maintain	Parts/Billion

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$20.0) This reflects 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:

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;

Geographic Program: Mississippi River Basin

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$12,400.0</i>	<i>\$12,400.0</i>
Total Budget Authority / Obligations	\$0.0	\$0.0	\$12,400.0	\$12,400.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Mississippi River Basin initiative will focus on nonpoint source program enhancements to result in water-quality improvement throughout the watershed and in the Gulf of Mexico. This initiative supports the implementation of the *Gulf Hypoxia Action Plan 2008* as well as the regional priorities outlined in the Gulf of Mexico Alliance’s Governor’s Action Plan II), both of which describe strategies to reduce, mitigate, and control hypoxia in the Northern Gulf of Mexico and improve water quality in the Mississippi River Basin.⁴³

Resources in this program project – supplemented by EPA support via the Surface Water Protection and Gulf of Mexico program projects – will support grants for the development and implementation of state nutrient reduction strategies and the achievement of other goals outlined in the *Hypoxia Action Plan 2008*, and the Action Plan II, and will involve close collaboration with the U. S. Department of Agriculture’s (USDA) efforts to target critical watersheds for focused nutrient reduction efforts, as well as the efforts of the U.S. Geological Survey (USGS) to measure progress in nutrient reduction within the Basin. The 2008 Action Plan describes eleven goals and actions needed to reduce nitrogen and phosphorus, including the promotion of effective conservation practices and management practices, tracking progress, reducing existing scientific uncertainties, identifying the economic costs of hypoxia, and promoting effective communications to increase awareness of Gulf hypoxia.

For more information, visit: <http://www.epa.gov/msbasin/>

This program will work closely with the Gulf of Mexico program over the upcoming year to coordinate and integrate activities to maximize their effectiveness. The Agency will also examine the most appropriate program and accountability structure for the Mississippi River Basin and Gulf of Mexico programs for the next budget cycle and will make changes as needed.

FY 2011 Activities and Performance Plan:

The hypoxic zone that forms in the summer off the coasts of Louisiana and Texas is primarily caused by excess nutrients, many of which originate in Middle American cities, farms and

⁴³ (<http://www.epa.gov/msbasin/actionplan.htm>)

industries. To address this pressing water quality challenge, EPA will work with state and Federal partners to target the highest priority watersheds in the Mississippi River Basin to demonstrate how effective nutrient strategies and enhanced partnerships, especially with the agricultural community, can yield significant progress in addressing non-point source driven nutrient pollution. A key emphasis will be encouraging partnerships with USDA and USGS to promote sustainable agricultural practices, to reduce nutrient loadings in the Mississippi River Basin.

In FY 2011, EPA will invest \$12.4 million in the Mississippi River Basin through grants for the following activities, which will be targeted in one high priority watershed in each of Regions 5 and 7:

- Working with Federal and state partners to focus wetland restoration and development and habitat restoration efforts towards projects within the Mississippi River Basin that will sequester nutrients as appropriate from targeted watersheds and tributaries;
- Designing and implementing Nutrient Reduction Strategies in the Mississippi River Basin watershed as called for by the *Gulf Hypoxia Action Plan 2008*;
- Coordinating with the USDA Mississippi River Basin Healthy Watershed Initiative to promote watershed scale planning, practice implementation, and monitoring by the states⁴⁴ in line with their nutrient reduction strategies, which will benefit the state resources impacted by nutrient pollution and Gulf hypoxia;
- Supporting pilot investigations of critical Regional priorities described in the Gulf Hypoxia Action Plan 2008 related to nutrient reduction, such as providing support as the states develop nutrient standards, and support for watershed planning that incorporates practice implementation to reduce the impacts of cropland drainage;
- Collaboration with states and other Federal agencies within targeted watersheds to leverage.

Performance Targets:

Work under this program supports the Improve Water Quality on a Watershed Basis sub-objective. Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$12,400.0) This increase reflects EPA's increased support of programs to design and implement Nutrient Reduction Strategies in the Upper Mississippi River Basin as called for by the *Gulf Hypoxia Action Plan 2008* and the *Gulf of Mexico Alliance Action Plan II*.

Statutory Authority:

CWA.

⁴⁴ Louisiana, Mississippi, Arkansas, Tennessee, Missouri, Illinois, Indiana, Kentucky, Ohio, Iowa, Wisconsin and Minnesota

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$3,072.9	\$7,000.0	\$3,000.0	(\$4,000.0)
Total Budget Authority / Obligations	\$3,072.9	\$7,000.0	\$3,000.0	(\$4,000.0)
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. Priorities for CCMP implementation with quantitative targets and timeframes were adopted in the Long Island Sound Study 2003 Agreement.

The States of New York and Connecticut are actively reducing nitrogen through their innovative and nationally-recognized pollution trading programs. In 2008, the states discharged 40,440 trade-equalized pounds per day of nitrogen from 106 sewage treatments plants in New York and Connecticut that discharge to Long Island Sound. This represents a 31.6 percent reduction from the baseline and 51.4 percent of the total reduction goal for 2014. Between 1998 and 2009, the states restored or protected 1,613 cumulative acres of critical coastal habitat, and reopened 147 cumulative miles of river corridors to diadromous fish passage through construction of fishways or removal of barriers to fish passage. The states have committed to restore or protect an additional 240 acres and reopen an additional 50 river miles between 2009 and 2014 inclusive. EPA will work with the states through the Long Island Sound Futures Fund grant program to assist in achieving these goals.

(See <http://www.longislandsoundstudy.net> and <http://www.epa.gov/region01/eco/lis> for further information.)⁴⁵

FY 2011 Activities and Performance Plan:

EPA will continue to oversee implementation of the Long Island Sound Study (LISS) CCMP in FY 2011 by coordinating the cleanup and restoration actions of the LISS Management Conference as authorized under Sections 119 and 320 of the CWA. In FY 2011, EPA will focus on the following:

- 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 revise and implement the nitrogen Total Maximum Daily Load first 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 through the Long Island Sound Futures Fund, administered by the National Fish and Wildlife Foundation;
- 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; and

⁴⁵ For additional information see:

<https://www.cfda.gov/index?s=program&mode=form&tab=step1&id=6504cc92476f05523fc836b5dc099c2f>

- 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	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.			52	52	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.			33	50	Percent Goal Achieved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.			33	50	Percent Goal Achieved

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$4,000.0) This reduces congressional directed increase in funding in FY 2011 for the Long Island Sound program.

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: Gulf of Mexico

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$4,837.5	\$6,000.0	\$4,515.0	(\$1,485.0)
Total Budget Authority / Obligations	\$4,837.5	\$6,000.0	\$4,515.0	(\$1,485.0)
Total Workyears	12.7	14.0	13.0	-1.0

Program Project Description:

EPA's efforts in the Gulf of Mexico directly support a transparent and 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.

Building on the successes of the first *Gulf of Mexico Governors' Action Plan* released in 2006, the Gulf States and their partners developed the *Governors' Action Plan II*, a far-reaching, five year regional plan released in June 2009 that will expand partnerships to strengthen the Federal state and local network and set a course for action designed to improve the health of the Gulf coastal ecosystems and economies in ways that a single entity could not achieve. It is a strategy for tangible results that identifies processes and financial authorities in order to leverage resources. In addition, Action Plan II encourages collaboration among countries in the region.⁴⁶

This program will work closely with the new Mississippi River Basin program over the upcoming year to coordinate and integrate activities to maximize their effectiveness. The Agency will also examine the most appropriate program and accountability structure for the Mississippi River Basin and Gulf of Mexico programs for the next budget cycle and will make changes as needed.

⁴⁶ For additional information see:

<http://www.epa.gov/gmpo>

<https://www.cfda.gov/index?s=program&mode=form&tab=step1&id=46df7553599d7161ec8540db0240f199>

FY 2011 Activities and Performance Plan:

The Gulf of Mexico Alliance's environmental priority focus areas are water quality for healthy beaches and seafood, habitat conservation and restoration, ecosystems integration and assessment, reducing nutrient impacts to coastal ecosystems, coastal community resilience, and environmental education. FY 2011 activities of the Gulf of Mexico Program and its partners will include:

- Supporting efforts to achieve the FY 2011 target to restore 128 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 30,000 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;
- 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 Mississippi River Basin Initiative 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.

The bi-national red tide monitoring system framework (Harmful Algal Bloom Observing System, 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 support the Gulf States Governors' Alliance and the five-year Action Plan II of 100 specific challenges designed to enhance the environmental and economic health of the Gulf of Mexico. Progress reported toward the number of near-term actions in Action Plan I, with the leverage of the Federal Workgroup partnership, exceeded expectations at an overall 100 percent on track or completed. The success of the state-led and Federally-supported Gulf of Mexico Alliance shows that the Gulf region is making progress in addressing tremendous challenges and has emerged as a governance model for the nation.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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).	96	131	96	128	Impaired Segments

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats.	26,000	29,344	27,500	30,000	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Improve the overall	2.5	2.2	2.5	2.6	Scale

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.					

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 to restore a total of 30,000 cumulative acres.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$103.0 / -1.0 FTE) This change includes -\$103.0 in associated payroll and reflects EPA’s workforce management strategy that will help the Agency better align resources, skills and Agency priorities. These resources are shifting to support a HQ Gulf of Mexico Hypoxia Coordinator under the National Estuary Program.
- (-\$20.0) This decrease in travel costs reflects an effort to reduce the Agency’s travel footprint by promoting green travel and conferencing.
- (-1,362.0) This reduces congressionally directed funding in FY 2011 for the Gulf Of Mexico Program. However, in conjunction with the new funding (\$17 million) for the Mississippi River Basin, total resources that will help address Gulf of Mexico issues specifically will increase overall..

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$3,147.5	\$4,000.0	\$1,434.0	(\$2,566.0)
Total Budget Authority / Obligations	\$3,147.5	\$4,000.0	\$1,434.0	(\$2,566.0)
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.⁴⁷

FY 2011 Activities and Performance Plan:

Through a collaborative and transparent process, 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 2011 activities include:

- Working with Federal, state, provincial, and local partners to address high levels of phosphorous, by implementing the joint Vermont and New York Lake Champlain Total Maximum Daily Load (TMDL) to reduce phosphorus loads from all categories of sources (point, urban, and agricultural nonpoint);
- Continuing to collaborate with the International Joint Commission (IJC) to determine the critical source areas of phosphorus in the Missisquoi Bay sub-basin, distributing results obtained to date to Lake Champlain partners at the state, local, Federal, and provincial level for implementation actions;

⁴⁷ For additional information see: <http://www.epa.gov/NE/eco/lakechamplain/index.html>
<http://www.lcbp.org>
http://nh.water.usgs.gov/champlain_feds
<http://www.cfda.gov>

- Carrying out required activities resulting from the Lake Champlain TMDL lawsuit and the Vermont National Pollution Discharge Elimination System (NPDES) withdrawal petition;
- 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;
- Developing and implementing an adaptive management framework for evaluating the results of management efforts in the Lake Champlain basin on water quality and other ecosystem indicators;
- Developing and implementing a tracking system for investments in Lake Champlain basin restoration;
- 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 the invasive species: Asian clam and spiny waterflea;
- Monitoring the population of alewives, a recent invasive species affecting Lake Champlain, and 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;
- Implementing recommendations resulting from the climate change studies (water quality, precipitation, flow) to reduce the impacts of climate change on water quality in the Lake Champlain Basin; and
- Developing new approaches to stormwater control from urban areas in conjunction with state partners.

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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$2,566.0) This reduces congressional directed increase in funding in FY 2011 for the Lake Champlain Basin.

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: Other

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Communities; Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$5,223.2	\$7,273.0	\$4,687.0	(\$2,586.0)
Total Budget Authority / Obligations	\$5,223.2	\$7,273.0	\$4,687.0	(\$2,586.0)
Total Workyears	4.3	10.0	8.5	-1.5

Program Project Description:

EPA targets efforts to protect and restore various communities and ecosystems impacted by environmental problems. Under this program, the Agency works, develops and implements 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 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 through a collaborative and voluntary effort, strives to restore the ecological health of the Basin by developing and funding restoration projects within the sixteen parishes in the basin. It also supports related scientific and public education projects.

Community Action for a Renewed Environment (CARE)

Through the CARE program, EPA provides funding tools and technical support that enable underserved communities to create collaborative partnerships to take effective actions to address local environmental problems. The on-the-ground support and funding help to reduce toxic pollution from all sources, revitalize underserved areas and improve the health of communities across the nation in sustainable ways. The National Academy of Public Administration (NAPA) issued a positive evaluation of the CARE demonstration program in May 2009 observing "...the CARE program complements EPA regulatory strategies with place-based strategies—strategies that consider the local context in which environmental decisions are made and effects are felt." The NAPA Panel believes that the CARE approach represents a "next step" in environmental improvement and protection." The NAPA Panel concluded that the CARE program successfully

demonstrated that the concept works well to combine EPA expertise with community capacity-building to deliver funding and assistance to address risks from all sources of toxics in underserved communities.

Since its launch in 2005, the CARE program has awarded 68 grants to communities across 35 states with over 1,500 partners engaged for a total of \$12 million in grants. CARE delivers funding through cooperative agreements. In the smaller Level I agreements, the community, working with EPA, creates a collaborative problem-solving group of community stakeholders. That group assesses the community's toxic exposure, environmental problems and priorities, and begins to identify potential solutions. In the larger Level II agreements, the community, working with EPA, selects and funds projects that reduce risk and improve the environment in the community. The CARE program is ending its successful demonstration period. The cooperative agreements issued under the demonstration authorities of the 7 environmental statutes may not be used to support day-to-day program implementation. EPA is requesting authority to implement the CARE program to continue serving communities across the nation.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will protect and restore various communities and ecosystems impacted by diffuse sources of pollution. These collaborative and transparent community-based approaches will decrease the cumulative risk for geographic areas. EPA's FY 2011 efforts will focus on the following:

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 2011, EPA will invest \$1.3 million in the Northwest Forest program for the following activities:

- Continue stream reach and watershed condition/trend monitoring in 2,000 sub-watersheds in California, Oregon, Idaho, Montana, and Washington;
- Use remote sensed data and GIS data layers and field data to complete annual status and trend updates on a subset of 1,300 watersheds in western Oregon, Washington, and Northern California and to support a five-year trend assessment on all 1,300 watersheds;
- 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 evaluate stream and riparian conditions to tie back to monitoring trends and necessary changes to management actions;
- Refine shade models to assist managers in prioritizing restoration opportunities to address stream temperature issues; and
- 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 2011, EPA will invest \$978,000 in the Lake Pontchartrain Basin program for the following activities:

- Implement 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.

CARE

With a FY 2011 investment of \$2.4 million in the CARE program, EPA will continue to provide technical support for underserved and other communities, help them use collaborative processes to select and implement local actions, and award Federal funding for projects to reduce exposure to toxic pollutants and local environmental problems. EPA is requesting new grant authority to continue this program beyond the demonstration phase.

In FY 2011, the CARE program will provide support to communities to help them understand and improve their local environments and health by:

- Selecting and awarding assistance agreements to create and strengthen local partnerships, local capacity, and civic engagement to improve local environments and health, and to ensure sustainability of environmental health efforts over time;

- Providing technical support and training to help CARE communities build partnerships, improve their understanding of environmental risks from all sources, set priorities, and take actions to reduce risks;
- Improving community access to EPA programs and helping communities utilize these programs to reduce risks;
- Implementing a Memorandum of Understanding with the Centers for Disease Control's Agency for Toxic Substances and Disease Registry, to improve support for communities by coordinating the efforts of multiple Federal agencies working at the community level to improve environmental health; and
- Conducting outreach to share lessons learned by CARE communities and encouraging other communities to build partnerships and take actions to reduce risks.

Performance Targets:

Work under these programs supports the Restore and Protect Critical Ecosystems objective. Currently, there are no performance measures for this specific program.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$244.0) This reflects 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.
- (-\$522.0) This reduces congressional directed funding in FY 2010 for the Lake Pontchartrain Basin Restoration Program. This reduction will reduce EPA support for the implementation of the Lake Pontchartrain Basin Program Comprehensive Management Plan, including water quality and infrastructure improvements, and coastal restoration.
- (-\$1820.0 / - 1.5 FTE) This reduces congressional directed funding in FY 2010 for the Potomac Highlands initiative and includes a reduction of 1.5 FTE and decreased associated payroll of \$180.0.

Statutory Authority:

The Pontchartrain Basin Restoration Act of 2000; 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; FIFRA; Pollution Prevention Act; Marine Protection, Research, and Sanctuaries Act; and National Environmental Education Act. New grant authority for CARE is requested in the FY 2011 President's Request.

Program Area: Homeland Security

Homeland Security: Communication and Information

Program Area: Homeland Security

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

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$6,983.0</i>	<i>\$6,926.0</i>	<i>\$4,324.0</i>	<i>(\$2,602.0)</i>
Total Budget Authority / Obligations	\$6,983.0	\$6,926.0	\$4,324.0	(\$2,602.0)
Total Workyears	13.9	17.0	16.0	-1.0

Program Project Description:

This program supports workforce health and safety in the event of an Incident of National Significance (INS) and a Continuity of Operations (COOP) or pandemic situation and enables the upgrading and standardization of technology, with particular emphasis on the Internet Protocol Version 6 (IPv6) infrastructure. It 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. This program also serves to capitalize on the concept of "dual-benefits" so that EPA's homeland security efforts enhance and integrate with EPA's 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 2011 Activities and Performance Plan:

EPA will develop a homeland security policy for planning, prevention, preparedness, and response for nationally significant incidents. EPA's homeland security efforts will focus on water security, decontamination issues, emergency response, and internal preparedness.

EPA will ensure that interagency intelligence-related planning and operational requirements are met. This will be achieved through coordination 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 National and Homeland Security Councils. EPA also will track emerging national/homeland security issues in order to anticipate and avoid crisis situations and target the Agency's efforts proactively against threats to the United States.

EPA's FY 2011 resources will support the Agency's rapid response infrastructure by delivering 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.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$58.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$2,490.0) This reflects a reduction to the Agency's homeland security specific IT Infrastructure security efforts related to the deployment of wireless infrastructure in support of emergency response and homeland security activities.
- (-\$159.0/-1.0 FTE) This change includes \$159.0 in associated payroll and reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency Priorities by streamlining administrative management.
- (-\$11.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

Homeland Security Presidential Directives; National Oil and Hazardous Substances Pollution Contingency Plan (NCP); CERCLA; RCRA; SDWA; CWA; CAA; TSCA; FIFRA; Bio Terrorism Act of 2003; Homeland Security Act of 2002; Post-Katrina Emergency Management Reform Act; 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$6,837.2	\$6,836.0	\$2,415.0	(\$4,421.0)
Science & Technology	\$23,961.7	\$23,026.0	\$16,105.0	(\$6,921.0)
Hazardous Substance Superfund	\$1,767.0	\$1,760.0	\$0.0	(\$1,760.0)
Total Budget Authority / Obligations	\$32,565.9	\$31,622.0	\$18,520.0	(\$13,102.0)
Total Workyears	47.8	49.0	28.0	-21.0

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.

FY 2011 Activities and Performance Plan:

Information Sharing Networks & Water Security

In FY 2011, 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, 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 2011, EPA will continue efforts to increase the water sector's participation in these critical 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. In addition to providing a vehicle for utilities to access these materials, EPA will continue to develop materials to ensure that utilities have the most updated and critical information. 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 2011 request level for the information sharing networks is \$1.9 million.

EPA also supports the Regional Offices' emergency response activities. The program provides 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 breach.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$3.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$694.0) This reduction reflects decreased Federal support for the water information sharing networks as it transitions to a subscription based program by FY 2011.
- (-\$1,114.0 / -1.0 FTE) This reduction reflects the development of effective modeling methodologies to demonstrate the effects of air threats to air quality in the United States for use in emergency response situations. This reduction includes 1.0 FTE and associated payroll of \$123.0.
- (-\$2,616.0 / -11.8 FTE) Beginning in FY 2011, EPA will not need to maintain separate capacity to support environmental criminal investigations and training for counter – terrorism related investigations. This reduction reflects the increased capacity of other agencies to handle the environmental forensics work associated with potential homeland security related incidents. This reduction includes 11.8 FTE and associated payroll of \$1,980.0.

Statutory Authority:

NCP; CERCLA; 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; Defense Against Weapons of Mass Destruction Act (Title XIV of Public Law 104-201).

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): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$3,054.1</i>	<i>\$3,423.0</i>	<i>\$2,012.0</i>	<i>(\$1,411.0)</i>
Science & Technology	\$41,771.8	\$41,657.0	\$34,598.0	(\$7,059.0)
Hazardous Substance Superfund	\$55,479.4	\$53,580.0	\$42,274.0	(\$11,306.0)
Total Budget Authority / Obligations	\$100,305.3	\$98,660.0	\$78,884.0	(\$19,776.0)
Total Workyears	187.8	174.2	181.0	6.8

Program Project Description:

EPA plays a lead role in protecting U.S. citizens and the environment from the effects of attacks that release chemical, biological, and radiological agents. EPA's Homeland Security Emergency Preparedness and Response program develops and maintains an Agency-wide capability to prepare for and respond to large-scale catastrophic incidents with emphasis on those that may involve Weapons of Mass Destruction (WMD). EPA continues to increase the state of preparedness for homeland security incidents. The response to chemical agents is different from the response to biological agents, but for both, the goals are to facilitate preparedness, guide the appropriate response by first responders, ensure safe re-occupancy of buildings or other locations, and 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.

FY 2011 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.

Since FY 2009, the AEGLs program has shifted emphasis from producing Proposed values to creating Interim and ultimately Final status via peer review by the National Academies of Science. In FY 2011, the emphasis will be on finalizing already developed AEGL values. By the close of FY 2011, EPA expects to have published Final values for at least 70 chemicals. The development of proposed values for existing chemicals of concern is expected to be completed by the end of FY 2010. Any proposed values will be raised to Interim status within one year of

being proposed. An additional 30 chemicals are under consideration for addition to the list of chemicals targeted for AEGLs development, but a decision is pending on whether to add them. For more information, please visit <http://www.epa.gov/oppt/aegl>.

In addition, EPA is working with the United States Department of Agriculture (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 Agency-wide efforts to build environmental laboratory capacity and capability.

Performance Targets:

This program has consistently exceeded its performance targets in past years in developing Proposed AEGL values. In FY 2011, the program will transition to working solely on Final AEGL values. This measure can be found in Program Project: Toxic Substances – Chemical Risk and Review.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$13.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$15.0) This reflects reduced costs for IT security and integration services.
- (-\$1,409.0) This reflects decreased support for homeland security pesticides related activities. This reduction is possible since EPA has assisted DHS and other agencies in completing guidance on procedures, plans, and technologies to restore airports following a biological attack, and completed the development of a risk management framework for decision-makers for restoration and recovery from a biological incident, including response to and recovery from *Bacillus anthracis* contamination of a large urban area.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$6,648.8</i>	<i>\$6,369.0</i>	<i>\$6,391.0</i>	<i>\$22.0</i>
Science & Technology	\$587.0	\$593.0	\$594.0	\$1.0
Building and Facilities	\$8,559.9	\$8,070.0	\$8,070.0	\$0.0
Hazardous Substance Superfund	\$1,203.6	\$1,194.0	\$1,194.0	\$0.0
Total Budget Authority / Obligations	\$16,999.3	\$16,226.0	\$16,249.0	\$23.0
Total Workyears	5.1	3.0	3.0	0.0

Program Project Description:

EPA's Homeland Security program is composed of the following 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 2011 Activities and Performance Plan:

In FY 2011, 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.

Regarding national security information, FY 2011 activities will include: classifying, declassifying, and safeguarding classified information; identifying and marking of classified

information; performing education, training, and outreach; and conducting 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$23.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$17.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$16.0) This reflects a realignment of general expenses and contracts to support administrative costs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$5,347.1</i>	<i>\$5,866.0</i>	<i>\$5,615.0</i>	<i>(\$251.0)</i>
Science & Technology	\$371.0	\$453.0	\$461.0	\$8.0
Total Budget Authority / Obligations	\$5,718.1	\$6,319.0	\$6,076.0	(\$243.0)
Total Workyears	39.9	39.4	37.1	-2.3

Program Project Description:

EPA’s non-regulatory indoor radon program promotes actions to reduce the public’s 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 promotes partnerships between national organizations, the private sector, and state, local, and Tribal government programs to achieve radon risk reduction.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will:

- Continue to partner with national and private sector organizations, as well as state, local, and Tribal government organizations to reduce radon exposure;
- 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
- Improve scientific knowledge and technologies to support and drive aggressive action on radon in conjunction with partners.

In FY 2011, the program will continue to focus on radon risk reduction in homes and schools. EPA will use information dissemination, social marketing techniques, and partnerships with influential public health and environmental organizations to drive action at the national level. EPA will continue to promote public action to test homes for indoor radon, fix homes when levels are high, and build homes with radon-resistant features.

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 improving transparency by making state radon grantee performance data available to the public via a website or other easily accessible means. For more information on this program, please visit <http://www.epa.gov/radon>.

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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Cumulative number of existing homes with an operating mitigation system (HOMS) compared to the estimated number of homes at or above EPA's 4pCi/L action level.	11.5	12	12	12.5	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Total number of all new single-family homes (SFH) built in high radon potential areas (zone 1) compared to new homes in zone 1 built with mitigation-ready systems (radon-	31.5	Data Avail 2010	33	34.5	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	reducing features).					

In FY 2011, EPA’s performance targets are: 1) that 12.5 percent of single-family homes, above EPA’s action level, will have operating radon mitigation systems and 2) that 34.5 percent of single family homes are built with mitigation ready systems in high radon potential areas. EPA estimates that by meeting these targets, the program will prevent over 900 future premature cancer deaths annually.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$250.0 / -2.3 FTE) 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. This change also reflects EPA’s workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.
- (+\$3.0) This increase in contract and grant funding will support radon outreach efforts.
- (-\$4.0) This decrease in travel costs reflects an effort to reduce the Agency’s travel footprint by promoting green travel and conferencing.

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 Outdoor Air; Healthier Indoor Air

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$24,335.2	\$20,759.0	\$22,156.0	\$1,397.0
Science & Technology	\$706.5	\$762.0	\$768.0	\$6.0
Total Budget Authority / Obligations	\$25,041.7	\$21,521.0	\$22,924.0	\$1,403.0
Total Workyears	65.7	63.8	69.8	6.0

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.⁴⁸ People typically spend close to 90 percent of their time indoors and may be more at risk from indoor than outdoor air pollution.⁴⁹

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 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to promote comprehensive asthma care that integrates management of environmental asthma triggers and health care services. EPA is requesting additional resources to increase its work to promote community adoption of comprehensive asthma care programs through the Communities in Action for Asthma-Friendly Environments Campaign, as part of the Agency’s Healthy Communities: Clean, Green and Healthy Schools Initiative. EPA will place a particular emphasis on protecting “at risk” populations, including children, low-income, and minority populations disproportionately impacted by poor asthma outcomes. Expansion of the Campaign also will deliver effective asthma management strategies to improve and develop new, targeted school-based asthma programs, particularly in low-income school districts. EPA will continue to work in partnership and collaboration with other Federal agencies, the health care community, and state and local organizations to promote smoke-free

⁴⁸ 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.

⁴⁹ 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.

homes and cars, emphasizing protection for young children through collaboration with the Department of Health and Human Services' Office of Head Start.

In FY 2011, EPA will increase its work to create healthier learning environments through communications and outreach, technical assistance, tools, and resources to the school community to promote adoption of Indoor Air Quality Tools for Schools (IAQ TfS), or comparable indoor air quality management and design programs. EPA will work in partnership with non-profit organizations to engage school officials, school nurses, teachers, facility managers, planners, and parents to improve indoor air quality (IAQ) in schools in communities across the country, in particular in urban, Tribal and other at-need areas.

EPA also will promote a suite of "best practice" guidance for a range of building types, including guidance for the control and management of moisture and mold, comprehensive best practice guidance for IAQ during each phase of the building cycle. Additional guidance will focus on best maintenance practices for indoor environmental quality and ensuring good IAQ in concert with increased energy efficiency in buildings.

Internationally, EPA will continue the Partnership for Clean Indoor Air 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 and heating fires. Since 2003, the indoor air program has documented nearly three million households across the globe, nearly 20 million people, who have adopted clean and efficient cooking and heating technologies through the Partnership's programs.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of public that is aware of the asthma program's media campaign.	>20	No Data Avail	>30	>30	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	2,000	4,614	2,000	2,000	Professionals

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Estimated annual number of schools establishing indoor air	1,000	2,062	1,000	1,000	Schools

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	quality programs based on EPA's Tools for Schools guidance.					

EPA will continue to work under its long term strategic goal for 2014 that 7.2 million people with asthma will be taking the essential actions to reduce their exposure to environmental triggers. EPA's goal is to motivate an additional 400,000 people with asthma to take these actions in 2011, bringing the total number to approximately 6.1 million people with asthma who are taking the essential actions to reduce their exposure to environmental triggers. 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 percent 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 for asthma in late 2009 and for schools in 2013.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$234.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$29.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$1,192.0/ +6.0 FTE) This reflects additional resources as part of the Healthy Communities: Clean, Green and Healthy Schools Initiative, including 6.0 FTE with associated payroll of \$812.0. The increased resources will focus on improving and developing new, targeted school-based asthma programs through improved use of existing information and expansion of the Communities in Action for Asthma-Friendly Environments Campaign. This will expand the current Communities in Action Network of 400 community-based programs and make best practice strategies available to schools across the nation.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$6,832.4</i>	<i>\$7,100.0</i>	<i>\$10,159.0</i>	<i>\$3,059.0</i>
Total Budget Authority / Obligations	\$6,832.4	\$7,100.0	\$10,159.0	\$3,059.0
Total Workyears	12.1	11.9	25.9	14.0

Program Project Description:

The Agency coordinates and advances protection of children’s health through regulatory development, science policy, program implementation, communication and effective results measurement to make protecting children an explicit part of the EPA mission to protect human health. The children’s health protection effort is directed by the 1997 Executive Order 13045, *Protection of Children’s Health from Environmental Health Risks and Safety Risks* and the 1996 EPA document *National Agenda to Protect Children’s Health from Environmental Threats*. Legislative mandates such as the Energy Independence and Security Act of 2007, the Safe Drinking Water Amendments of 1996, and the Food Quality Protection Act of 1996 also directs the Agency to protect children and other vulnerable life stages.⁵⁰

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will increase focus on environmental health in schools, under the Agency’s Healthy Communities: Clean, Green and Healthy schools initiative, to work with states, tribes, and local governments to effectively incorporate environmental health considerations of children in schools. The program will ensure that non-governmental organizations and the public (family members, health care providers, community leaders, etc.) have and use reliable/valid scientific information and exposure prevention techniques and tools when making decisions that impact the health of children. (In FY 2011, the Children and other Sensitive Populations: Agency Coordination program will be funded at \$7.62 million and 13.9 FTE.)

⁵⁰ The Energy Independence and Security Act of 2007 directs EPA to produce guidelines on the safe siting of schools and guidelines to states on healthy, high-performance schools in order to protect children from environmental hazards where they learn.

The 1996 amendments to the Safe Drinking Water Act require EPA to strengthen protection of children by considering the risk to the most vulnerable populations and lifestyles when setting standards.

The Food Quality Protection Act (FQPA) of 1996 amended the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the Federal Food Drug, and Cosmetic Act (FFDCA) to include stricter safety standards for pesticides, especially for infants and children, and a complete reassessment of all existing pesticide tolerances.

The following are examples of planned activities:

- Using authority provided by the Energy Independence and Security Act of 2007 (EISA), establish a state grants program funded at about \$1.9 million to support states and communities in the implementation of strategies to create healthier school facilities and learning environments by expanding adoption of existing clean and healthy school programs.
- Provide focused outreach and technical assistance to school districts to increase adoption of EPA's Healthy School Environments Assessment Tool (Healthy SEAT) and to increase deployment of EPA's programmatic school environmental health tools (e.g. IAQ Tools for Schools, School Chemical Cleanout Campaign, Integrated Pest Management).
- Improve and develop new, targeted school-based asthma programs through improved use of existing information and expansion of the Communities in Action for Asthma-Friendly Environments Campaign.
- Increase transparency and coordination with states, local communities, schools and the general public by supporting a strong communications and outreach effort to share information and provide technical assistance, tools and materials to schools and stakeholder groups.
- Improving coordination across the Agency will also ensure that EPA's policies and programs explicitly consider and use the most up-to-date data and methods for protecting children from heightened public health risks. In addition, EPA plans to serve as a co-lead of an inter-agency effort with the Department of Education and the Department of Health and Human Services to improve Federal government wide support of "clean, green, and healthy schools", implementing legislative mandates and coordinating outreach and technical assistance.
- Provide information and technical assistance to States and communities on emerging children's environmental health issues concerning schools.

Performance Targets:

Work under this program supports EPA's Objective 4.2: Communities. Currently, there are no performance measures for this specific Program Project; however, the Agency will begin developing measures specific to children's environmental health in FY 2010, and will continue this effort in FY2011.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$628.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.
- (+\$2,290.0 / +11.0 FTE) These resources include \$1,384.0 in associated payroll and 11.0 FTE, and will support the coordination and implementation of EISA, providing technical assistance to states and communities on implementation of voluntary school

citing and environmental health guidelines. This also is part of the Agency's cross-program Healthy Communities Initiative: Clean, Green and Healthy Schools.

- (+\$1,250.0 / +2.0 FTE) These resources include \$286.0 in associated payroll and 2.0 FTE, and will support the Agency's cross-program Healthy Communities Initiative: Clean, Green and Healthy Schools. Funding is for coordinating expertise and efforts across programs to provide technical assistance, develop and implement tools and models, and support communication and outreach.
- (+\$147.0 / +1.0 FTE) These resources include \$147.0 in associated payroll and reflect EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities. The FTE supports enhanced Regional implementation of the Children's Health program.

Statutory Authority:

EO 13045; Energy Independence and Security Act of 2007.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$8,762.9	\$9,038.0	\$6,448.0	(\$2,590.0)
Total Budget Authority / Obligations	\$8,762.9	\$9,038.0	\$6,448.0	(\$2,590.0)
Total Workyears	15.2	17.6	0.0	-17.6

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 EE 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; and
5. Promote and encourage environmental careers.

Please see the program website for additional information (www.epa.gov/enviroed).

FY 2011 Activities and Performance Plan:

In FY 2011, a resource level of \$6.45 million and 0.0 FTE support EE. Other existing EE resources are shifted from the EE program to the Office of Congressional, Intergovernmental & External Relations to more effectively manage EE activities through placement of these resources in the appropriate oversight function. This change will affectively increase the Agency's ability to focus on the management of assistance and programmatic resources supporting EE. This change was necessary because due to payroll increases, it is now

impossible to meet mandated staffing and the required 25 percent ceiling as set forth in the National Environmental Education Act, without increasing programmatic operations.)

The National Environmental Education Act (NEEA) provides the foundation for the activities the Agency conducts with appropriated funds. Major programs and activities 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 EE program's strategic plan which includes measureable objectives, and clearly identified outputs, outcomes and performance measures for each of the corresponding goals. The EE program's 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:

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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$2,587.0 / -17.6 FTE) This change includes -17.6 FTE and -\$2,255.0 in associated payroll, and reflects the transfer of existing FTE from the Environmental Education program to Congressional, Intergovernmental & External Relations to more effectively manage environmental education activities through placement of these resources in the appropriate oversight function. This change will effectively increase the Agency's ability to focus on the management of assistance and programmatic resources supporting environmental education activities. This change was necessary due to payroll increases, it is now impossible to meet mandated staffing and the required 25 percent ceiling without impacting program operations.
- (-\$3.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

NEEA (PL 101-619).

Congressional, Intergovernmental, External Relations

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$48,743.0</i>	<i>\$51,944.0</i>	<i>\$57,473.0</i>	<i>\$5,529.0</i>
Hazardous Substance Superfund	\$7.3	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$48,750.3	\$51,944.0	\$57,473.0	\$5,529.0
Total Workyears	350.8	364.1	390.6	26.5

Program/Project Description:

The Congressional, Intergovernmental and External Relations program project provides resources to several headquarters and Regional offices that help EPA to meet its commitments to protect human health and the environment. The activities 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. This program also provides support for the Immediate Office of the Administrator, public affairs, administrative services, correspondence control, the management of EPA's Federal Advisory Committee Act (FACA) process, and environmental education's management and oversight functions.

FY 2011 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 via the Web. (In FY 2011, the Headquarters Office of the Administrator and Deputy Administrator will be funded at a level of \$5.4 million and 34.8 FTE.)

The headquarters and Regional Congressional and Intergovernmental offices lead EPA's interactions with Congress, Governors and other state and local officials. In FY 2011, 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. The Agency's state and local relations will be supported through management of the Administrator's Local Government

Advisory Committee (LGAC) and the Small Community Advisory Committee (SCAC). These activities will help to ensure that EPA's 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 2011, the headquarters Office of Congressional and Intergovernmental Relations will be funded at a level of \$8.2 million and 58.8 FTE.)

In addition, this program has oversight responsibility for the Agency's FACA committee management process. This work will ensure that EPA's 49 Federal advisory committees are in compliance with the FACA requirements and the General Services Administration Committee Management Secretariat's administrative guidelines. In FY 2011, the Cooperative Environmental Management (OCEM) program will manage five FACA committees, develop a framework for measuring the effectiveness of EPA's FACA committees, and ensure that all new or renewed committee charters include expected outputs/outcomes and performance measures. (In FY 2011, the Agency's Cooperative Environmental Management program (OCEM) will be funded at a level of \$2.1 million and 11.1 FTE.)

In FY 2011, EPA headquarters and Regional Offices of Public Affairs will utilize multimedia and Web applications for international and domestic populations and local, state and Tribal governments to easily access high quality, timely, coherent, and comprehensive information concerning the Agency's activities and policies. These offices strive to increase the public's awareness and perception regarding environmental issues, as well as social, technological, and scientific solutions. Public affairs will utilize the Web to reach multiethnic and multilingual populations. (In FY 2011, the headquarters Public Affairs Office will be \$7.3 million and 52.1 FTE.)

As the central administrative management component of the Office of the Administrator (AO), Executive Services provides advice, tools, and assistance for the organization's human resources management, budget and financial management, and information technology management and security. In FY 2011, Executive Services will work to maximize the effective utilization of AO's resources by implementing recommendations associated workforce and succession planning, addressing staffing needs, conducting workload and budget projections, and managing training and career development programs. (In FY 2011, the Office of Executive Services (OES) will be funded at a level of \$3.2 million and 21.0 FTE.)

The Executive Secretariat manages the Administrator's and Deputy Administrator's correspondence and records, including identification and maintenance of vital records, FOIA, and the Correspondence Management System. (In FY 2011, the Executive Secretariat will be funded at a level of \$1.9 million and 13.6 FTE.)

EPA is proposing to become more efficient through the establishment of Regional "Centers of Excellence." Rather than have every Region support a program, the Agency will establish Regional subject matter experts for a few programs whose practical, "on the ground" program implementation work will allow them to serve as expert resources, providing best practice information and answering specific questions for other regions. The resources have been set centrally to ensure that they can be allocated to the highest priorities throughout the year as the

Agency adapts to this new approach. In FY 2011, this project will be funded at a level of \$1.5 million to implement this new initiative, which will benefit the entire Agency.

Other existing Environmental Education (EE) resources are shifted from the EE program to the Office of Congressional, Intergovernmental & External Relations to more effectively manage EE activities through placement of these resources in the appropriate oversight function. This change will affectively increase the Agency's ability to focus on the management of assistance and programmatic resources supporting EE. This change was necessary to adequately cover the payroll needs associated with the mandated staffing within the required 25 percent resource ceiling under the National Environmental Education Act without decreasing programmatic funding. In FY 2011, Congressional, Intergovernmental and External Relations will fund the management and oversight functions for the Environmental Education program at \$2.5 million and 19.6 FTE.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$666.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$31.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$335.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and teleconferencing.
- (-\$99.0) This reflects a decrease to contract support resources for the program.
- (+\$1,500.0) This funding provides support for the Regional Centers of Excellence which will provide concentrated programmatic expertise across Regions and offices to produce greater collaboration, integrated research, and high quality results.
- (+\$919.0/ +7.0 FTE) These pre-existing FTE were realigned from across the Agency to advance the Administrator's priorities of openness and transparency in the Agency's expanded communications and outreach initiatives. These FTE will enhance EPA's ability to maximize cutting-edge technologies, including Web 2.0 and social media, in its communications in order to further the Agency's goals and priorities. This change includes 7.0 FTE, and \$919.0 in associated payroll.
- (-\$13.0/ -0.1 FTE) This change includes -\$13.0 in associated payroll and -0.1 FTE, and reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities by streamlining administrative management.

These resources were given to OCHP to support the Agency Healthy Communities Initiative.

- (+\$2,922.0 / +19.6 FTE) This change includes 19.6 FTE, and \$2,922.0 in associated payroll, and reflects the transfer of existing FTE from the Environmental Education program and other parts of the Agency to more effectively manage environmental education activities through placement of these resources in the appropriate oversight function. This change will effectively increase the Agency's ability to focus on the management of assistance and programmatic resources supporting environmental education activities. This change was necessary because due to payroll increases, it is now impossible to meet mandated staffing and the required 25 percent ceiling without impacting program operations.

Statutory Authority:

As provided in Appropriations Act funding; FACA; EAIA; NAFTA Implementation Act; RLBPHRA; NAAED; LPA-US/MX-BR; CERCLA.

Exchange Network

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$17,440.8</i>	<i>\$17,024.0</i>	<i>\$18,702.0</i>	<i>\$1,678.0</i>
Hazardous Substance Superfund	\$922.4	\$1,433.0	\$1,433.0	\$0.0
Total Budget Authority / Obligations	\$18,363.2	\$18,457.0	\$20,135.0	\$1,678.0
Total Workyears	28.6	24.0	30.0	6.0

Program Project Description:

The Exchange Network⁵¹ (Network) is a standards-based partnership 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, such as along the Columbia, Missouri, and Susquehanna 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 and first-responders. 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 vital Geographic Information System (GIS)-displayed information onto their laptops while in their fire truck on the way to a fire.

The Central Data Exchange⁵² (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, and standards-setting projects with states, tribes, and

⁵¹ For more information on the Exchange Network, please visit: <http://www.epa.gov/Networkg/>

⁵² For more information on the Central Data Exchange, please visit: <http://www.epa.gov/cdx/>

territories for e-reporting, as well 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, and 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) is a widely used source of environmental data about facilities and allows a multimedia display and integration of environmental information. This 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 a key data source.
- The National Geospatial Program 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) 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 supports efficient reporting under the 2009 American Recovery and Reinvestment Act (ARRA) requirements. Additional details can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>.

FY 2011 Activities and Performance Plan:

In FY 2011, 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.

Also in FY 2011, EPA, states, 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 will continue adding new features to the Network such as RSS (real simple syndication) feeds, which are news channels 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. Because the Central Data Exchange is already in production and is designed to support cost effective data sharing, it can be used to support innovative data exchanges with, and for, other agencies.

In FY 2011, EPA will continue building linkages and Exchange Network platforms to provide import safety information to port officers across the nation to protect against the illegal importation of chemicals, substances, and products that could potentially harm human health and the environment. 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 (CBP) 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. Data received from ACE can also be used by EPA to improve enforcement efforts through pro-active prevention of violations versus reactive processing once a violation has occurred. 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 directive M-07-23 for full utilization of our ACE solution by FY 2011.

CDX positions EPA to lead national efforts to understand and address climate change challenges and policy developments. EPA's proposed Mandatory Reporting Rule (MRR) for the collection of Greenhouse Gas (GHG) emissions data from all sectors of the economy will be finalized and approximately 13,000 entities will begin submitting reports to EPA in FY 2011. CDX integration and analysis tools will inform future policy by facilitating facility-level listings of GHG emissions. EPA has committed to share production results with states, via the Exchange Network, approximately 60 days after the March 31, 2011 reporting deadline.

As a part of continuing efforts to improve efficiency, the Agency will consolidate key components of the Agency's corporate data management product suite. These components include the Envirofacts data warehouse, the Facility Registry System (FRS), and the System of Registries (SoR). Functions will be streamlined and redundant processes will be eliminated. Specifically, rather than serving the public directly through a web-based interface, these products will be retooled solely as web services for other applications to consume. This will complete the transition from a series of EPA-funded databases to a services-orientation allowing data consumers to obtain secure direct service from a secondary provider. The goal is to take EPA data systems out of their individual "stovepipes" so that data can be more easily exchanged or integrated with data from other systems and eliminate extensive manual effort. A service oriented architecture does this by centralizing and standardizing data exchange approaches and protocols. The result is a virtual ability to combine data from different databases. For example, when searching for a factory or site that emits cyclohex-1,3,5-triene (stored on the Facility Registry System), the public would also receive a list of the different names for that substance, such as benzene (which is stored in EPA's Substance Registry System).

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. This is important to achieve full utilization of our ACE solution by FY 2011. 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.

EPA will continue to improve Exchange Network data security by implementing electronic reporting standards as required by the Federal Information Security Management Act that support the authentication and electronic signatures of report submitters. The Agency has recently stepped up its assistance to states, tribes and territories in implementing these standards and will be reviewing, at a minimum, more than two dozen applications from states to obtain approval of their electronic reporting systems during FY 2011.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	States, tribes and territories will be able to exchange data with CDX through nodes in real time, using standards and automated data-quality checking.	60	59	65	65	Users

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.	130,000	184,109	195,000	205,000	Users

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	50	55	60	67	Systems

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$60.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$933.0/+6.0 FTE) This increase reflects a realignment of FTE from IT/Data Management. This shift more accurately reflects the work already being done.

- (-\$600.0) This reflects efficiency gains from consolidating a portion of the Envirofacts data warehouse, the Facility Registry System, and the Systems of Registries into a single operation under one Federal manager.
- (+\$1,285.0) This is an increase to ACE/ITDS. The additional ACE/ITDS funding supports work that will help further define the requirements and develop and test prototypes of the needed services for interoperability with Customs and Border Protection/ACE. It will also vastly improve the infrastructure efficiency needed to interoperate with Customs and Border Protection/ACE and lower long-term maintenance 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. Exchange Network Program funding has been provided by the annual appropriations for EPA: FY 2002 (Public Law 107-73), FY 2003 (Public Law 108-7), FY 2004 (Public Law 108-199) FY 2005 (Public Law 108-447) and FY 2006 (Public Law 109-54), FY 2007 (Public Law 110-5), FY 2008 (Public Law 110-161), and FY 2009 (Public Law 111-8).

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$2,623.3	\$3,028.0	\$3,040.0	\$12.0
Total Budget Authority / Obligations	\$2,623.3	\$3,028.0	\$3,040.0	\$12.0
Total Workyears	9.0	10.0	10.0	0.0

Program Project Description:

The Asbestos and Small Business Ombudsman (ASBO), a component of the Office of Small Business Programs, serves as the Environmental Protection Agency’s (EPA) leading advocate for small business regulatory issues. The ASBO reaches out to the small business community by partnering with state Small Business Environmental Assistance Programs (SBEAPs) nationwide and hundreds of small business trade associations. 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.⁵³

The core ASBO 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 ASBO helps small businesses learn about new EPA actions and developments, and helps EPA learn about the concerns and needs of small businesses. The ASBO 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 ASBO 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.

Small businesses are a major source of job creation in the U.S. economy, and play a crucial role in green workforce development, and help to train, prepare, and employ workers for the green economy. Moreover, small businesses also represent a large number of the small manufacturers who will, and are already, playing a crucial role in improving the environmental performance of U.S. manufacturing. Therefore, resources will also support green workforce development, and sustainable manufacturing efforts. These efforts identify and support efforts to develop and deploy strategies for a greener and more sustainable workforce and manufacturing sector, respectively. The initiatives will develop analytical tools, and train EPA and other stakeholders in using these tools to promote environmental improvements. The efforts will also work

⁵³ Please refer to: <http://www.epa.gov/sbo>

collaboratively with EPA programs/regions and external stakeholders to promote equity in sustainable economic development associated with a greener workforce and a greener small manufacturing sector.

The Agency's sustainable communities program will work to help small business effectively compete in retail markets as neighborhoods receive public infrastructure investments. Small businesses are critical to compact, walkable communities. In addition, the Agency will work to overcome targeted market and code barriers to small businesses who are seeking to employ effective green building practices. Small businesses include designers, remodelers, product manufacturers, and specialty retailers. They are hampered by numerous market barriers, including inconsistent standards, codes and code enforcement; lack of adequate building performance data in real estate transactions and financing; and insufficient incentives to provide or employ green building products and services.

FY 2011 Activities and Performance Plan:

In FY 2011, the Asbestos and Small Business Ombudsman program will:

- 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 quarterly Smallbiz@EPA electronic bulletin.
- 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.gov. Business.gov is an official site of the U.S. Government that helps small businesses understand their legal requirements, and locate government services supporting the nation's small business community. This work helps to improve services and reduces the burden on small businesses by guiding them through government rules and regulations. EPA also will support and promote a state-led multi-media small business initiative and coordinate efforts within the Agency.
- Strengthen and support partnerships with state Small Business Environmental Assistance Programs (SBEAP) and trade associations, and recognize 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.
- Building on the current EPA efforts in Lean Manufacturing and the Environment, help develop and coordinate EPA policies and strategies related to sustainable manufacturing, while working with EPA's program and regional partners, as well as partners in the Departments of Commerce and Energy on a multi-agency initiative to demonstrate successes in sustainable production. Work with partners in EPA's programs and regions

to lead and coordinate Agency policies and strategies on green workforce development. Provide technical assistance and coordination to other Federal and State departments and agencies - as well as other external organizations - to promote green workforce development in key sectors that are critical to meeting EPA's goals.

Under this program, resources of \$1.74 million and 5.0 FTE, support the Office of Small Business Programs. The remaining \$1.30 million and 5.0 FTE in this program support the Office of Policy and 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$17.0) This reflects recalculation for payroll and cost of living for existing FTE.
- (-\$8.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$3.0) This reflects an increase to grants.

Statutory Authority:

CAAA, 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$2,319.6	\$2,350.0	\$2,358.0	\$8.0
Total Budget Authority / Obligations	\$2,319.6	\$2,350.0	\$2,358.0	\$8.0
Total Workyears	9.1	9.8	9.8	0.0

Program Project Description:

The Small Minority Business program encompasses the Agency's Office of Small Business Programs' (OSBP) Direct Procurement, Disadvantaged Business Enterprise (DBE), and Minority Academic Institutions (MAI) programs. This program provides technical assistance to small businesses and headquarters and Regional employees, to ensure that small, disadvantaged, women-owned, Historically Underutilized Business Zone (HUBZone), service-disabled veteran-owned small businesses (SDVOSBs), and MAIs receive a fair share of EPA's procurement dollars and grants, where applicable. This program enhances the ability of these businesses to participate in the protection of human health and the environment. The functions involve 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 comply with Federal laws and regulations regarding the utilization of small and disadvantaged businesses, direct procurement acquisitions, indirect procurement assistance, and further the policies and mandates of Executive Orders associated with the MAI program.

FY 2011 Activities and Performance Plan:

In FY 2011, under the Agency's OSBP Direct Procurement program, small and disadvantaged business procurement experts will provide assistance to headquarters and Regional program office personnel and small business owners to ensure that small disadvantaged businesses (SDBs), Women-Owned Small Businesses (WOSBs), HUBZone firms, and SDVOSBs receive a fair share of EPA's procurement dollars. EPA negotiates a number of national goals with the Small Business Administration (SBA) every two years, which are targeted at increasing opportunities for the above mentioned categories of small businesses. (In FY 2011, the funding for the Small Minority Business Assistance Program is \$2.36 million and 9.8 FTE).

In FY 2011, EPA's contract reviews for an increasing number of Agency contracts will eliminate unnecessary contract bundling to help ensure opportunities for 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 Executive Order #13360, which requires increased Federal contracting opportunities for this group of entrepreneurs.

Under its DBE 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 and its financial assistance recipients to meet these 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 while creating more jobs. As a result of the Supreme Court's decision in *Adarand v. Peña*, 115 S. Ct. 2097 (1995), EPA will continue implementation of the Agency's rule for the participation of DBEs in procurements funded through EPA's assistance agreements.

Under its MAI program, the Agency develops strategies, collects data, provides technical assistance, and produces reports on its efforts to meet the initiatives of Executive Order 13216; Increasing Participation of Asian Americans and Pacific Islanders in Federal Programs; Executive Order 13230, President's Advisory Commission on Educational Excellence for Hispanic Americans; Executive Order 13256, President's Board of Advisors on Historically Black Colleges and Universities (HBCUs); and Executive Order 13270, Tribal Colleges and Universities (TCUs).

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$14.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$8.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$2.0) This reflects a minor increase to contract resources.

Statutory Authority:

Small Business Act, sections 8 and 15, as amended; Executive Orders 12073, 12432, 12138, 13256, 13270, 13230, and 13216; 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$12,152.1</i>	<i>\$13,303.0</i>	<i>\$13,529.0</i>	<i>\$226.0</i>
Total Budget Authority / Obligations	\$12,152.1	\$13,303.0	\$13,529.0	\$226.0
Total Workyears	50.9	57.9	57.9	0.0

Program Project Description:

EPA works with state, local, and Tribal 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 and local planning entities, as well as the Chemical Safety Board, and be 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.

Under the Emergency Planning and Community Right-to-Know Act (EPCRA)⁵⁴, the Agency works with state, local, and Tribal partners to help them develop and implement emergency plans 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 about local facilities, as well as helping them understand 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 better prepared to reduce and mitigate releases that may occur.

EPA also assists the Department of Homeland Security (DHS) as well as other Federal agencies, state, Tribal, and local partners by providing updated copies of the RMP database, analytical support, and ongoing technical support for integration of RMP and EPCRA tools and information. In addition, EPA conducts analyses of RMP data to identify regulated facilities,

⁵⁴ <http://www.epa.gov/oem/content/epcra/index.htm>

chemical accident trends, and industrial sectors that may be more accident-prone, and to gain knowledge on the effectiveness of risk management measures.

FY 2011 Activities and Performance Plan:

In FY 2011, the Agency will continue its efforts to help state, Tribal, and local partners implement their emergency plans. 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 Agency also will continue to further improve the Risk Management program by focusing on high-risk facilities. This plan included development of criteria to identify high-risk facilities. In FY 2011, EPA activities in support of these efforts include the following:

- EPA and other implementing agencies will continue to perform their inspection obligations of at least 400 on-site facility inspections, including 80 high-risk facilities, such as petroleum refineries and larger chemical manufacturing sites.
- EPA will continue to provide training for Federal, state, 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 to support CAMEO software which assists first responders by providing access to critical information about toxicity, behavior, and movement of chemicals.
- EPA will improve implementation of the Risk Management program. Activities include:
 - Strengthening controls to identify facilities that did not file RMPs;
 - Providing the RMP required training courses and industry-specific training, when warranted, to ensure that program inspectors are adequately trained; and
 - Exploring strategies for providing additional resources to those Regional offices with high facility-to-full time equivalent (FTE) ratios to ensure that high-risk facilities are inspected expeditiously.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Conduct 400 risk management plan audits and inspections.	400	654	400	400	Audits

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$242.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$30.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$14.0) This increase reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$15,409.5</i>	<i>\$14,933.0</i>	<i>\$16,494.0</i>	<i>\$1,561.0</i>
Total Budget Authority / Obligations	\$15,409.5	\$14,933.0	\$16,494.0	\$1,561.0
Total Workyears	37.4	43.0	51.2	8.2

Program Project Description:

The Toxics Release Inventory⁵⁵ (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 also is used by the financial community to monitor corporate environmental stewardship and by other EPA programs to support data quality and enforcement activities.

FY 2011 Activities and Performance Plan:

The regulatory foundation for the TRI program ensures that communities have access to timely and meaningful information on toxic chemical releases in their neighborhoods. To strengthen this foundation, the program will take steps in FY 2011 to clarify the TRI reporting requirements for specific industries, as needed (e.g., wood preserving and metal mining facilities). The program also will take steps to add selected chemicals (e.g., chemicals identified as carcinogens by the National Toxicology Program) to the list of toxic chemicals that are tracked by TRI. In addition, the program will consider whether to regulate additional toxic chemicals, industry sectors, and individual facilities of concern.

TRI will continue working 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. 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, reduces burden to facilities over time and makes it possible for TRI to process, analyze and release the data to the

⁵⁵ For more information on the Toxics Release Inventory, please visit: <http://www.epa.gov/tri/>

public more quickly. Over the past several years, the 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 discontinued the TRI-ME compact disc version in FY 2010.

The TRI program will continue working 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 will continue encouraging states to participate in the TRI State Data Exchange, and encouraging facilities located in participating states to utilize the 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, which significantly reduces their reporting effort.

By July 1st each year, reporting facilities are required to submit their reports for the previous calendar year. In FY 2011, 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 working 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 ChemicalRight2Know.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. The program will continue providing access to TRI data at the corporate level (i.e., the forms and instructions for facilities will include additional explanation to highlight corporate level data collection) and from individual facilities. TRI also will continue to highlight 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$409.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (+\$1,148.0/+8.2 FTE) This change is a realignment of resources, including shifting 8.2 FTE and associated payroll, from the IT/Data Management program to the TRI program to reflect current efforts being performed for TRI. These efforts include the assessment of

chemicals to be listed in the inventory and the development of community-focused tools to assist in the evaluation of toxics release data.

- (-\$50.0) This decrease reflects a redirection of resources to the Human Health and Ecosystems program, which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife. Various programs have contributed to this database in the past.
- (-\$38.0) This reflects a reduction in funding for general expenses, contracts, grants, and IT and communications.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$13,174.7</i>	<i>\$12,080.0</i>	<i>\$15,005.0</i>	<i>\$2,925.0</i>
Total Budget Authority / Obligations	\$13,174.7	\$12,080.0	\$15,005.0	\$2,925.0
Total Workyears	83.8	73.1	88.1	15.0

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 (GAP) 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
- In FY 2011 the Agency is requesting a new multi-media grant program which will provide the opportunity for implementation of Tribal environmental programs by tribes. This program would develop guidance for the grants as well as perform administrative and oversight roles for the program.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA requests funds for a new multi-media grant program for Tribal implementation. These grants will be tailored to address an individual tribe's most serious environmental needs through the implementation of Federal environmental programs. Additional FTE and resources

are requested for this program to support the design and effective implementation and oversight of this important new grant program. It is essential that EPA's Tribal capacity grant program and this new multi-media implementation grant program be effectively harmonized so that they build upon each other to enhance environmental protection in Indian country and Alaska Native Villages.

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 Tribal GAP and the new Multi-Media Tribal Implementation program, 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 helps to provide Agency and Tribal managers with a more complete picture of conditions and facilities on Tribal lands. In FY 2011, the ongoing integration and merger of TPEA with the EPA Enterprise Architecture will continue to lead to a more efficient information technology infrastructure.

To expand EPA's effort to ensure environmental protection in Indian country, the program provides 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 2011. 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. TPEA, accessible through the Tribal portal, 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 2011. All GAP grantees must meet the requirement, begun in FY 2007, to submit a standardized work plan which includes milestones and 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.

In FY 2011, 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) will continue.

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 Project.

Information in the IHS SDS system is reported in the Agency's Strategic Plan. Work under this program supports multiple strategic objectives.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$233.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$2,698.0/ +15.0 FTE) This reflects an increase for implementation of the new multi-media grant program which includes associated payroll of \$1,894.0 for 15.0 FTE. These funds support new positions to oversee, provide guidance, and ensure accountability to the new grant program. Most (twelve) of the FTE are regional due to the place-based nature of this new program.
- (-\$6.0) This decrease in travel costs reflects an Agencywide effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$5,621.8	\$4,969.0	\$4,979.0	\$10.0
Total Budget Authority / Obligations	\$5,621.8	\$4,969.0	\$4,979.0	\$10.0
Total Workyears	20.7	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. In addition, 432 thousand of the 14 million people in the region live in 1,200 colonias⁵⁶ 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 (4 U.S./6 Mexican) 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) implemented the Transporte Limpio, modeled after EPA’s SmartWay. This program increases fuel efficiency and reduces pollutant and greenhouse gas emissions from diesel trucks operating along the border; (3) developed a Scrap Tire Integrated Management Initiative to eliminate scrap tire piles and ensure that newly generated scrap tires are managed in an environmentally sound manner; (4) closed 20 of 27 major dumps on the Torres Martinez reservation (Torres Martinez Solid Waste Collaborative); (5) cleaned Matamoros, Reynosa, Piedras Negras, and San Luis Rio Colorado tire piles and continue the cleanup at the Juarez site. Together, all cleanups to date have eliminated over 4 million scrap tires along the border; (6) published Toxics Release Inventory (TRI) data for the U.S. border region; and (7) signed a new U.S.-Mexico Joint Emergency and Contingency Plan.

Note that Border water and wastewater infrastructure programs are described in the State and Tribal Assistance Grants (STAG) appropriation, Infrastructure Assistance: Mexico Border Program Narrative.

⁵⁶ http://www.borderhealth.org/border_region.php

FY 2011 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 to achieve GHG reduction; (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 7 million people benefit today from improved sanitation and access to drinking water. 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 launching the Transporte Limpio, modeled after EPA's SmartWay. Work under this program will continue with a goal to 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. In FY 2011, the program will work towards building on border greenhouse gas (GHG) information capacity using comparable methodologies and expand voluntary cost-effective programs for reduction of GHG emissions in the border area. GHG emissions will be estimated in at least eight border states, identifying the sources and locations from which reductions may be achieved.

Abandoned scrap tires continue to present environmental and public health hazards from potential fires and their resulting air pollution and from disease-carrying pests. 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 2011, the program will continue the clean-up of the Ciudad Juarez tire pile, in addition to reducing waste generation through green purchasing, solid waste management, and source reduction practices.

The Border Program successfully completed remediation of the Metales y Derivados as the first completed cleanup under Mexico's new cleanup law and under Border 2012's Goal 3, Sub-Objective 4A. Metales y Derivados was a lead smelting facility that began operations in the late

1980s, was cited by Mexico's Attorney General for Environmental Protection (PROFEPA) for environmental non-compliance, and was abandoned by its U.S. owner in 1994. In FY 2011, 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:

Work under this program supports EPA's Goal 4 objective to sustain, clean up, and restore communities and the ecological systems that support them. There are currently no performance measures for this program under this appropriation. There are performance measures under the State and Tribal Assistance Grants appropriation.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$7.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$1.0) This reflects a decrease to IT and telecommunications resources.
- (\$+4.0) This increase supports administrative costs for the Border Program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$6,836.1</i>	<i>\$8,628.0</i>	<i>\$8,759.0</i>	<i>\$131.0</i>
Total Budget Authority / Obligations	\$6,836.1	\$8,628.0	\$8,759.0	\$131.0
Total Workyears	38.3	44.4	44.4	0.0

Program Project Description:

EPA has improved the quality of life for all Americans by safeguarding their air, water, and land as well as helping to protect their health. However, 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, toxics, as well as greenhouse gases (GHGs). As we better understand the interdependencies of global ecosystems and the transport of pollutants from its sources, it becomes clear that the actions of other countries affect the U.S. environment. EPA also supports efforts to address global level environmental challenges such as climate change. 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 and improved environmental governance. 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.

FY 2011 Activities and Performance Plan:

Air Quality

Air quality in the United States is affected by other countries’ emissions, such as criteria pollutants (e.g., PM [inclusive of black carbon]), NOx, SOx, lead, ozone, carbon monoxide) and air toxics (e.g. Hg, POPs) which can have a detrimental impact on human health and the environment. EPA will continue to address air quality in priority areas through the “Breathe Easy” program and address international climate change issues by fulfilling its international responsibilities under existing efforts and provisions. The Agency will intensify efforts to coordinate, negotiate, implement, and participate in international agreements relating to the

environment and climate change. EPA will do this at the policy level via participation and representation of the US in international organizations and at international fora. EPA engagements will cover core elements of ongoing negotiations, and associated multilateral and bilateral dialogue on implementation via mitigation, adaptation, financing and trade, and technology cooperation. EPA will continue to improve international monitoring, reporting, and verification capabilities. EPA also will address growing interest in assessing and reducing climate impacts of short-term air pollutants including black carbon, stratospheric ozone and methane, with a particular focus on the Arctic and on densely populated regions in developing countries where glacier-fed fresh water supplies are threatened by pollution-driven climate change.

Additionally, EPA will strengthen and expand international capacity building efforts for GHG avoidance and reduction, focusing primarily, but not exclusively, on work with developing countries and emerging economies. EPA will partner with developed and developing countries, to share lessons learned on the effective management of GHG emissions reductions as well as to share tools and methodologies to promote ways to adapt to climate change. EPA also will promote co-benefit strategies with partner countries that reduce GHG emissions and black carbon, while improving local air quality.

In FY 2011, EPA will continue its involvement in the Partnership for Clean Fuels and Vehicles (PCFV) program. The global car fleet is predicted to triple by 2050 - over 80 percent of that in the developing world.⁵⁷ The primary goal of this global partnership is to reduce vehicular air pollution in developing countries and transitioning countries by eliminating lead in gasoline, phasing down sulphur in diesel and gasoline fuels, and facilitating the introduction of cleaner and more efficient vehicles. 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.

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. As an illustration of this commitment, EPA joined the USG and international community at the February 2009 United Nations Environment Programme (UNEP) Governing Council in Nairobi, 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.⁵⁸

In FY 2011, EPA will work with the UNEP and other partners to ensure the availability and reliability of data, analyses, and other technical information necessary to inform the Intergovernmental Negotiating Committee (INC) process. EPA also will continue to address priority issues such as reducing the supply of commodity mercury to the global market, enhancing the capacity for mercury storage, reducing mercury use in products and processes and

⁵⁷ IEA 2008 Energy Technology Perspectives 2008 – Scenarios and strategies to 2050, International Energy Agency, Paris.

⁵⁸ Governing Council of the United Nations Environmental Program February 2009

raising awareness of mercury-free alternatives. EPA will work with partners to address various aspects of the reduction or elimination of the use of mercury from vinyl chloride monomer industry and other industrial sectors in China; from gold shops and gold mining in Africa, Latin America and Asia; and from the chlor-alkali industry in key countries.

Water Quality

For FY 2011, EPA will promote clean water and drinking water programs in Africa, China, Latin America, and other key countries and regions focusing on improving the quality of water sources and managing other environmental risks using comprehensive and sustainable approaches. Through an exchange of technical expertise and capacity building efforts, EPA will work with partners to 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 2011, 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 Convention⁵⁹, 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; 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; and 3) capacity building in developing countries and with non-governmental organizations to address obsolete stocks and uses of persistent organic pollutants including certain pesticides and PCBs, through information sharing, training, and other methods.

In FY 2011, EPA will help strengthen implementation of global programs to address electronic waste (e-waste) and sound reuse and recycling of electronic equipment. The Agency will partner with other nations to assess and map flows of global movement of electronic waste from the US and 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, cadmium, perfluorinated chemicals, 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.

⁵⁹ For more information on the Stockholm Convention, see <http://www.pops.int>.

Improved environmental governance provides a firm foundation for most of EPA's programs. In FY 2011, EPA will continue to provide training and technical assistance to improve environmental governance in key countries and regions, including Africa, Russia, India and the Middle East. This work will include development of regional networks for environmental governance, training on environmental enforcement, inspections, investigations, and pilot demonstration projects.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of countries completing phase out of leaded gasoline. (incremental)	4	2	3	1	Countries

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of countries introducing low sulfur in fuels. (incremental)	3	2	9	2	Countries

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$128.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$1.0) This reflects a decrease to IT and telecommunication resources.
- (\$+4.0) This increase supports administrative costs for international programs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$5,413.2	\$6,227.0	\$6,202.0	(\$25.0)
Total Budget Authority / Obligations	\$5,413.2	\$6,227.0	\$6,202.0	(\$25.0)
Total Workyears	16.4	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 trade agreement to enforce their own environmental laws. Through leadership in the Commission on Environmental Cooperation (CEC), the Organization for Economic Cooperation and Development (OECD), and other international entities, EPA supports environmental performance reviews of other countries. These reviews help facilitate the sharing and continual improvement of good governance best practices (such as providing access to information, collaborating with diverse stakeholders, and providing transparency in environmental decision making).

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 (USTR) on trade policy issues. U.S. trade with the world has grown rapidly from \$34.4 billion in 1960 to \$3.394 trillion in 2008 as stated by the U.S. Census Bureau, Foreign Trade Division.⁶⁰ 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 USTR to provide advice, guidance and clearance to the USTR in the development of U.S. international trade and investment policy. EPA provides input 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

⁶⁰ <http://www.census.gov/foreign-trade/statistics/historical/goods.pdf>.

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.

NAAEC was founded on the notion that trade liberalization would increase trade but was likely to have a negative impact on the environment in North America. The North American Free Trade Agreement (NAFTA) did in fact result in increased commerce, and U.S. trade with its NAFTA partner countries has increased 547 percent since 1985 (in 1985 U.S. total trade with Canada and Mexico was \$149.0 billion; in 2008, that number grew to \$964.4 billion).⁶¹ Booming trade after NAFTA's entry into force also has led to increasing traffic congestion and related environmental consequences, particularly air pollution.⁶² For example, the majority of trade between Mexico and the U.S. is carried by heavy-duty diesel trucks, which are major emitters of nitrogen oxide (NOx), particulate matter (PM) and carbon dioxide. The increased traffic entering the U.S. at key border crossings, such as the San Diego/Tijuana area, have resulted in correspondingly higher NOx and PM emissions.⁶³

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, supports 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 2011 Activities and Performance Plan:

During FY 2011, EPA will continue to provide input to U.S. engagement in multilateral trade negotiations and initiation and/or conclusion of new bilateral or regional free trade agreements,

⁶¹ US Census Bureau, Foreign Trade Division, Annual 2008 Trade Highlights, www.census.gov/foreign-trade/statistics/highlights/annual.html, accessed August 17, 2009.

⁶² U.S. Transportation Research Board, The National Academies, "Critical Issues in Transportation," 2006.

⁶³ Short-term exposure to diesel exhaust can irritate the eyes, 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.

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 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, 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 serves as a good example of EPA's approach to trade related work. Within the NAAEC, EPA will continue to work with Mexico and Canada through the CEC to ensure integration of environmental considerations into trade policies in the midst of increased trade and economic development, and will focus specifically on: (1) consistent with US domestic policy, developing aggressive GHG reduction targets and a range of policy tools, strongly emphasizing co-benefits of air pollution reductions and climate change mitigation among the three Parties; (2) promoting the greening of the North American economies by supporting sustainable use of materials through application of the "3 R's" (Reduce, Reuse, Recycle); sustainable use of energy and new energy resources and developing sustainable communities through EPA's Smart Growth program; and (3) strengthening institutions and practices that support healthy communities and ecosystems, including promoting the sound management of chemicals, increasing the capacity for pollution prevention, strengthening environmental enforcement, and preventing the adverse effects of pollution on human and ecosystem health.

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 promote quality assurance mechanisms, transparency, and cost effectiveness. EPA also will 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 will focus on minimizing the risks of human and environmental exposure to *chemicals in use*, or previously used in and traded as products (e.g., mercury, lindane); *categories of chemicals*, including those produced as unintentional by-products from disposal of traded products (e.g., dioxins and furans); and *industry sectors and technologies* common to the three countries (e.g., automotive, electronics). In general terms, the CEC's sound management of chemicals initiative focuses on chemicals in trade, their products, and long-range transport of chemicals across borders. The CEC facilitates discussion, coordination and mutual assistance among the three Parties.

Under EPA guidance, the CEC will continue its 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 that is comparable, verifiable and compatible 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 development 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 greater use of low carbon alternatives in North America; 2) promoting more energy efficient economic growth in the region; and 3) enhancing cooperation among the three countries to support clean energy projects and facilitate activities that will help North America transition towards a low carbon economy.

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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$33.0) This decrease is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on the recalculation of base workforce costs.
- (-\$1.0) This reflects a decrease to IT and telecommunications resources.
- (+\$9.0) This increase supports international cooperation efforts.

Statutory Authority:

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$4,565.3	\$5,912.0	\$7,030.0	\$1,118.0
Hazardous Substance Superfund	\$1,013.2	\$785.0	\$728.0	(\$57.0)
Total Budget Authority / Obligations	\$5,578.5	\$6,697.0	\$7,758.0	\$1,061.0
Total Workyears	8.7	15.8	15.3	-0.5

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 2011 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. In FY 2011, EPA's continuous integrated efforts will allow the Agency's Information Security Program to take a more pro-active role in dealing with these threats.

EPA will continue to protect, defend and sustain its information assets by continuing to improve its Information Security Program. The Agency will continue to focus initially on asset definition and management, compliance, incident management, knowledge and information management, risk management, and technology management. Secondary activities in FY 2011 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 Management and Budget (OMB) information security initiatives, which will be implemented throughout FY 2011, 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 will continue 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 2011.

Additionally, EPA will continue implementing 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	100	100	100	100	Percent

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$69.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (+\$1,041.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program. In accordance with the Federal Information Security Management Act, EPA is required to have the ability to provide pro-active, reactive and support services associated with information security incident management.
- (+\$8.0) This reflects an increase for general expenses, contracts, and IT and telecommunications resources.

Statutory Authority: FISMA; GPRA; GMRA; CCA; PRA; FOIA; PR; EFOIA.

IT / Data Management

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$90,809.5</i>	<i>\$97,410.0</i>	<i>\$98,060.0</i>	<i>\$650.0</i>
Science & Technology	\$3,852.1	\$4,385.0	\$4,111.0	(\$274.0)
Leaking Underground Storage Tanks	\$164.3	\$162.0	\$0.0	(\$162.0)
Oil Spill Response	\$36.3	\$24.0	\$0.0	(\$24.0)
Hazardous Substance Superfund	\$17,266.1	\$17,087.0	\$16,720.0	(\$367.0)
Total Budget Authority / Obligations	\$112,128.3	\$119,068.0	\$118,891.0	(\$177.0)
Total Workyears	484.6	503.1	489.3	-13.8

Program Project Description:

In broad terms, IT/DM houses all of the critical IT infrastructure needed for: 1) rapid and efficient communication; 2) exchange and storage of data, analysis and computations; and 3) access to the scientific, regulatory, and best practice infrastructure needed by agency staff, the regulated community, and the public. These functions are integral to the implementation of Agency information technology programs and systems like the Exchange Network, the Central Data Exchange (CDX), and the Permit Compliance System (PCS). Recent partnerships include portals projects with the Research and Development and Air and Radiation offices to access scientific and program data.

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 2011 Activities and Performance Plan:

In FY 2011, the Agency will work with EPA program offices on the Healthy Communities priority, this program will focus on: 1) increasing the availability of plain language information and tools on air toxics for at-risk communities, including information on environmental health issues affecting schools and children; 2) providing Web 2.0 information collaboration tools such as wikis and/or blogs in EPA's outreach and communications efforts to increase transparency, coordination, and collaboration among states, local communities, schools and the general public

as they share lessons learned, best practices, and an evolving understanding of the environment; and 3) maintaining EPA's technology infrastructure to provide the capacity needed to support use of information technologies in outreach programs.

In particular, work in the program will focus on developing discovery tools and data publishing infrastructure for facilitating access to EPA data assets. This includes an automated capability to discover, access and query data from programmatic databases. Work also will include the ability to convert existing data into a number of different data formats, including open geospatial standards, to enhance data integration and collaboration. Final products will be available in the form of Web services and syndicated feeds to a variety of different users inside and outside EPA, including publishing the data through the Exchange Network.

The program will work to develop collaborative tools and suites of key information in close consultation with EPA's media programs. The program also will assist by developing a mobile application to allow monitoring data collected in the field to be sent directly to EPA or the appropriate location for publication on the Internet so that it can be made quickly available to all who are interested. Working through its ongoing relationship with National Advisory Council for Environmental Policy and Technology (NACEPT), the program will continue to obtain and utilize advice on ways diverse and underserved communities prefer to receive, and better understand environmental information that will allow them to participate in keeping our communities healthy.

The following summarize the major activity areas within this program:

- **Information Access** - FY 2011 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 Inventory⁶⁴ (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 2011, EPA's E-Gov participation and contributions continue with the coordination, development and implementation of Geospatial One-Stop. Key activities will ensure that access to critical data (e.g., geospatial information, Federal regulations) is increased through the Geospatial One-Stop portal and the 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 2011 focus area, the Integrated Portal, will continue with implementing identity and access management solutions, integrating geospatial tools, and linking to the

⁶⁴ For more information on Toxics Release Inventory data, please visit: <http://www.epa.gov/tri/>

Central Data Exchange⁶⁵ (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 also is EPA's link to data sets and systems that are not part of the Exchange Network. (In FY 2011, the Information Access activities will be funded at \$5.4 million)

- **Geospatial Information and Analysis⁶⁶** – In FY 2011 EPA will continue providing 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 2011, the Geospatial Information and Analysis activities will be funded at \$10.3 million)
- **Envirofacts⁶⁷** – 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 also is being used to help plan and conduct multi-media inspections, and to support emergency response and planning. In FY 2011 the program will consolidate operations of, and reduce service delivery by, key components of the Agency's corporate data management product suite. These components, including the Envirofacts data warehouse, the Facility Registry System and the System of Registries will be combined into a single operation under a single Federal manager. The scope of services being delivered will be refocused and the manner in which users receive service will change. Rather than serving the public directly through a Web-based interface, these products will be retooled to offer Web services for other applications to consume. This will complete

65 For more information on the Central Data Exchange, please visit: <http://www.epa.gov/cdx/>

66 For more information on the Geospatial program, please visit: <http://www.epa.gov/geospatial/>

67 For more information on Envirofacts, please visit: <http://www.epa.gov/enviro/>

the transition from a series of EPA-funded databases to a services-orientation whereby the consumer gets direct service from a secondary provider. (In FY 2011, Envirofacts activities will be funded at \$2.7 million)

- **IT/Information Management (IT/IM) Policy and Planning** – FY 2011 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 Control⁶⁸ process (CPIC), to assist the Agency in making better informed decisions on IT/IM investments and resource allocations. (In FY 2011, the IT/IM Policy and Planning activities will be funded at \$15.3 million)
- **Electronic Records and Content Management** – FY 2011 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 2011 the Agency will continue implementing the ECMS project, an enterprise-wide, multi-media solution designed to manage and organize environmental data and documents for EPA, Regional offices, 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 2011, the Electronic Records and Content Management activities will be funded at \$3.1 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 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 2011, the IOME activities will be funded at \$5.5 million)
- **Information Reliability and Privacy** – FY 2011 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

68 For more information on the Capital Planning and Investment Control Process, please visit: <http://www.epa.gov/OEI/cpic/>

information, such as business information that is reported by various industry communities, and personal information for all EPA employees. (In FY 2011, the Information Reliability and Privacy activities will be funded at \$1.0 million)

- **IT/IM Infrastructure** – This area supports 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 2011, 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 also will 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 numbers of public users grow. (In FY 2011, the IT/IM Infrastructure activities will be funded at \$54.7 million)

Performance Targets:

Work under this program supports multiple strategic objectives. There are no specific performance measures under this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,757.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (-\$2,112.0/-14.3 FTE) This change is a realignment of resources, including: 6.0 FTE and associated payroll, from IT/DM to Exchange Network, 8.2 FTE and associated payroll to TRI, and a 0.1 FTE reduction in the regions.
- (-\$508.0) This reflects a realignment of Agency's IT and telecommunications resources for Computer Security Incident Response Center from across programs to the Information Security program and other related IT and telecommunications needs.
- (-\$111.0) This decrease in travel costs reflects an effort to reduce the Agency’s travel footprint by promoting green travel and conferencing.
- (+\$186.0) This increase reflects a realignment of resources from LUST and Oil appropriations to provide more efficient accounting of program funding.
- (-\$1,256.0) This reduction reflects expected savings from consolidating Envirofacts, Facility Registry System, and System of Registries under a single Federal manager.

- (+\$2,000.0) This change supports enhancements to information access and Web tools to promote transparency and open government. With EPA's improved Web pages and Web-accessible information, the public will have greater access to environmental information. EPA's upgrade to Web tools will make environmental information more accessible and provide it in a format preferred by the public.
- (+\$791.0) This change allows EPA to stay on schedule for several projects that support EPA programs by providing enhanced tools and infrastructure. These projects include: developing improved Environmental Indicators, deploying enterprise-wide IT infrastructure solutions such as the Enterprise Content Management System, expanding the capabilities of the National Geospatial Program, upgrading desktop services in the regions, Capital Planning and Investment Control, and Identity Access Management.

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

Administrative Law

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$4,584.8	\$5,275.0	\$5,332.0	\$57.0
Total Budget Authority / Obligations	\$4,584.8	\$5,275.0	\$5,332.0	\$57.0
Total Workyears	29.9	33.7	33.7	0.0

Program Project Description:

This program project supports EPA's Administrative Law Judges (ALJs) and the Environmental Appeals Board (EAB or the Board). The ALJs preside in hearings and issue initial decisions in cases initiated by EPA's enforcement program concerning environmental violations. The EAB issues final decisions in environmental adjudications (primarily enforcement and permit-related), that are on appeal to the Board. The EAB also 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. The decisions reflect findings of fact and conclusions of law.

FY 2011 Activities and Performance Plan:

By adjudicating disputed matters, the ALJs and EAB will continue to further the Agency's mission to protect human health and the environment. 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 right of affected persons to appeal those decisions is conferred by various statutes, regulations and constitutional due process rights. The EAB issues the Agency's final 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 Agency has sought efficiencies in this process. The ALJs increased the use of alternative dispute resolution techniques to facilitate the settlement of cases and 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 2011, the EAB plans to monitor the electronic filing of original documents with the Board as first permitted in FY 2010 and, at the end of FY 2011, assess whether any changes to the process are needed. This should result in greater efficiencies for all concerned. The EAB will continue its two-year pilot project initiated

in FY 2010 on the use of alternative dispute resolution in cases on appeal, to be followed by an assessment of the results of the pilot and modifications as appropriate. The Board will also continue to support international judicial environmental training consistent with Agency priorities. (In FY 2011, the ALJ office will be funded at \$2.93 million and 18.3 FTE, and the EAB will be funded at \$2.41 million and 15.4 FTE.)

Performance Targets Narrative:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$68.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$11.0) This decrease in travel costs reflects our effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$1,280.5</i>	<i>\$1,147.0</i>	<i>\$1,390.0</i>	<i>\$243.0</i>
Hazardous Substance Superfund	\$1,369.4	\$893.0	\$913.0	\$20.0
Total Budget Authority / Obligations	\$2,649.9	\$2,040.0	\$2,303.0	\$263.0
Total Workyears	6.3	7.3	7.3	0.0

Program Project Description:

The Agency’s General Counsel and Regional Counsel Offices provide environmental Alternative Dispute Resolution (ADR) services. The intent is to offer a cost-effective process to resolve disputes.

FY 2011 Activities and Performance Plan:

In FY 2011, the Agency will continue to 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$244.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-\$2.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$1.0) This reflects a net change in contracts and general expenses to support an increase in IT and telecommunications resources.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$11,898.0</i>	<i>\$12,224.0</i>	<i>\$12,366.0</i>	<i>\$142.0</i>
Total Budget Authority / Obligations	\$11,898.0	\$12,224.0	\$12,366.0	\$142.0
Total Workyears	68.0	69.5	69.5	0.0

Program Project Description:

EPA’s Office of Civil Rights provides policy direction and guidance on equal employment opportunity, civil rights, affirmative employment, diversity, and reasonable accommodations 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; and affirmative employment and diversity program planning and implementation.

Program functions include accountability for implementation, program evaluation and compliance monitoring of the Civil Rights Act of 1964 (Titles VI, VII, IX), and legislative requirements and executive orders covering civil rights, affirmative employment, disability, alternative dispute resolution, and reasonable accommodation. The program also interprets policies and regulations, ensures compliance with civil rights laws, Equal Employment Opportunity Commission (EEOC) directives and equal employment initiatives, and upholds the civil rights of EPA employees and prospective employees as required by Federal statutes and Executive Orders.

FY 2011 Activities and Performance Plan:

In FY 2011, the Office of Civil Rights (OCR) will continue to focus on its core mission, to insure the fair and equitable treatment of all employees and applicants for employment, and to foster an environment wherein diversity is recognized as a valuable resource within the Agency. OCR plans to conduct compliance reviews of five recipients of EPA financial assistance in FY 2011. The Agency’s Civil Rights External Compliance Program also plans to identify and implement more effective and timely processes for the resolution of external complaints. (In FY 2011, the Headquarters Office of Civil Rights will be funded at \$8.44 million and 39.5 FTE.)

In FY 2011, the OCR will:

- Work with the U.S. Department of Justice, Department of Health and Human Services and the Department of Education on issues regarding discrimination on the basis of age, sex, and other factors, as well as working with varying Federal agencies that may simultaneously receive discrimination complaints from the same complainant regarding a particular recipient.
- Aggressively work to reduce processing time for complaints of discrimination and increase the number of complaints resolved through the alternative dispute resolution.
- Ensure that certification training, refresher training, and technical guidance are provided to more than 100 collateral duty Equal Employment Opportunity (EEO) counselors in the Agency's Regional offices and at Headquarters, annually. OCR will provide guidance and technical direction to its EEO Officers and provide technical assistance, as needed.
- Re-establish an EEO presence in the EPA Las Vegas (LV) Laboratory and develop EEO training programs to specifically address concerns in the LV lab.
- Monitor and evaluate the effectiveness of the Reasonable Accommodation process. Provide technical assistance to managers, supervisors, employees and the designated Local Reasonable Accommodation Coordinators, in the form of expert training and consultation by the Northeast Regional Application Center, to insure efficient implementation of the policy and procedures.
- Monitor the Agency's compliance with various statutes, EEOC regulations, EPA policy and procedures related to the reasonable accommodation of qualified applicants and employees with disabilities.
- Conduct special emphasis programs that increase cultural awareness of minorities; women, and persons with disabilities, as well as celebrate the diversity of our Agency.
- Complete the Agency's 2009 Affirmative Employment Program plan and brief senior management in all headquarters program offices and work with Regional EEO officers to develop briefing strategies for Regional management teams. AED shall monitor all plans (Regional and headquarters) and establish a metric for determining progress in achieving "model EEO status."
- Re-evaluate and revise the Agency's current policy on processing of complaints of discrimination based on sexual orientation and revise/update, as appropriate.
- Issue new policy on harassment and discrimination in the workplace.
- Link the Agency's applicant flow data with the existing database for workforce diversity. OCR will engage the Office of Human Resources in the development of more meaningful and effective recruitment plans.

- Conduct a comparative analysis of EEOC's 462 reporting requirement covering fiscal years 2007-2009.
- Work with the Office of Human Resources, appropriate program offices and Regional offices to affect recruitment strategies that will result in 2 percent of the Agency's workforce being comprised of employees with disabilities.
- Ensure that less than 15 percent of all Title VII complaints will exceed the established timeframes.
- Work with EPA's Office of General Counsel to close 14 Title VI complaints.

As a result of these activities, the Agency's mission will be supported by a workforce that is as diverse as the communities it serves, goal oriented, and treated in a fair and non-discriminatory manner.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$245.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$11.0) This decrease in travel costs reflects our effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$92.0) This reflects a decrease to contract support following evaluation of program needs as part of the effort to realign resources across the Agency.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$41,917.2</i>	<i>\$42,662.0</i>	<i>\$44,002.0</i>	<i>\$1,340.0</i>
Hazardous Substance Superfund	\$716.7	\$746.0	\$752.0	\$6.0
Total Budget Authority / Obligations	\$42,633.9	\$43,408.0	\$44,754.0	\$1,346.0
Total Workyears	242.6	250.6	252.2	1.6

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 2011 Activities and Performance Plan:

The Agency is committed to providing sound legal advice. In FY 2011, legal advice to environmental programs will continue to 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.

In FY 2011, the Agency will evaluate and reform the Title VI program, giving emphasis to the evaluation of potential long-term institutional changes to the Agency's Title VI complaint process. The additional resources will help ensure that all appropriate Agency components are used to create a timely and effective Title VI process.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,204.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$74.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$9.0) This reflects realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program and other IT and telecommunications needs.
- (-\$110.0) This reflects a redirection of contracts to support increases in general expenses and IT and telecommunications resources.
- (-\$128.0/ -0.9 FTE) This reflects a reduction in legal support for the Appalachian surface coal mining interagency action plan, which includes 0.9 FTE and associated payroll of \$128.0. The decrease in resources aligns with the required effort in FY 2011 to review program guidance and permit reviews associated with revised policies for the Appalachian surface coal mining.
- (+\$457.0/+2.5FTE) This reflects an increase for legal support for requirements under the Civil Rights Act of 1964, which includes \$457.0 in associated payroll for 2.5 additional FTE. The additional resources will be used to help resolve the Agency's backlog of pending Title VI complaints.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$14,236.7</i>	<i>\$14,419.0</i>	<i>\$15,735.0</i>	<i>\$1,316.0</i>
Total Budget Authority / Obligations	\$14,236.7	\$14,419.0	\$15,735.0	\$1,316.0
Total Workyears	81.3	86.3	86.3	0.0

Program Project Description:

The General Counsel and the Regional Counsel offices provide legal representational services, legal counseling and legal support for all activities necessary for the operation of the Agency. This program focuses on administrative requirements determined by statutes, GAO decisions and Federal agency regulations.

FY 2011 Activities and Performance Plan:

In FY 2011, legal representational services, legal counseling and legal support will continue to 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,345.0) This reflects an increase for payroll and cost of living for existing FTE.

- (-\$29.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

EPA's General Authorizing Statutes.

Regional Science and Technology

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$3,311.4	\$3,271.0	\$3,283.0	\$12.0
Total Budget Authority / Obligations	\$3,311.4	\$3,271.0	\$3,283.0	\$12.0
Total Workyears	1.9	2.0	2.0	0.0

Program Project Description:

The Regional Science and Technology (RS&T) Program supports the purchase of equipment for the Regional laboratories, field investigation teams, and mobile laboratory units, as well as equipment required for laboratory quality assurance and quality control. RS&T activities support all of the Agency's national programs (including enforcement) and goals, by supplying laboratory analysis, field monitoring and sampling, and through efforts to build Tribal capacity for environmental monitoring and assessment.

The RS&T program provides essential expertise for a multitude of national programs, including but not limited to ambient air, water quality, monitoring activities, and areas involving environmental biology, microbiology, chemistry, and criminal investigations. EPA has made significant strides toward improving environmental data collection and laboratory analytical capacity and capability to strengthen science-based decision-making. The program's applied science expertise is used to develop and modify analytical methods for specialty work such as emerging chemicals of concern and provides scientific consultation to Agency, state, and Tribal partners. Funding for equipment is essential for continued progress and enhanced capabilities in order to respond to emergencies, emerging environmental issues, and to improve efficiencies.

The RS&T program provides in-house expertise and technical capabilities in the generation of data for Agency decisions and differs from the Agency's research operation by focusing on applied science needs rather than short or long term research. RS&T resources support the development of critical and timely environmental data, rapid data review in emerging situations, and development of enhanced capabilities for proper environmental assessment of chemical warfare agents.

FY 2011 Activities and Performance Plan:

In FY 2011, RS&T resources will support Regional implementation of the Agency's statutory mandates through field operations for environmental sampling and monitoring. Regional laboratories perform environmental analytical testing, monitoring, special studies method development, quality assurance oversight, and data management support. Direct laboratory support also increases efficiencies in Regional program management and implementation by allowing the Regions to focus on addressing environmental issues which may be specific to certain geographic areas in the Nation (e.g. mountain top mining, wood treating operations, oil refining, etc.).

The Agency will stay abreast of rapidly changing technologies (i.e., new software, rapid analysis instrumentation, and new analytical capabilities; such as Polymerase Chain Reaction Technology and Time of Flight Mass Spectrometry), as well as new remote sensing technologies, that allow EPA to collect and analyze samples more cost effectively, quickly, and/or detect lower levels of contaminants, and to assay new and emerging contaminants of concern. In accordance with new policy directives and current issues/concerns, the Agency will enhance laboratory and field monitoring capacity and capability to ensure that it implements critical environmental monitoring and rapid analysis, partners with existing laboratory networks and state/local organizations, and develop enhanced response, recovery and cleanup procedures.

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, Clean Water Act, and Superfund programs. The laboratories analyze samples associated with a variety of illicit activities including unpermitted discharges, illegal storage and/or disposal of hazardous wastes, and illegal dumping. Resulting data are used by the Agency's Criminal Investigation Division and by Assistant U.S. Attorneys to support prosecution of civil and criminal 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, many 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$6.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$4.0) This reflects a realignment of Agency IT and telecommunications resources.
- (+\$10.0) This reflects an increase to contract resources for this program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$21,827.7	\$18,917.0	\$19,828.0	\$911.0
Total Budget Authority / Obligations	\$21,827.7	\$18,917.0	\$19,828.0	\$911.0
Total Workyears	109.2	82.9	72.1	-10.8

Program Project Description:

EPA is reorienting its regulatory innovation work to accomplish a new Administration priority – the development of strategies that promote greener, revitalized, sustainable communities, businesses, and industries. Doing so will enable the Agency to meet its core mission goals of protecting human health and the environment by providing more tools and resources to communities to help create stronger, more economically and environmentally resilient communities.

The program provides strategic leadership that will enable the Agency to contribute effective policies, practices and tools to promote greening of U.S. communities, businesses and industries. Working across EPA’s programs and mission activities, the program will coordinate and integrate Agency strategies and address emerging cross-cutting issues related to reducing environmental degradation from development and industries.

EPA plays a critical role in achieving better environmental outcomes from development patterns and buildings. EPA helps community and government leaders meet environmental standards through innovative community and building design, policies, and infrastructure investment strategies. EPA accomplishes this work by: (1) strengthening collaborative work with federal, state, and local agencies, (2) providing community assistance and training; and (3) developing standards and design approaches that support sustainable communities. EPA is working to improve these outcomes in the built environment to protect environmental quality and public health, while avoiding disproportionate harm to disadvantaged communities.

EPA also is analyzing and promoting new strategies for: energy and natural resource use, materials management, increased sustainability in goods and services, and financial transparency on environmental issues. These new efforts are designed to maximize the longer-term benefits of near-term investments in a cleaner, healthier environment and economy.

EPA will draw on its innovation and cross-media experience to provide strategic focus, analysis, and cross-Agency coordination to these efforts. The Regulatory Innovation program will work across offices, programs, and Regions, and effectively partner with states, other Federal agencies, and other external stakeholders to integrate economic and environmental protection goals. To ensure the effectiveness and efficiency of its programs and strategies, this program will also continue to advance management improvements through activities such as program evaluation, performance analysis, and the application of “lean” government tools.

Finally, this program will continue to support advancements in analytic tools and methods designed to reveal the connectedness and complexities of relationships between the benefits from policies targeted at reducing risks to human health and ecological resources, and how these policies impact economic activity and measures of sustainable growth and development.

FY 2011 Activities and Performance Plan:

In FY 2011, activities will include:

Sustainable Communities/Smart Growth Program: EPA requests additional resources to expand Smart Growth work to support the Federal DOT, HUD, EPA partnership, to provide additional Smart Growth technical assistance to states and local communities, and to develop additional tools and other community resources. In addition, EPA’s facilitation and convening role on green building practices will be integrated with its Smart Growth program because of the importance of sustainable design at multiple scales: Regional, neighborhood, and site. The Sustainable Communities/Smart Growth program works with Federal (including other parts of EPA) and state partners to develop policies, regulations, standards, guidelines, spending priorities that support sustainable development. This work helps ensure that policies, actions, rules, standards, guidelines and spending at the national and state levels do not favor development that adversely affects the environment and public health or disproportionately harms disadvantaged communities.

- *Engaging Federal Partners.* With the new U.S. Department of Transportation-U.S. Department of Housing and Urban and Development-U.S. Environmental Protection Agency Partnership for Sustainable Communities⁶⁹, EPA is working with its program offices and regions as they implement activities related to the Partnership. Potential areas of work within EPA may include storm water regulations, Brownfield assistance, environmental justice, energy and water efficient buildings, green building, and climate change mitigation and adaptation. In FY 2011, EPA will work to catalyze changes in Federal rules, regulations, policies, programs, and spending to better support creation of sustainable communities. EPA will do this by providing support and Smart Growth expertise to other Federal agencies – such as HUD, DOT, USDA, FEMA and NOAA – will help them achieve greater environmental benefits through their programs, policies, regulations, and resources while meeting their core agency objectives. EPA also will work to establish better training and education programs on implementing sustainable community approaches – particularly for Federal and state government employees in a variety of agencies.

⁶⁹ For more information, please refer to: <http://www.epa.gov/smartgrowth/partnership/index.html>

- Providing Technical Assistance. The Agency also provides a variety of types of direct technical assistance to state and local governments to promote more sustainable development outcomes at the neighborhood, Regional, and state levels. Through this technical assistance, the Sustainable Communities program provides expertise to help communities achieve the greatest environmental and public health benefit from major public investments and policy decisions. Research efforts are focused on developing and field testing tools to help facilitate better development and public investment decisions.

In FY 2011, EPA will expand its current technical assistance programs to Tribal, state, Regional, and local governments as they seek to develop ways that could reduce greenhouse gas emissions, adapt to climate change, implement green infrastructure approaches, incorporate green building practices, or promote equitable development by providing better transit access, safer routes to schools, and housing opportunities for distressed communities. EPA will accomplish these goals by: (1) expanding the current set of smart growth implementation tools and development mechanisms, (2) delivering assistance with these tools to a larger number of recipient communities, and (3) expanding policy assistance to states through the Governors' Institute on Community Design.

EPA Regional staff will be fully incorporated into technical assistance efforts, as will partners from the HUD and DOT, as appropriate. In addition, EPA will develop a new program aimed at increasing capacity within long-standing metropolitan, Regional or state-based organizations to support smart growth and green building implementation in their region through education, training, and technical assistance related to the activities of the Federal Sustainable Communities Partnership.

- Developing Tools and Other Community Resources. Finally, because both smart growth development and sustainable building implementation are dependent, in part, on local codes, ordinances and standards, EPA works with, and convenes, a wide variety of stakeholders to ensure that rules and practices guiding the development, redevelopment and operations of communities and buildings support more environmentally sustainable outcomes. For example, EPA will facilitate consensus around voluntary sustainable building standards, and participate in external third-party standards development to improve their environmental effectiveness. EPA is also developing technical analysis, guidance and implementation tools to improve building practices. For FY 2011, EPA will expand its applied research and policy assessment to develop more practical place-based tools and resources for communities across the urban-to-rural spectrum. Finally, EPA will develop new tools communities can use to evaluate the environmental implications of land use, transportation and housing policies and investments to reduce climate change impacts and implementation tools on innovative approaches to building codes, building retrofits, street design standards, and zoning codes.

(In FY 2011, the Sustainable Communities/Smart Growth program will be funded at \$9.91 million under the Regulatory Innovation program, and \$1.32 million under the Brownfields program.)

Promoting a Greener Economy: EPA will realign and build upon its prior innovation and cross-media experience with a strategic focus on efforts that help to advance the goal of a greener economy. Emphasizing emerging, cross-cutting issues that do not have an exclusive home elsewhere in the Agency, the program provides leadership to align the entire Agency's resources and programs to create a coordinated response in partnership with states, other Federal agencies, and other external stakeholders to integrate economic development and improved environmental protection. To ensure the effectiveness and efficiency of Agency programs and strategies, this program will also continue to advance management improvements through activities such as program evaluation, performance analysis, and the application of "lean" government tools.

The specific issues addressed in this program will evolve over time, but near term areas of focus include:

- Articulating and operationalizing, strategies through which EPA can promote improved materials management and resource efficiency, to allow the economy to grow while at the same time shrinking its environmental footprint;
- Analyzing the financial sector implications of environmental performance, and developing strategies to ensure transparency in reporting so that markets are well-informed.
- Integrating efforts across the Agency to promote greener, sustainable products, to ensure that policy issues are identified and addressed, and that the Agency participates effectively in the discussion of product labeling and greenwashing;
- Spearheading EPA's support for efforts across the federal government to develop a greener workforce, ensuring that the expertise, resources, and opportunities available within the Agency's programs are effectively brought to bear on those efforts in partnership with other federal agencies, states, communities, and educational institutions

Under efforts such as these, activities in FY2011 will include analysis, development of new policies and tools, demonstration of new strategies, cross-agency coordination, and external communication of agency views and expertise. Established relationships with other Federal agencies, states, communities and others will serve both as a source of learning for EPA and as a means for deploying new tools and policies. EPA will analyze the role that government agencies (Federal, state, local) would play in supporting progress toward a greener economy and will identify areas in which development of new agency policies and tools may help that progress. Additionally, EPA will analyze its own policies, statutory authorities, programs and activities related to these segments of the economy and will identify areas for new policy development, especially gaps that need to be filled.

Program Evaluation and Performance Analysis: EPA uses program evaluation and performance analysis to support evidence-based decisions about which programs protect human health and the environment in the most efficient and the most cost-effective ways. This is particularly important in an era of fiscal responsibility that calls for greater Federal accountability and public transparency of our programs. EPA acknowledges that rigorous, independent empirical evidence plays an important role in effective environmental policy and EPA is committed to publicly disseminating complete evaluation findings, regardless of whether conclusions are consistent with Agency expectations.

In FY 2011, resources will be provided to EPA headquarters and Regional offices to conduct rigorous evaluations. Specific consideration will be given to evaluations that (a) assess program effectiveness and efficiency, (b) provide insights on how the use of new approaches may help better achieve program goals and fulfill the Agency's mission; (c) address issues of strategic importance to the Agency, or address cross-cutting issues that present challenges to multiple programs; (d) draw on social science research and tools to evaluate the impact of EPA activities on the behavior of regulated entities; and (e) assess the statistical rigor and validity of EPA's outcome measurement data. Resources will support EPA's performance management training regimen (online and classroom), which enables EPA staff and managers to use essential tools such as logic modeling and performance measurement. Resources also will support outcomes and impact measurement projects in collaboration with states and other co-regulators.

Additional funding is requested in FY 2011 to build EPA's capacity to: incorporate evaluation into new initiatives, evaluate the impact of policy interventions, and assess the outcomes and impacts of EPA's strategic priorities based on targeted needs. EPA will acquire staff with program evaluation expertise to: promote rigorous, evidence-based evaluation methods for transparent external and in-house evaluations, and manage contracts with third-party, independent evaluators. As part of this capacity building, EPA will also support efforts to make Agency program data available to the public and enable external evaluators to assess programs.

EPA will continue to improve the effectiveness and efficiency of Agency programs and policies through program analysis and review, more efficient operations, and improved information sharing. EPA will conduct program analysis using quantitative measures and qualitative information to inform regulatory, policy, and guidance decisions. EPA will coordinate an effective and proactive management strategy across the Agency, providing analysis and decision-making support to strengthen Agency performance. (In FY 2011, the Program Evaluation and Performance Analysis will be funded at \$4.88 million.)

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$193.0) This increase 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.
- (-\$52.0) This decrease in travel costs reflects an effort to reduce the Agency's total footprint by promoting green travel and conferencing.
- (+\$500.0/ +2.0 FTE) This is an increase in resources to implement EPA's program evaluation strategy and build evaluation capacity, which is consistent with the Administration's Program Evaluation Initiative. The change includes 2.0 FTE, and \$300.0 in associated payroll.

- (+\$1,093.0/ +4.0 FTE) This is a realignment of existing 4.0 FTE and associated payroll supporting the program analysis function consistent with the reorganization of the program. This includes 4.0 FTE, and \$617.0 in associated payroll.
- (+\$4,213.0/ +5.0 FTE) This increase represents funding to support and integrate the Smart Growth program as part of the Agency's participation in the Sustainable Communities Partnership, which is included in EPA's Healthy Communities initiative. The change includes 5.0 FTE, and \$745.0 in associated payroll.
- (-\$3,695.0/ -13.8 FTE) This decrease represents a reorganization of past regulatory innovation programs to focus more tightly on efforts that help to promote a greener, more sustainable economy. The change includes -13.8 FTE, and -\$2,077.0 in associated payroll.
- (-\$1,272.0/ -8.0 FTE) This decrease represents the discontinuation of the Effective Use of Environmental Stewardship, which is consistent with the reorganization of the program. The change includes -8.0 FTE, and -\$1,204.0 in associated payroll.
- (-\$69.0) This decrease is a net change to programmatic support for the program following reorganization.

Statutory Authority:

AAA; CWA, Section 104(b)(3); CAA, Section 104(b)(3).

Regulatory/Economic-Management and Analysis

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$17,677.1</i>	<i>\$19,404.0</i>	<i>\$22,640.0</i>	<i>\$3,236.0</i>
Total Budget Authority / Obligations	\$17,677.1	\$19,404.0	\$22,640.0	\$3,236.0
Total Workyears	100.3	104.2	102.2	-2.0

Program Project Description:

EPA ranks second among Federal departments and agencies in the number of regulations issued annually (typically over 450). EPA takes its regulatory responsibility seriously and has invested in a centralized regulatory and economic management and analysis function to encourage and support the development of high quality regulations.

The Regulatory Economic, Management and Analysis program strengthens EPA’s regulatory, economic, and policy development efforts. The program focuses on ensuring an efficient and effective regulatory and policy planning and decision process, including consistent and appropriate policy and economic analysis. The program supports consideration of an appropriate set of alternatives and works to fill gaps in EPA’s ability to quantify the costs and benefits of environmental regulations and policies. 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 policy priorities including considering impacts on small business and governmental entities.

Objectives of the program include:

- Implementing efficient and effective internal procedures that facilitate timely decisions.
- Ensuring that Agency decision-making processes are invested with high quality and timely information, including relevant science, policy, economic factors, and consideration of an appropriate range of alternatives to achieve the best overall environmental results.
- Advancing the theory and practice of quality economics, and promoting policy analysis and risk analysis within the Agency.

- Providing information on the full societal impacts of reducing environmental risks, including the expected distribution of the costs, benefits and impacts of regulatory options.
- Building and communicating a more comprehensive picture of the economic consequences of environmental policies and programs in EPA's economic analyses, and delivering sound and timely economic, science, regulatory, and program analyses to support 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.
- Working with state representatives to minimize state administrative reporting burden.
- Increasing the transparency of and encouraging public involvement in EPA's regulatory and policy development efforts through improved use of collaborative networking and implementation of information technology.
- 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 2011 Activities and Performance Plan:

Program activities planned for FY 2011 include:

- Managing the Agency's internal *Action Development Process*, and ensuring appropriate engagement across EPA's headquarters and Regional offices, and leading EPA's review of other agency and department actions. Providing training, resources, and tools to EPA staff on the Agency's Action Development process, Economic Analysis Guidelines, and related requirements (e.g., OMB Circular A-4 on Regulatory Analysis). EPA will review and revise its economic guidelines so that they remain current with advancements and reflect best practices in the profession.⁷⁰
- Participating in the development of the Agency actions, implementing policy priorities in rulemakings, characterizing the impacts of Agency actions, filling critical gaps in the Agency's capability to quantify the environmental improvements and economic impacts of the Agency's regulatory programs, and providing technical assistance when needed to help meet Agency goals.

⁷⁰ Please refer to: <http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/Guidelines.html>

- Improving the information available to the public about EPA’s regulatory, policy and guidance activities to foster collaboration, encourage innovation, and increase openness and transparency.
- Chairing Small Business Advocacy Panels and leading implementation of the Regulatory Flexibility Act.
- 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 integration of ecological and economic models to value improvements in ecological functions and services, establishing improved measures of the economic benefits of reducing health risks to children, and improvements in surveys and other data collection tools used to gather information on economic costs and benefits from environmental programs.
- Supporting the Pollution Abatement Costs and Expenditures (PACE) survey, the most comprehensive national source of pollution abatement costs and expenditures related to environmental protection reported by the manufacturing sector in the United States. The PACE survey collects facility-level data on pollution abatement capital expenditures and operating costs associated with compliance with local, state, and Federal regulations, as well as voluntary or market-driven pollution abatement activities for air, water, and waste programs.

This information will support efforts to measure the economic costs of regulatory programs on the manufacturing sector. The data also gives EPA additional means to monitor the adoption of new environmental technologies, and supports research aimed at analyzing the impact of environmental regulations on important economic outcomes related to job growth, international competitiveness, investment demand, opening and closing of manufacturing facilities, and productivity growth. EPA plans also include making ready to expand the survey to be prepared to collect data on the costs of forthcoming GHG emission controls and process changes undertaken either under voluntary programs, or to meet new regulatory requirements. EPA will lead efforts to design and perform research studies using the survey data, and supports a website with information on the survey and research generated using the data: <http://yosemite.epa.gov/ee/epa/eed.nsf/pages/pace2005.html>

- Facilitating communication between the scientific community and Agency policy analysts by supporting workshops on priority economic and environmental policy issues. Examples include analytic tools to measure environmental justice impacts, measuring the economic benefits of ecological services, measuring human health benefits with a focus on risks to children, evaluating market mechanisms and incentives, developing improved risk assessment methods to serve economic analyses, and methods to address uncertainties in risk and economic analyses⁷¹. Support the utilization of high quality

⁷¹ For more information on these workshops, please refer to: <http://yosemite.epa.gov/ee/epa/eed.nsf/webpages/WorkshopSeries.html>

outside technical peer review of influential economic models and methods used in Agency regulations.

- Improving the focus on water protection activities by enhancing EPA's capacity to analyze and estimate the benefit of water protection activities. This includes the Chesapeake Bay and urban waters.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$356.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$21.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$298.0 / -2.0 FTE) This change includes -2.0 FTE and -\$298.0 in associated payroll, and reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities by streamlining administrative management.
- (+\$1,100.0) Additional resources for enhanced regulatory support across the Agency for the development of 1) science-based methods to assess disproportionate health impacts; 2) advances in the measurement of the beneficial effects of reducing pollutants, including supporting analysis and development of methods to improve the utility of cancer and non-cancer risk assessment consistent with recommendations from the National Academy of Sciences; and 3) supporting research to explore application of the comparative risk assessment framework and tools to conduct disproportionate impact analysis.
- (+\$2,099.0) These resources will increase the National Center for Environmental Economics (NCEE) capabilities for: providing original analyses and expanding technical assistance support for economic benefit-cost and risk analyses pertaining to EPA regulations; developing better information on the economic implications of environmental regulations and policies on the competitiveness of domestic industries, including consideration of trade, employment and productivity effects; increasing efforts to integrate economic and natural science models to support economic benefits analyses; and increasing participation in the development and modification of Agency science policy in response to advances in risk assessment methods and recommendations from expert institutions such as the National Academy of Science.

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.

Science Advisory Board

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$5,052.1	\$6,278.0	\$5,902.0	(\$376.0)
Total Budget Authority / Obligations	\$5,052.1	\$6,278.0	\$5,902.0	(\$376.0)
Total Workyears	25.2	25.2	28.6	3.4

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 highly visible and important 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.⁷²

FY 2011 Activities and Performance Plan:

In FY 2011, 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; (2) assessments of Integrated Risk Information System (IRIS) chemicals; (3) ambient water quality criteria; (4) homeland security and risk management technologies; (5) economic benefit methods and analyses; and (4) EPA's research and science programs. The SAB plans to produce 20 advisory reports on these areas. In FY 2011, NAAQS reviews will continue at an increased pace as the Agency updates standards on the five year cycle outlined in the statute. (In FY 2011, the funding for the SAB will be \$5.9 million and 28.6 FTE.)

⁷² 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$399.0) 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.
- (-\$102.0) This decrease in travel costs reflects our effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$387.0) This reflects a reduction in additional resources provided in FY 2010 for accelerated review of Integrated Risk Information System (IRIS) chemicals.
- (+\$512.0/ +3.4 FTE) This change includes 3.4 FTE and \$512.0 in associated payroll, to support EPA's plans to have the Science Advisory Board review the National Ambient Air Quality Standards for the six criteria pollutants on a five year cycle.

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

Facilities Infrastructure and Operations
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$302,944.6</i>	<i>\$315,238.0</i>	<i>\$329,831.0</i>	<i>\$14,593.0</i>
Science & Technology	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Building and Facilities	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
Leaking Underground Storage Tanks	\$895.5	\$904.0	\$916.0	\$12.0
Oil Spill Response	\$576.1	\$505.0	\$534.0	\$29.0
Hazardous Substance Superfund	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
Total Budget Authority / Obligations	\$481,429.3	\$496,978.0	\$510,344.0	\$13,366.0
Total Workyears	390.2	411.1	415.1	4.0

Program Project Description:

Environmental Program Management (EPM) resources in the Facilities Infrastructure and Operations program are used to fund rent, utilities, security, and energy conservation/sustainable facilities programs. EPM resources are also used to manage activities and support services in many centralized administrative areas within 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 2011 Activities and Performance Plan:

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. 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. As a result of this effort, in FY 2011, EPA anticipates rent savings of \$5 million to a target of \$7.5 million, which will help avoid a portion of the projected rent increases. In alignment with one of the President's SAVE Award proposals, EPA will consolidate its facility in Lakewood, Colorado, and release the separate detached building housing the National Enforcement Training Institute. (For FY 2011, the Agency is requesting a

total of \$169.92 million for rent, \$13.41 million utilities, \$30.90 million for security, \$11.93 million for transit subsidy, and \$6.67 million for Regional moves in the EPM appropriation.)

In FY 2011, 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) 13423⁷³, *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 building standards. In FY 2011, the Agency plans to reduce energy utilization (or improve energy efficiency) by approximately 37 billion British Thermal Units or three percent. EPA should end FY 2011 using approximately 20% less energy than it did in FY 2003. EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, expands upon EO 13423 and requires additional reductions to green house gas emissions.

EPA will continue to 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 EO 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percentage reduction in energy consumption.	12	18	15	18	Percent

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$2,215.0) This reflects an increase for payroll and cost of living for existing FTE.

⁷³ Information is available at <http://www.fedcenter.gov/programs/eo13514/>, *Federal Leadership in Environmental, Energy, and Economic Performance*; and <http://www.fedcenter.gov/programs/eo13423/>, *Strengthening Federal Environmental, Energy, and Transportation Management*

- (+\$12,875.0) This change reflects a net effect of the projected contractual rent increase and EPM's rent reduction realized from the space consolidation effort, as well as a rebalancing of cost methodologies between the EPM, S&T, and SF appropriations. The space consolidation effort provides cost avoidances that help to avoid a portion of the projected rent increases.
- (-\$105.0) This change reflects a decrease in utility costs.
- (+\$2,904.0) This change reflects an increase in security costs.
- (+\$303.0) This reflects an increase in transit subsidy costs.
- (-\$3,790.0) This reduction reflects a decrease in the Regional Moves resources as a result of the completion of the Puerto Rico and Region 10 moves.
- (-\$416.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$112.0) This reflects a net change in contracts, grants, and general expenses.
- (+\$200.0) This reflects an increase in operations and maintenance costs at EPA owned Regional laboratories.
- (+\$32.0) This reflects an increase in general expenses for Regional facility operations support.
- (+\$122.0/ +1.0 FTE) This change reflects realignment to the Facilities Infrastructure and Operations program from the Acquisition Management program to consolidate property management services into a single function under the Office of Administration, which manages the Agency's facilities. This includes 1.0 FTE, and \$122.0 in associated payroll.
- (+\$165.0/ +1.0 FTE) This reflects an increase to support administrative oversight, and includes 1.0 FTE, and \$165.0 in associated payroll.

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).

Central Planning, Budgeting, and Finance
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$89,875.3	\$82,834.0	\$86,039.0	\$3,205.0
Leaking Underground Storage Tanks	\$1,109.6	\$1,115.0	\$1,050.0	(\$65.0)
Hazardous Substance Superfund	\$24,154.9	\$27,490.0	\$26,934.0	(\$556.0)
Total Budget Authority / Obligations	\$115,139.8	\$111,439.0	\$114,023.0	\$2,584.0
Total Workyears	530.2	547.7	547.1	-0.6

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 2011 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.

FY 2011 is a critical year in the Agency's efforts to develop and modernize the Agency's financial systems. The aggressive schedule includes final testing, data migration, and other vital implementation steps. 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.

In FY 2011, 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. EPA 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,365.0) This reflects an increase of payroll and cost of living for existing FTE.
- (+\$1,880.0) This change reflects an increase in contract resources required for the Agency's Financial System Modernization Project (FSMP) to stay on course with an aggressive production schedule including system configuration, testing, and preparing user community for system deployment.
- (-\$119.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$87.0) This change reflects a slight increase in general expenses.
- (-\$8.0) This change reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (+0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources to enhancement of financial management in the regions.

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.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$31,332.7</i>	<i>\$32,404.0</i>	<i>\$33,934.0</i>	<i>\$1,530.0</i>
Leaking Underground Storage Tanks	\$139.8	\$165.0	\$165.0	\$0.0
Hazardous Substance Superfund	\$23,521.1	\$24,684.0	\$24,337.0	(\$347.0)
Total Budget Authority / Obligations	\$54,993.6	\$57,253.0	\$58,436.0	\$1,183.0
Total Workyears	339.7	362.9	363.0	0.1

Program Project Description:

Environmental Programs & Management (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 supports sound management of 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 2011 Activities and Performance Plan:

In FY 2011, 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; the Agency will be better able to meet internal and external reporting demands; and the system will integrate with the Agency's financial and government-wide shared services systems.

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 also will continue to implement new training requirements associated with the IAE, and the new acquisition system.

In FY 2011, resources are being added to EPA's budget for additional acquisition management support. The funds shall be available only to supplement, and not to supplant existing acquisition workforce activities. Such funds shall be available for training, recruitment, retention, and hiring additional members of the acquisition workforce as defined by the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 401 et seq.). These funds shall also be available for information technology in support of acquisition workforce effectiveness or for management solutions to improve acquisition management.

In FY 2011, 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 and enhance contract oversight.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,331.0) This change reflects an increase for payroll and cost of living for existing FTE.
- (-\$18.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$113.0) This increase reflects a realignment of Agency IT and telecommunications resources.
- (-\$1,050) This change reflects a reduction of additional funding provided in FY 2010 for deployment of the new acquisition system.
- (-\$120.0/ -1.0 FTE) This change reflects realignment from the Acquisition Management program to the Facilities Infrastructure and Operations program to consolidate property management services into a single function under the Office of Administration, which manages the Agency's facilities. This includes -\$120.0 in associated payroll.
- (+\$1,500.0/ +2.0 FTE) This reflects an increase to supplement existing acquisition workforce activities for training, recruitment, retention, and hiring additional acquisition

staff in an effort to enhance acquisition workforce effectiveness. This includes 2.0 FTE, and \$280.0 in associated payroll.

Statutory Authority:

EPA's Environmental Statutes; annual Appropriations Acts; FAR.

Financial Assistance Grants / IAG 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$26,422.9	\$25,487.0	\$26,466.0	\$979.0
Hazardous Substance Superfund	\$2,932.5	\$2,945.0	\$3,318.0	\$373.0
Total Budget Authority / Obligations	\$29,355.4	\$28,432.0	\$29,784.0	\$1,352.0
Total Workyears	184.6	177.5	178.4	0.9

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 2011 Activities and Performance Plan:

In FY 2011, EPA will achieve key objectives under its long-term Grants Management Plan. These objectives include strengthening accountability, ensuring competition, achieving positive and measurable environmental outcomes, and aggressively implementing new and revised policies on at-risk grantees.⁷⁴ The Grants Management Plan provides 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. Oversight activities will include a

⁷⁴ US EPA, *EPA Grants Management Plan*. EPA-216-K-08-001, October 2008, <http://www.epa.gov/ogd/EO/finalreport.pdf>.

substantial program of post award monitoring with a focus on to ensuring that EPA's Recovery Act grant dollars are spent efficiently and effectively. EPA also will continue to 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 will continue 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 Project.

FY 2011 Change from the FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,089.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$59.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$3.0) This decrease reflects a realignment of Agency IT and telecommunications resources.
- (-\$48.0) This change reflects a decrease in contract resources supporting this program.

Statutory Authority:

EPA's Environmental Statutes; Annual Appropriations Acts; FGCAA; Section 40 CFR Parts 30, 31, 35, 40, 45, 46, and 47; American Recovery and Reinvestment Act of 2009.

Human Resources 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$43,373.2	\$42,447.0	\$44,842.0	\$2,395.0
Leaking Underground Storage Tanks	\$3.0	\$0.0	\$0.0	\$0.0
Hazardous Substance Superfund	\$5,475.1	\$5,580.0	\$7,081.0	\$1,501.0
Total Budget Authority / Obligations	\$48,851.3	\$48,027.0	\$51,923.0	\$3,896.0
Total Workyears	301.8	303.1	303.1	0.0

Program Project Description:

Environmental Programs & Management (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 2011 Activities and Performance Plan:

In FY 2011, 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*⁷⁵, 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 2011, the Agency will continue its efforts to implement a Workforce Planning System by:

- Closing competency gaps for Toxicology, Information Technology, Human Resources, Grant and Contract Specialist positions, as well as leadership positions throughout the Agency and across multiple goals;
- Shortening the hiring timeframes for the senior executives and non-SES positions through improved automation and enhancements to application process; and
- Implementing innovative recruitment and hiring flexibilities that address personnel shortages in mission-critical occupations.

⁷⁵ 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 recently established Shared Service Centers. These Shared Service Centers process personnel and benefits actions for EPA's 17 thousand 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 FY 2011, EPA will continue to support the transition to a new 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Percent of GS employees hired within 80 calendar days.				60	Percent

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$3,524.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$125.0) This reflects a decrease for workers compensation unemployment cost.
- (-\$199.0) This change decreases contract resources for human resources management transactional work resulting from efficiencies created from the Human Resources Shared Service Centers.
- (+\$105.0) This change increases resources for EPA's Sign Language program.
- (-\$901.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$9.0) This reflects a decrease in Agency IT and telecommunications resources.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$60,952.3	\$62,944.0	\$64,666.0	\$1,722.0
Science & Technology	\$3,159.3	\$3,750.0	\$3,806.0	\$56.0
Total Budget Authority / Obligations	\$64,111.6	\$66,694.0	\$68,472.0	\$1,778.0
Total Workyears	481.2	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.”⁷⁶

EPA’s Pesticides program screens new pesticides before they reach the market and ensures that pesticides already in commerce are safe when used in accordance with the label. 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 comply with statutory mandates, EPA must conduct risk assessments using the latest scientific methods to determine the risks that pesticides pose to human health, as well as plants, animals, and ecosystems which are not the targets of the pesticide. The risk assessments are peer reviewed and regulatory decisions are posted for review and comment to ensure that these actions are transparent and that stakeholders, including at risk populations, are engaged in decisions affecting their health and environment.⁷⁷ As part of the regulatory process, the Agency must establish tolerances for the maximum allowable pesticide residues on food and feed. In setting these food tolerances, EPA must balance the risks and benefits of using the pesticide, consider cumulative and aggregate risks, and ensure the protection of vulnerable, at risk populations including children and tribes.

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

⁷⁶ 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 <http://www.epa.gov/opp00001/regulating/laws.htm>

⁷⁷ The public can see what dockets are currently opened and provide comments at <http://www.epa.gov/pesticides/>.

compatibility with Integrated Pest Management (IPM).⁷⁸ Several countries and international organizations also 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. For example, millions of agricultural workers are exposed to pesticides in occupations such as lawn care, 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 2011 Activities and Performance Plan:

During FY 2011, 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 timeframes. EPA will process these registration requests with special consideration given to susceptible populations, especially children. Specifically, EPA will focus 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.⁷⁹ 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 2011, 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.⁸⁰ 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.

⁷⁸ See U.S. Environmental Protection Agency, Pesticides: Health and Safety, Reducing Pesticide Risk internet site: <http://www.epa.gov/pesticides/health/reducing.htm>.

⁷⁹ See U.S. Environmental Protection Agency, Pesticides: Topical & Chemical Fact Sheets, Pesticide Registration Program internet site: <http://www.epa.gov/pesticides/factsheets/registration.htm>.

⁸⁰ See U.S. Environmental Protection Agency, Pesticide Tolerance Reassessment and Reregistration internet site: www.epa.gov/pesticides/reregistration.

Reregistration Eligibility Decisions (REDs) issued under reregistration 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.

EPA 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 2011, the Agency, in collaboration with the United States Department of Agriculture (USDA), 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Reduced cost per pesticide occupational incident avoided.	6	Data Avail 10/2010	8	10	Cum. Reduction

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate.	30	Data Avail 10/2010	No Target Established	50	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent reduction in concentrations of pesticides detected in general population.	No Target Established	Biennial	50	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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	Data Avail 10/2010	No Target Established	<= 3.5/100,000	Incidents

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of decisions completed on time (on or before PRIA or negotiated due date).			99	99	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent reduction of children's exposure to rodenticides.				10	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of agricultural acres treated with reduced-risk pesticides.	20	Data Avail 10/2010	21	21.5	Percent

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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,431.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$46.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$106.0) This decrease in travel costs reflects efforts to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$500.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a web or video conference format. In order to be successful, strategic investments in video/web conferencing capabilities are necessary. Funds will support the creation of multi-use conference rooms in selected locations, as well as the needed internet capacity.
- (-\$57.0) This decrease reflects a redirection of resources to the Human Health and Ecosystems program which funds ECOTOX Program, a database for locating single chemical toxicity data for aquatic life, terrestrial plants, and wildlife.

Statutory Authority:

Pesticide Registration Improvement Renewal Act; Endangered Species Act; Federal Insecticide, Fungicide and Rodenticide Act; Toxic Substances Control Act; Food Quality Protection Act; Federal Food, Drug, and Cosmetic Act.

Pesticides: Protect the Environment from Pesticide Risk

Program Area: Pesticides Licensing

Goal: Healthy Communities and Ecosystems

Objective(s): Chemical and Pesticide Risks; Communities

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$42,531.0</i>	<i>\$42,203.0</i>	<i>\$43,031.0</i>	<i>\$828.0</i>
Science & Technology	\$2,121.9	\$2,279.0	\$2,312.0	\$33.0
Total Budget Authority / Obligations	\$44,652.9	\$44,482.0	\$45,343.0	\$861.0
Total Workyears	333.2	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.”⁸¹

In complying with FIFRA, EPA must conduct risk assessments using the latest scientific methods to determine the risks that pesticides pose to human health, and ecological effects on plants, animals, and ecosystems which are not the targets of the pesticide. The Agency’s regulatory decisions are posted for review and comment to ensure that these actions are transparent and that stakeholders, including at risk populations, are engaged in decisions which affect their environment. In addition to FIFRA responsibilities, the Agency has responsibilities under the Endangered Species Act (ESA).⁸² Under FIFRA, EPA must determine that a pesticide will not cause unreasonable adverse effects on the environment. For food uses of pesticides, this standard requires EPA to determine that food residues of the pesticide are “safe.” For other risk concerns, EPA must balance the risks of the pesticides with benefits provided from the use 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.⁸³

⁸¹ 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 <http://www.epa.gov/opp00001/regulating/laws.htm>

⁸² The Endangered Species Act of 1973 sections 7(a)1 and 7 (a)2; Federal Agency Actions and Consultation ns, 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/ESA35/ESA35DaleQA.html>

⁸³ 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 <http://www.epa.gov/opp00001/regulating/laws.htm>

Under ESA, EPA must ensure that pesticide regulatory decisions will not destroy or adversely modify critical habitat or result in likely jeopardy to 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. Where risks occur, EPA must work with FWS and NMFS in a consultation process to ensure these pesticide registrations will meet the ESA standard.

EPA has instituted processes and begun to consider endangered species issues routinely in EPA reviews. As a result of a lawsuit filed against FWS and NMFS, the United States District Court for the Western District of Washington overturned the most critical aspects of a regulation that would have provided EPA authority to make certain determinations where risks were minimal, without further consultation with FWS and NMFS.⁸⁴ In the immediate future EPA will continue to comply with ESA by engaging in consultation with the FWS and NMFS when required, including for those situations where risks are minimal. EPA has made assessing potential risks to endangered species a priority and continues to work with the Services to find efficiencies that will allow us to meet our ESA obligations.

FY 2011 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 chlorpyrifos, and consider whether any additional action is necessary.⁸⁵ In FY 2011 the Agency will continue to work with USGS to develop sampling plans and refine program goals.

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. 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. 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

⁸⁴ *Wash. Toxics Coalition, v. U.S. Dept. of Interior*, 457 F. Supp.2d 1158 (W.D. Wash. 2006).

⁸⁵ 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/>.

Registration program in ensuring lower risk and the availability of effective 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.

Another program focus in FY 2011 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 2011, 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!*⁸⁶ 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 2011, 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Average cost and average time to produce or update an	\$2,916, 73 hrs.	N/A *	\$2,625, 66 hrs.	\$2,364, 60 hrs.	Cost, Hours

⁸⁶ <http://www.epa.gov/espp/bulletins.htm>

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	Endangered Species Bulletin.					

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of agricultural watersheds that do not exceed EPA aquatic life benchmarks for two key pesticides of concern (azinphos-methyl and chlorpyrifos).			0, 10	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of urban watersheds that do not exceed EPA aquatic life benchmarks for three key pesticides of concern (diazinon, chlorpyrifos and malathion)	No Target Established	Biennial	5, 0, 20	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of pesticide registration review dockets opened.			70	71	Dockets

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of pesticide registration review final work plans completed.			70	70	Work Plans

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of Product Reregistration Decisions	2,000	1,770	1,500	1,500	Decisions

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 2011, EPA is continuing to implement the Pesticide Registration Improvement Act (PRIA) and the Pesticide Registration Improvement Renewal Act (PRIRA) 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 PRIRA 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 biennial early sampling in eight urban watersheds and sampling every four years in a second set of nine urban watersheds; and yearly monitoring in eight agricultural watersheds and biennial sampling in three 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.

EPA is actively committed to producing and updating Endangered Species Bulletin in a timely and cost effective manner. However in 2009, no Bulletins were issued due to ongoing litigation.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$924.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$45.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$51.0) This decrease reflects a redirection of resources to the Human Health and Ecosystems program which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife.

Statutory Authority:

Pesticide Registration Improvement Renewal Act; Endangered Species Act; Federal Insecticide, Fungicide and Rodenticide Act; Toxic Substances Control Act; Food Quality Protection Act; Federal Food, Drug, and Cosmetic Act

Pesticides: Realize the Value of Pesticide Availability

Program Area: Pesticides Licensing

Goal: Healthy Communities and Ecosystems

Objective(s): Chemical and Pesticide Risks; Communities

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$12,772.7</i>	<i>\$13,145.0</i>	<i>\$14,156.0</i>	<i>\$1,011.0</i>
Science & Technology	\$442.8	\$537.0	\$546.0	\$9.0
Total Budget Authority / Obligations	\$13,215.5	\$13,682.0	\$14,702.0	\$1,020.0
Total Workyears	89.4	89.7	93.2	3.5

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.”⁸⁷

Through ongoing education and research in environmentally sound pest remediation methods, the Realize the Value of Pesticides program ensures that effective and safe pesticides are available for regular use and in emergency situations. Examples of actions that lead to societal benefits are exemptions granted under FIFRA Section 18. For example, in the event of an emergency such as 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. For example, an estimated \$1.8 billion in termite damage is avoided each year through the availability of effective termiticides.⁸⁸ 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 in accordance with the latest science. Section 3 of FIFRA also authorizes EPA to register 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

⁸⁷ 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 <http://www.epa.gov/opp00001/regulating/laws.htm>

⁸⁸ U.S. Census Bureau data (www.census.gov/compendia/statab/files/house.html); University of Georgia Entomology Dept. (<http://www.ent.uga.edu/pubs.htm>); National Pest Management Association (<http://www.pestworld.org/Database/Article.asp?ArticleID=34&UserType>).

broader access to products. These price declines generate competition that provides benefits to farmers and consumers.

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.⁸⁹ 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.⁹⁰ This "Monroe Model" serves as an example of how to implement IPM in school districts across the country.

FY 2011 Activities and Performance Plan:

EPA's statutory and regulatory functions for the pesticides program include registration, product reregistration, registration review implementation, risk reduction implementation, rulemaking and program management. During FY 2011, 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 (PRIRA) 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 provides exemptions to growers for use of pesticides that are not registered for their crops during emergency situations. 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.

EPA will continue to conduct pre-market evaluations of efficacy data for public health claims and ensure that the products will work for their intended purposes. Through the Antimicrobial

⁸⁹ 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, referred.

⁹⁰ <http://www.epa.gov/pesticides/ipm/>

Testing Program, the Agency will continue to conduct post-market surveillance to monitor the efficacy of hospital disinfectants.

EPA will strengthen, in support of the Promoting Healthy Communities initiative, efforts crucial to reducing the risks children face from pesticide use in the school environment through additional contracts, grants, and partnerships. Additional focus will be directed toward easily implemented IPM strategies to reduce sources of food, water, and shelter for pests in school buildings and on school grounds.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Reduced cost per acres using reduced risk management practices compared to the grant and/or contract funds on environmental stewardship.	4%, (\$2.52)	4 (\$2.52)	6% (\$2.47)	10% (\$2.37)	Reduc. (\$/acre)

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations.	\$1.5 B	\$1.5 B	\$1.5 B	\$1.5 B	Loss Avoided

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Millions of dollars in termite structural damage avoided annually by ensuring safe and effective pesticides are registered/re-registered and available for termite treatment.	\$900 M	\$900 M	\$900 M	\$900 M	Dollars

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Maintain timeliness of Section 18 Emergency Exemption Decisions	45	40	45	45	Days

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$324.0) This reflects an increase for payroll and cost of living for all FTE.
- (-\$24.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and teleconferencing.
- (+\$283.0) This increase for Integrated Pest Management in schools through additional contract, grants, and partnerships in support of the Promoting Healthy Communities initiative.
- (+\$441.0 / +3.5 FTE) This increase includes payroll resources for three new Regional FTEs and .5 additional HQ FTE. This also reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. Additional resources will support Integrated Pest Management in schools as part of the Promoting Healthy Communities initiative.
- (-\$13.0) This decrease reflects a redirection of resources to the Human Health and Ecosystems program which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife.

Statutory Authority:

Pesticide Registration Improvement Renewal Act; Endangered Species Act; Federal Insecticide, Fungicide and Rodenticide Act; Toxic Substances Control Act; Food Quality Protection Act; Federal Food, Drug, and Cosmetic Act.

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

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$2,084.4	\$1,840.0	\$1,850.0	\$10.0
Total Budget Authority / Obligations	\$2,084.4	\$1,840.0	\$1,850.0	\$10.0
Total Workyears	8.9	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 information sharing 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. Such international activity is coordinated with the Department of State. In addition, independent science review is provided by the Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel (FIFRA SAP), a scientific peer-review mechanism.

FY 2011 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 also will, 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 plants crop that have completed review for use in the United States.⁹¹

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

⁹¹ <http://usbiotechreg.nbio.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.

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. Notice of the FIFRA SAP meetings are published in the Federal Register. In FY 2011, topics may include issues related to biotechnology, chemical-specific risk assessments, nanotechnology, and endocrine disruptors, among others.

Performance Targets:

Currently there are no performance measures specific to this Program Project. 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 SAP meetings and letter reviews.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$30.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$20.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

Federal Insecticide, Fungicide and Rodenticide Act; Toxic Substances Control Act; Food Quality Protection Act; Federal Food, Drug, and Cosmetic Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$67,198.4	\$68,842.0	\$67,911.0	(\$931.0)
Total Budget Authority / Obligations	\$67,198.4	\$68,842.0	\$67,911.0	(\$931.0)
Total Workyears	392.6	397.0	382.4	-14.6

Program Project Description:

The Waste Management program’s primary focus is to provide national policy direction concerning the Resource Conservation and Recovery Act (RCRA) in order to reduce the amount of waste generated; 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 ensure 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, such as new waste streams from new industrial processes, and learning from technological advances in the waste management arena. There is a continued focus on safe disposal practices, the conservation of resources, and 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, local governments 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.⁹²

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to assist states in putting in place permits, permit renewals, or other approved controls at facilities that treat, store, or dispose of hazardous waste. 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

⁹² Refer to <http://www.epa.gov/rcc/>.

is responsible for the continued maintenance of the regulatory controls at about 10,000 process units (such as incinerators, landfills and storage tanks) at facilities in the permitting baseline.⁹³

The Agency will continue its high priority work on encouraging proper management of coal combustion residuals. EPA will propose regulations for coal combustion residuals aimed at increasing protection of human health and the environment. EPA will continue to work with interested parties to promote use of the voluntary “Guide for Industrial Waste Management,”⁹⁴ which provides facility managers, state and Tribal regulators, and the public with recommendations and tools to better address the management of land-disposed non-hazardous industrial waste.

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 and reclamation facilities operating under the definition of solid waste exclusion provide proof of their ability to pay for the cleanup, closure, and post-closure care of their facilities.

The Agency will continue to develop a proposed rule that will address solvent-contaminated industrial wipes under Subtitle C of RCRA. In FY 2011, based on the risk analysis and review of public comments, the Agency will 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 2011 to ensure safe combustion of both hazardous and solid waste. 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 2011 will be the continuation of efforts to make the hazardous waste program more cost-effective and easy-to-use for the more than 100 thousand generators of hazardous waste. EPA will prepare and issue guidance materials on issues raised by the regulated community and by those living near solid and hazardous waste facilities. If determined necessary, EPA will propose regulatory changes to improve the program.

During FY 2011, 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 maintain information on technologies and tools for use in decontamination/disposal operations related to terrorist events, natural disasters, or other disease outbreaks.

In FY 2011, the Agency will continue to issue Polychlorinated Biphenyl (PCB) disposal approvals and implement the PCB cleanup program. EPA will work with the U.S. Navy to

⁹³ The permitting baseline universe currently has 2,446 facilities with approximately 10,000 process unit groups.

⁹⁴ <http://www.epa.gov/epawaste/nonhaz/industrial/guide/index.htm>

address the reefing of ships and will work with the U.S. Maritime Administration (MARAD) as it safely dismantles its fleet of obsolete ships which contain equipment using PCBs, asbestos, and other materials. In addition, the Agency will work with the Department of Defense to oversee the disposal of PCBs in nerve agent rockets.

The Agency also will increase its support of PCB remediation activities in the Regional offices, in conjunction with EPA's cross-program initiative for Healthy Communities. These resources will promote safe handling and management of PCB-containing caulk in schools and build necessary regional technical support and outreach to effectively implement site-specific cleanup and disposal plans.

Also, with new funding provided for the Healthy Communities initiative, EPA will continue to work with its Regional, state and Tribal partners to promote waste reduction and reuse and enhance recycling efforts in communities by emphasizing lifecycle-based materials management approaches. The Agency will investigate product stewardship approaches which may enable sustainable mechanisms for municipal collection and recycling programs. Efforts will also include building upon EPA's efforts working with Feed People – Not Landfills (<http://www.epa.gov/waste/consERVE/materials/organics/food/fd-donate.htm>) which encourages donation of excess food to community food banks instead of landfilling and also promoting the composting of waste-food which can be used to sustain community gardens, particularly in urban areas. In addition, there are existing activities and an ever-growing interest in green construction (e.g. state and local government, industry, Federal Agencies-especially Department of Defense). A materials management approach to construction/deconstruction recycling also can have a direct benefit to communities by providing lower-cost building materials, reducing inner city blight, and increasing resource conservation. The Agency has developed several short and long term goals and will work towards implementing this Construction/Deconstruction pilot in 2011.

Providing grant funds, training, and technical assistance to tribes and Tribal organizations for the purpose of addressing solid and hazardous waste problems and reducing the risk of exposure to improper disposal of solid and hazardous waste also is a priority in FY 2011. While many of the 572 federally recognized tribes have waste management plans, 63 of those have met EPA's internal criteria for having an integrated waste management plan as of FY 2008. During FY 2011, EPA will increase the number of tribes covered by an integrated waste management plan by 22. 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 2011, the focus of the program will be on developing training and technical assistance tools for tribes to develop sustainable waste management programs to meet these goals.

In FY 2011, EPA plans to scale back headquarters resources for voluntary programs including WasteWise, Green Highways, and Pay-As-You-Throw. These programs will continue to receive additional support from the RCRA Waste Minimization and Recycling program.

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 2010 target was 3.72 facilities per million dollars of program cost, and the FY 2011 target is 3.75 facilities per million dollars of program cost.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of hazardous waste facilities with new or updated controls.	100	115	100	100	Facilities

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Number of facilities with new or updated controls per million dollars of program cost.	3.68	3.75	3.72	3.75	Percent

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,310.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$139.0) This decrease in travel costs reflects an effort to reduce the Agency’s travel footprint by promoting green travel and conferencing.
- (+\$500.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a web or video conference format. In order to be successful, strategic investments in video/web conferencing capabilities are necessary. Funds will support the creation of multi-use conference rooms in selected locations, as well the needed internet capacity.
- (+\$764.0/ +2.0 FTE) This increase will support the Agency’s Healthy Communities initiative. These resources, including 2.0 FTE and associated payroll of \$278.0, will meet emerging needs for PCB cleanup and disposal of PCB-containing caulk in schools at the Regional level.
- (+\$1,000.0/ +3.0 FTE) This increase will support EPA’s Healthy Communities initiative to promote reducing, reusing, and recycling waste for sustainable communities. These resources, including 3.0 FTE and associated payroll of \$417.0, will meet emerging needs for lifecycle-based materials management approaches at the headquarters level, including expansion of work with EPA’s Feed People – Not Landfills program which encourages donation of excess food to community food banks.

- (-\$10.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$75.0) This reflects a redirection of resources to the Human Health and Ecosystems program which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants, and wildlife. Various programs have contributed to this database in the past.
- (-\$4,281.0/ -19.6 FTE) This change, including 19.6 FTE and associated payroll of \$2,653.0, reflects a decrease in resources available to support several existing efforts aimed at promoting the reduction, reuse, and recycling of municipal solid waste and industrial materials at the headquarters level.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$38,451.0</i>	<i>\$40,029.0</i>	<i>\$40,003.0</i>	<i>(\$26.0)</i>
Total Budget Authority / Obligations	\$38,451.0	\$40,029.0	\$40,003.0	(\$26.0)
Total Workyears	236.9	246.9	244.9	-2.0

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 states⁹⁵ are the primary implementers of the Corrective Action program, EPA is the lead regulator at a significant number of facilities undergoing corrective actions across the country, in addition to directly implementing the program in the states of Iowa and Alaska. 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.⁹⁶

FY 2011 Activities and Performance Plan:

In FY 2011, the Agency will continue to work in partnership with the states to coordinate cleanup program goals and direction. 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 that will ensure protective controls are in place if the use changes in the future.

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.

⁹⁵ This includes both those states authorized for corrective action and those not authorized for corrective action but contribute through work sharing agreements with their EPA Regional Offices.

⁹⁶ For more information please refer to <http://www.epa.gov/correctiveaction/>.

In addition, EPA will ensure that polychlorinated biphenyl (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.

In FY 2011, EPA will continue to work toward the calendar year 2020 goal 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 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 2011, the Agency will be working with states to continue developing and implementing program improvements in order to meet the ambitious 2020 goal.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Percent increase of final remedy components constructed at RCRA corrective action facilities per federal, state, and private sector dollars per year.	3	39.6	3	3	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percentage of RCRA facilities with final remedies constructed.			35	38	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percentage of RCRA facilities with human exposures to toxins under control.			69	72	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percentage of RCRA facilities with migration of contaminated groundwater under control.			61	64	Percent

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$942.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$813.0/ -2.0 FTE) This reduces regional oversight and technical assistance to states in support of the RCRA corrective action program. The reduced resources include 2.0 FTE and associated payroll of \$270.0.
- (-\$91.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$64.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$13,680.9</i>	<i>\$14,379.0</i>	<i>\$14,822.0</i>	<i>\$443.0</i>
Total Budget Authority / Obligations	\$13,680.9	\$14,379.0	\$14,822.0	\$443.0
Total Workyears	85.3	82.2	82.2	0.0

Program Project Description:

The Resource Conservation and Recovery Act (RCRA) directs EPA to promote reductions 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 has been working through its Resource Conservation Challenge (RCC) programs to build partnerships with government agencies⁹⁷, businesses, and nonprofits to encourage recycling and waste prevention, and leverage resources to improve energy conservation.⁹⁸

Materials management considers the human health and environmental impacts associated with the full life cycle of materials – from the amount of raw materials extraction, through transportation, processing, manufacturing, use, recycling, and disposal. By considering the impacts throughout the entire life cycle instead of just the resulting waste, materials management provides a platform for choosing policies, programs, and practices that carefully consider the effect on the amounts and types of materials used and the full system impacts of those choices. Recycled materials are a readily-available resource that can reduce the need for energy-intensive extraction, transportation and manufacturing processes using virgin materials. The climate benefits of waste prevention and recycling have been well established and existing technologies are available to realize these benefits.⁹⁹

Through the National Partnership for Environmental Priorities (NPEP)¹⁰⁰, which is also funded under this program, EPA promotes waste minimization activities that diminish priority chemicals as they affect 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

⁹⁷ Federal, state, local, and Tribal agencies.

⁹⁸ <http://www.epa.gov/rcc/>.

⁹⁹ EPA 2009. Opportunities to Reduce Greenhouse Gas Emissions through Materials and Land Management Practices, http://www.epa.gov/oswer/docs/ghg_land_and_materials_management.pdf

¹⁰⁰ <http://www.epa.gov/osw/partnerships/npep/>.

chemical substitutions and processes upstream and eliminate occupational exposures to the priority chemicals.

FY 2011 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 reduction of priority chemicals.

Municipal Solid Waste

EPA will continue to motivate and provide leadership to industry, government agencies, public interest groups, and citizens to reduce, reuse, and recycle municipal wastes. In calendar year 2008, the United States recycled 83 million tons of municipal solid waste (MSW), roughly one third of the country's total.¹⁰¹ As a result, the United States avoided generation of 182 million metric tons of carbon dioxide equivalent (MMTCO₂E), which is comparable to avoiding the emissions from 33 million passenger cars.¹⁰²

In FY 2011, EPA will continue to 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 ongoing WasteWise campaign, EPA will continue to provide enhanced tools to help communities reduce waste, increase recycling, and promote alliances between businesses and communities that can advance waste prevention and recycling. In FY 2011, 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 internal waste reduction activities.

EPA will promote the Benefit Evaluation Tool (BET) for participating cities to use in evaluating their individual economic and environmental savings from adopting the Pay-as-You-Throw (PAYT) program. PAYT creates a direct economic incentive for citizens to significantly reduce wastes and increase recycling. EPA will provide technical assistance to state and local elected officials from at least five large cities choosing to implement the Save Money and Reduce Trash (SMART) program as part of the American Big City (ABC) campaign.

¹⁰¹ <http://www.epa.gov/waste/nonhaz/municipal/pubs/msw2008rpt.pdf>.

¹⁰² www.epa.gov/warm - The Waste Reduction Model (WARM) calculates and totals GHG emissions of baseline and alternative waste management practices – source reduction, recycling, combustion, composting, and landfilling. The model calculates emission 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 lifecycle 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.

Green Initiatives-Electronics/Green Buildings

In FY 2011, EPA will continue to address the nation's growing electronics waste stream through partnerships with private and public entities including Plug-In To eCycling, the Federal Electronics Challenge (FEC), and Electronic Product Environmental Assessment Tool (EPEAT). Through Plug-In, EPA has established partnerships with 25 major electronic businesses. Those partners report that more than 200 million pounds of consumer electronics have been collected and reused or recycled safely. Building on current Plug-In to eCycling activities, EPA will work to highlight the importance of recycling electronics and continue 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 FY 2011, 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.¹⁰³

Under the RCC, EPA will continue to support implementation of its green building strategy and provide support to the Green Building Workgroup and Management Steering Committee, including the task groups for guiding principles, research, Federal facilities metrics, and greening existing homes and buildings. EPA also will continue working to improve its effectiveness in influencing marketplace (e.g., LEED) definitions of "green building."

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 GHG emissions. For every ton of coal fly ash that is used in place of Portland cement, nearly a ton of CO₂ emissions are avoided. The RCC Industrial Materials Recycling effort primarily focuses on three large industrial non-hazardous waste streams: (1) coal combustion products; (2) construction and demolition debris; and (3) foundry sand.

In FY 2011, the program will continue its voluntary Coal Combustion Partnership Program (C2P2) to increase the beneficial use of fly ash, for example, in concrete. The Agency will continue to implement its relationship with the U.S Department of Agriculture (USDA), the National Ready Mix Concrete Association, and other key partners of C2P2 in order to provide outreach, technical information, and assistance to increase the use of coal combustion products. 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 studies will be used to assist the public in making beneficial use decisions regarding FGD gypsum.

¹⁰³ <http://www.epa.gov/osw//conserve/materials/ecycling/r2practices.htm>.

EPA also will continue working with Federal, state, Tribal 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.

Priority and Toxic Chemicals Reduction

In FY 2011, NPEP will continue to reduce priority chemicals which are persistent, bio-accumulative, and highly toxic. As of January 2010, the NPEP program has obtained industry commitments to reduce 3 million pounds of priority chemicals through FY 2014.

In FY 2011, EPA’s School Chemicals Cleanout Campaign Program (SC3) will continue its work to minimize chemical hazards associated with poor chemical management in K-12 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 by expanding the network of industry partners and community organizations such as emergency services 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Billions of pounds of municipal solid waste reduced, reused, or recycled.	19.5	Data Avail 10/2010	20.5	21	Billion Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Increase in percentage of coal combustion ash that is used instead of disposed.	1.8	Data Avail 10/2010	1.4	1.4	Percentage Increase

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of closed, cleaned up, or upgraded open dumps in Indian Country or on other tribal lands.	27	129	22	22	Open Dumps

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of tribes covered by an	16	31	23	22	Tribes

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	integrated solid waste management plan.					

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Quantity of priority chemicals reduced from all phases of the manufacturing lifecycle through source reduction and/or recycling.	1	7.05	0.75	0.75	Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Number of pounds of priority chemicals reduced from the environment per federal government costs.	0.429	3.35	0.435	0.442	Pounds/ Dollar

In FY 2011, EPA will focus on resource conservation through efficient materials management from small businesses at the local level. In addition, the program will continue to recognize the co-benefit decreases in GHG emissions from efficient materials management. In calendar year 2008, under the RCC programs (WasteWise and C2P2), EPA and its partners estimated GHG reductions of 34.6 MMTCO₂E, equal to the annual emissions from 6.6 million cars, and savings of 270 trillion British Thermal Units (BTUs) of energy.¹⁰⁴

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. Industry costs are assumed to be neutral. EPA assumes that costs incurred by these partners are offset by cost saving from the program, resulting in a net cost neutral program. 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 was 0.435 pounds per dollar, and the FY 2011 target is 0.442 pounds per dollar.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$453.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$18.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

¹⁰⁴ Equivalent to the energy consumption of over 3 million households.

- (+\$8.0) This reflects a slight increase in general expenses and supporting the program 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. Veterans Administration (VA) and Housing and Urban Development (HUD) and Independent Agencies Appropriations Act; Public Law 105-276; 112 Stat. 2461, 2499 (1988); Pollution Prevention Act of 1990 (42 U.S.C. 13101).

Program Area: Toxics Risk Review and Prevention

Endocrine Disruptors

Program Area: Toxics Risk Review and Prevention

Goal: Healthy Communities and Ecosystems

Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$10,937.0</i>	<i>\$8,625.0</i>	<i>\$8,601.0</i>	<i>(\$24.0)</i>
Total Budget Authority / Obligations	\$10,937.0	\$8,625.0	\$8,601.0	(\$24.0)
Total Workyears	14.8	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)¹⁰⁵. The program develops and validates scientific test methods from which 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 (Tier 1) and to characterize those effects (Tier2). The program issues Tier 1 Test Orders to pesticide registrants and chemical companies, evaluates responses to Test Orders (e.g., waiver requests and submitted data), and determines the extent to which Tier 2 Test Orders will be issued based on the results of Tier 1 screening.

FY 2011 Activities and Performance Plan:

During FY 2011, the Endocrine Disruptor Screening Program (EDSP) will fulfill several milestones.

- Finalizing the validation of the Tier 2 assays;
- Prioritizing and selecting additional chemicals for Tier 1 screening;
- Issuing Tier 1 Test Orders for the selected chemicals based on publically-vetted policies and procedures;
- Evaluating results of Tier 1 screening data submitted for pesticide chemicals; and
- Determining which pesticide chemicals that have completed Tier 1 screening will require Tier 2 testing. These determinations will be based on criteria, to be published by 10/30/2010, that are developed using a process that allows for public input.

For more information, see <http://www.epa.gov/scipoly/oscpendo/>.

In FY 2011, the EDSP will work to protect communities from harm from substances in the environment which may adversely affect health through specific hormonal effects. Efforts

¹⁰⁵ <http://www.epa.gov/OGWDW/sdwa/>

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 continue reviewing data received in response to the first set of test orders issued to pesticide manufacturers. Chemicals that indicate the potential for interaction with the endocrine system in Tier 1 will undergo further testing in Tier 2.

EPA's Office of Research and Development program is developing computer models and in vitro, non-animal high throughput screening assays that can be used to rapidly prioritize chemicals for Tier 1 screening across many chemical and endocrine systems. EPA also will continue collaborations with 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 OECD projects involving development of computer-based and in vitro, non-animal prioritization methods, improvement of EDSP Tier 1 screening assays, and development and validation of Tier 2 assays. This includes a more efficient and effective extended 1-generation Tier 2 assay to replace the routine use of the mammalian two-generation assay, and multi-generation tests in fish, birds, and invertebrates, and a partial life-cycle test in frogs.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program.	1	38	1	1	Percent

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$51.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$1.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$50.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$24.0) This decrease reflects a redirection of resources to the Human Health and Ecosystems program which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife. This publically available database supports the EDSP by maintaining data published in the scientific peer-reviewed literature that is used with Tier 1 and Tier 2 data submitted to the Agency to determine if a chemical has the potential to affect the endocrine systems of wildlife.

Statutory Authority:

Pollution Prevention Act; Comprehensive Environmental Response, Compensation, and Liability Act; Resource Conservation and Recovery Act; Clean Water Act; Federal Insecticide, Fungicide and Rodenticide Act; Toxic Substances Control Act; Food Quality Protection Act; Superfund Amendments and Reauthorization Act; the Emergency Planning & Community Right-to-Know Act; Safe Drinking Water Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$48,269.9</i>	<i>\$54,886.0</i>	<i>\$55,820.0</i>	<i>\$934.0</i>
Total Budget Authority / Obligations	\$48,269.9	\$54,886.0	\$55,820.0	\$934.0
Total Workyears	247.0	246.1	246.6	0.5

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:

- Reviewing and acting on 1,500 ***Toxic Substances Control Act*** (TSCA) Section 5 notices, including Pre-Manufacture Notices (PMNs), received annually to ensure that no unreasonable risk is posed by new chemicals before they are introduced into U.S. commerce.
- Assessing thousands of existing chemicals already in commerce before TSCA took effect, and taking risk management actions as appropriate, including:
 - Obtaining and managing data to support hazard assessment and risk management actions for High Production Volume (HPV) chemicals (produced in volumes greater than one million pounds per year), and processing the 2010 TSCA Inventory Update (IUR) reports anticipated to be submitted in FY 2011 for approximately 7,000 existing chemicals produced in quantities greater than 25,000 pounds in 2010 and making IUR data publically available more quickly than in past reporting cycles;
 - Assessing the hazards and risks of High Production Volume (HPV) and other existing chemicals; and, as appropriate, taking risk management action (including the use of TSCA regulatory authority) to reduce human health and environmental risks posed by existing chemicals identified as chemicals of concern.

FY 2011 Activities and Performance Plan:

New Chemicals Program:

In FY 2011, EPA will continue preventing the entry into the U.S. market of chemicals that pose unreasonable risks to human health or the environment. Each year, the 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. The Agency recognizes that this measure does not involve systematic sampling and testing of all PMN-reviewed chemicals that have entered U.S. commerce, but believes nonetheless that it represents an efficient approach for using available information to assess and improve the effectiveness of EPA’s new chemicals risk screening tools and decision-making processes. EPA continues to explore more robust options for tracking the performance of the New Chemicals Program, and expects to propose additional GPRA measures in subsequent fiscal years.

EPA will allocate \$13.9 million to the New Chemicals Program in FY 2011.

For more information, see www.epa.gov/opptintr/newchems.

Existing Chemicals Program:

One of EPA’s primary responsibilities under TSCA is to address unreasonable risks posed by chemicals already in commerce before EPA began assessing new chemicals through the PMN program in 1979. These chemicals are employed by U.S. industries to produce widely used items, 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 the public’s everyday lives, some may adversely affect human health and the environment and may need to be regulated under TSCA to address unreasonable health and safety risks.

Building on the \$8 million investment Congress enacted in FY 2010 to enhance the existing chemicals program and initiate substantial risk management actions on identified chemicals of concern, in FY 2011 EPA will focus on:

- **Obtaining Needed Data:** EPA will continue obtaining data needed to assess the safety of HPV chemicals, including critical chemical hazard and fate data defined by the internationally recognized Screening Information Data Set (SIDS) and production and use data obtained through TSCA Inventory Update Reporting (IUR). In FY 2011, EPA will obtain needed SIDS data for additional HPV chemicals by publishing TSCA Section 4 test rules on chemicals that lack sponsors or for which sponsors failed to submit complete data, and by utilizing other mechanisms. With respect to obtaining production and use data, the Agency expects in FY 2011 to process submission of 2010 IUR data reports for approximately 6,000 to 7,000 HPV and Moderate Production Volume (MPV) chemicals (produced in volumes of greater than 25 thousand pounds per year). EPA will make these IUR data publicly available more quickly than in past reporting cycles. In early 2010, EPA expects to propose modifications to the IUR rule under TSCA Section 8 to make the reporting of chemical use information more transparent, more current, and more useful to the public.

The Agency is also considering a proposed rule under TSCA Section 4 to require companies to test several manufactured nanoscale materials for health and environmental effects. Please see “Assessing Chemicals for Hazard and Risk” and “Risk Management,” below, for additional information on EPA’s nanoscale materials efforts. Finally, EPA is initiating steps in FY 2010 that will continue in FY 2011 to improve the management of Confidential Business Information (CBI) so that the communication of chemical data to the public can be enhanced.

EPA will allocate \$11.1 million to obtain data in FY 2011.

- Assessing Chemicals for Hazards and Risks: EPA will continue using obtained and available data to assess the safety of existing chemicals, including developing screening-level hazard characterizations for HPV chemicals. EPA has developed and publicly posted hazard characterizations for 1,095 HPV chemicals through the end of FY 2009, will develop hazard characterizations for an additional 230 HPV chemicals in FY 2010 and for a proposed additional set of approximately 300 HPV chemicals in FY 2011 (as determined by numbers of chemicals contained within the categories reviewed). This includes the results of EPA’s continuing partnership with the Organization for Economic Cooperation and Development to produce hazard characterizations in the international arena and leverage similar work undertaken by other countries as a result.

In FY 2011, EPA will continue biodegradation testing including the testing of fluoropolymer and fluorotelomer products to determine whether they contain Perfluorooctanoic Acid (PFOA) and are able to release PFOA as they degrade. Please see “Risk Management,” below, for additional information on EPA’s PFOA efforts.

In FY 2011, EPA will analyze the data it has received through its Nanoscale Materials program and Test Rules 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. For more information, see <http://www.epa.gov/oppt/nano/>. Please see “Risk Management,” below, for additional information on EPA’s nanoscale materials efforts.

EPA also is assessing chemical hazards through 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 provided resources to support accelerated development of proposed AEGL values. In FY 2011, the emphasis will be on finalizing already proposed AEGL values. By the close of FY 2011, EPA expects to have published final values for at least 70 chemicals, including 10 to 20 additional final values expected to be completed in FY 2011. Work to develop proposed values should essentially be finished by the end of FY 2010. An additional 30 chemicals are under consideration for addition to the list of chemicals targeted for AEGLs development, but a decision on whether to add them has not yet been made. Any newly proposed values will

be raised to interim status within one year of being proposed. For more information, see <http://www.epa.gov/oppt/aegl>.

EPA will allocate \$11.7 million to assess chemicals in FY 2011.

- Managing Chemical Risks: EPA plans to initiate or continue risk management actions in FY 2010 and FY 2011 to reduce human health and environmental risks posed by a number of previously and newly identified priority existing chemicals using TSCA regulatory authorities and other strategies. The Agency commenced several regulatory actions in FY 2010 to address priority chemicals posing known risks, and will continue those actions in FY 2011, including:
 - Perfluorooctanoic Acid (PFOA): EPA will continue to evaluate and implement PFOA risk management actions. The Agency launched a global PFOA stewardship program in January 2006 for U.S. fluoropolymer and telomer manufacturers with eight major manufacturers of these chemicals participating. 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 third progress reports from companies participating in the PFOA stewardship program in October 2009. Continued progress towards these goals is expected in FY 2011. The Agency will receive annual updates through 2015. For more information, visit www.epa.gov/oppt/pfoa.
 - Nanoscale materials: EPA is considering rulemaking under Section 5(a)(2) of TSCA to require protective measures to limit exposure or otherwise mitigate the potential unreasonable risk presented by two carbon nanotube chemical structures.
 - Formaldehyde: EPA is considering rulemaking governing formaldehyde emissions from pressed wood products. The Agency is pursuing this course of action following review of a TSCA Section 21 citizens' petition, which requested that EPA adopt nationally a California regulation to control formaldehyde emissions from these wood products.
 - Lead wheel weights: EPA is considering rulemaking under Section 6 of TSCA to ban the use of lead weights in tires. The Agency is pursuing this course of action following the granting of a TSCA Section 21 citizens' petition, which requested that EPA prohibit the manufacture, processing, and distribution in commerce of lead wheel weights.
 - Glymes: EPA is considering rulemaking under Section 5(a)(2) of TSCA to require prior notification to the Agency of any new consumer use of monoglyme, diglyme, and ethylglyme.

EPA, through its chemical action plans, is identifying risk management actions for chemicals of concern, including potential regulatory actions for those listed under TSCA

Section 5(b)(4). EPA plans to develop approximately twelve chemical action plans per year. In addition to the action plans, EPA is also evaluating incoming Section 21 petitions and referrals from other government agencies. Criteria used to select initial chemicals for action plan development are mentioned below. As announced on September 29, 2009, prioritizing chemicals for future action plan development and risk management action is a key component of the agency's chemical risk management effort, and EPA intends to engage stakeholders and the public in this discussion.

For more information, visit

<http://www.epa.gov/oppt/existingchemicals/pubs/Existing.Chem.Fact.sheet.pdf>

Actions focusing on an initial set of four chemicals/chemical categories were identified in December 2009 - phthalates, short-chain chlorinated paraffins (SCCPs), polybrominated diphenyl ethers (PBDEs) and long-chain perfluorinated chemicals (PFCs). Chemicals are selected for risk management action based on a number of criteria, including:

- chemicals identified as persistent, bioaccumulative, and toxic;
- high production volume chemicals;
- chemicals in consumer products;
- chemicals of concern for children's health;
- chemicals subject to review and potential action by other governments;
- chemicals found in human blood in biomonitoring programs; and
- chemicals in categories generally identified as being of potential concern in the new chemicals program.

Risk management actions that may be implemented include:

- Section 6 authorities to prohibit or limit the manufacture, import, processing, use, or distribution of chemicals;
- Section 5 authorities to issue significant new use rules restricting uses of existing chemicals without submission of pre-manufacture notices;
- Section 5(b)(4) authorities to list chemicals that "may present an unreasonable risk of injury to health and the environment;"
- Referral/elevation to other EPA offices, or other Federal Agencies (e.g., TRI, OSHA, CPSC) if a rule-making or other form of risk management action is initiated because of our referral and not already undertaken; and,
- Stewardship activities including commitments from industry to adopt viable safer alternatives, safer best practices identified, voluntary withdrawal of chemicals and/or products from the market, stewardship programs to reduce emissions, and voluntary consensus standards.

EPA has and will continue to work closely with other Federal agencies working on these chemicals, such as FDA and CPSC.

EPA will allocate \$18.9 million to undertaking risk management actions in FY 2011.

For more information on EPA's efforts to assess and act on HPV and other existing chemicals, see <http://www.epa.gov/oppt/chemtest/>.

All of the work that is proposed to be accomplished in FY 2011 under the Chemical Risk Review and Reduction program may be affected by pending Congressional action on TSCA. Various proposals currently under consideration by Congress could change EPA's strategies and activities to safeguard human health and the environment against risks posed by dangerous chemicals.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Annual reduction in the production adjusted risk based score of releases and transfers of IUR chemicals from manufacturing facilities	2.4	Data Avail 10/2011	2.2	2	% RSEI Rel Risk

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Reduction in cost of managing PreManufacture Notice (PMN) submissions through the Focus meeting as a percentage of baseline year cost			61	63	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Annual number of hazard characterizations completed for HPV chemicals			230	300	Hazardous Units

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Annual number of chemicals with final values for Acute Exposure Guideline Levels (AEGL).	6	4	14	20	Chemicals

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment.	100	Data Avail 10/2010	100	100	Percent

EPA is using the measures described below as well as implementing the previously mentioned toxics program enhancements to evaluate program performance.

The cumulative and annual reductions in the production-adjusted risk-based score releases and transfers of chemicals are reported through Inventory Update Reporting (IUR). These measures look at the Risk Screening Environmental Indicators (RSEI) score for a subset of approximately 250 IUR chemicals that are reported through the Toxics Release Inventory (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 and FY 2008 performance results will be available for the FY 2010 Performance and Accountability Report.

The cumulative and annual measures tracking the number of chemicals with final values for AEGLs supports the Homeland Security program area. In FY 2011, the program continues to shift its emphasis to interim and final status AEGLs and will complete 20 final AEGL values with no proposed values left to complete. 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.

In FY 2011, EPA will track the number of HPV chemicals with completed hazard characterizations. These hazard characterizations summarize the adequacy of data received through HPV Challenge, identify remaining data needs, and present hazard data in a concise and uniform way. These hazard characterizations present EPA's perspective on data regarding ecotoxicity, acute toxicity, mutagenicity, reproductive and developmental toxicity, environmental fate, and physical/chemical properties. EPA has completed hazard

characterizations for 1,095 chemicals through 2009 and will target completion of hazard characterizations for an additional 230 chemicals in 2010 and for 300 additional chemicals in 2011.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,003.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$73.0 / +0.5 FTE) This increase includes \$73.0K in associated payroll and reflects EPA's workforce management strategy that will help the Agency better align resources. FTE are reprogrammed from the lead program to optimize IT staff utilization.
- (-\$52.0) This decrease in travel costs reflects efforts to reduce the Agency's travel footprint by promoting green travel conferencing.
- (-\$14.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$76.0) This decrease reflects a redirection of resources to the Human Health and Ecosystems program, which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife

Statutory Authority:

Toxic Substances Control Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$19,958.8</i>	<i>\$18,050.0</i>	<i>\$15,419.0</i>	<i>(\$2,631.0)</i>
Total Budget Authority / Obligations	\$19,958.8	\$18,050.0	\$15,419.0	(\$2,631.0)
Total Workyears	89.7	86.6	77.2	-9.4

Program Project Description:

The Pollution Prevention (P2) Program is one of EPA’s primary tools for promoting sustainability and encouraging environmental stewardship by the Federal and state governments, industry, communities, and individuals. The P2 Program has been producing energy efficiency and fossil fuel reduction results, along with co-benefits in chemical risk management and business cost savings, since the early 1990s. By helping businesses and entities prevent pollution, reduce greenhouse gas emissions, conserve resources, and green the design of processes, products, and technologies from a life cycle perspective, P2 approaches respond to the Administrator’s priorities for taking action on climate change through reducing greenhouse gas emissions, and reducing chemical risks. The P2 Program is augmented by a counterpart P2 grant program in the State and Tribal Assistance Grants (STAG) account.

The program accomplishes its mission through eight centers of results, including those described below, as well as through the Regional Offices and the Pollution Prevention Resource Exchange (P2Rx) program, which are described together as P2 technical assistance.

For more information, see <http://www.epa.gov/p2/>.

FY 2011 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 2011, 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, a partnership program that encourages federal facilities and agencies to purchase greener electronic products, reduce their impacts during use, and manage obsolete electronics in an environmentally safe way. EPP efforts will also continue 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, including energy savings that help to reduce greenhouse gas emissions which are

quantified¹⁰⁶ through a peer-reviewed electronics environmental benefits calculator¹⁰⁷. FY 2011 work on EPEAT will involve developing, through a consensus-based stakeholder process, new standards for additional electronic products, including televisions, imaging equipment, mobile devices and servers.

EPA will allocate \$3.0 million to this work area in FY 2011.

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 2011, the program will update the environmental component of “lean and clean” training modules used to train states and MEP centers who are delivering the Green Suppliers Network reviews. In FY 2011, the Green Suppliers Network will continue to strengthen its results algorithm to support the reporting of rigorous and defensible program results and will rely on private and social Return on Investment estimations as incentives to drive the program forward.

The program will provide support to the Economy, Energy and Environment (E3) program, an outgrowth of the Green Suppliers Network Program. E3 is a new Federal and local initiative that provides large to small manufacturers with greenhouse gas assessments; technical advice and support, with the goal of helping manufacturing plants become more energy efficient and cost-effective, improving the economy by creating and retaining jobs, and reducing carbon emissions by decreasing energy consumption. It serves as a model for collaboration among manufacturers, local government and Federal resources to address energy and sustainability challenges, provide valuable technical training and assessments, improve profitability and enable growth. E3 expands the GSN program to collaborate with the Department of Energy, the Small Business Administration and the Department of Labor, in addition to the Manufacturing Extension Partnership (MEP) Program of the Department of Commerce. The E3 activities will evolve from pilot projects conducted in Columbus, Ohio and San Antonio, Texas.

EPA will allocate \$3.3 million to this work area in FY 2011. For more information on the Green Suppliers Network, visit <http://www.greensuppliers.gov/gsn/home.gsn>. For information on the E3 activity, visit www.epa.gov/greensuppliers/e3.html.

¹⁰⁶ <http://www.epeat.net/FastBenefits.aspx>

¹⁰⁷ <http://www.federalectronicschallenge.net/resources/bencalc.htm>

Green Chemistry

The Green Chemistry Program fosters the design and marketplace acceptance of chemicals and chemical processes that reduce adverse environmental impacts as well as costs. In promoting the reduction or elimination of hazardous chemicals and the generation of waste, Green Chemistry also helps reduce workplace exposure to dangerous manufacturing and production processes and the need for end-of-pipe controls. Green Chemistry has also shown results in achieving energy savings and reducing greenhouse gases¹⁰⁸. In FY 2011, Green Chemistry will continue to administer the Presidential Green Chemistry Challenge, with its associated award ceremony, and will focus on the development of environmentally preferable substitutes for existing chemicals of concern (those currently in the marketplace and on the TSCA Inventory). In FY 2011, the program will conduct communication and outreach through information postings on the Green Chemistry website.

Green Chemistry will seek to leverage resources for the development of safer substitutes through the National Science Foundation (NSF) and EPA's Research and Development research strategies, such as influencing Federal grant solicitations for Small Business Innovation Research (SBIR) and the Science to Achieve Results (STAR) grants. Green Chemistry also will pursue the development of Cooperative Research and Development Agreements (CRADAs) with chemical producers and trade associations to target Green Chemistry research on alternatives for chemicals of concern.

EPA will allocate \$1.5 million to this work area in FY 2011. For more information, see <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 promoting the development and assessment of safer alternatives. The program provides hazard information on potential substitutes for chemicals of concern and assists companies in making product design improvements that will help reduce risks. 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. This is especially important to small businesses that do not have the broad range of scientific and technical expertise needed to conduct a hazard assessment. EPA's DfE Program helped companies reduce the use of more than 460 million pounds of chemicals of concern in 2009 alone¹⁰⁹.

In FY 2011, DfE will continue collaborating with industry and non-governmental organizations to reduce risk from chemicals. DfE's Safer Product Labeling Program differentiates products that are safer for people and the environment by permitting the use of the DfE logo only on products that meet stringent criteria and by providing chemical and toxicological information and

¹⁰⁸ <http://www.epa.gov/gcc/pubs/pgcc/technology.html#renewableResources>

¹⁰⁹ http://www.epa.gov/dfe/product_label_consumer.html#consumers

suggesting safer substitutes. The program is quickly growing and currently applies to more than 1,600 different products. A related DfE effort, the Safer Detergents Stewardship Initiative (SDSI), will provide incentives to companies to reduce their greenhouse gas emissions through the development of more concentrated detergents.

In FY 2011, DfE will grandfather or retire several partnerships that have produced significant results, such as its work with the automotive refinishing industry and its life-cycle assessment effort with the photovoltaic industries. The auto-refinishing project has provided best practices and compliance assistance training to auto-refinishing shops and career/technical schools from FY 2008 through FY 2010. By January 2011, auto-refinishing shops must be in full compliance with a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for area sources engaged in paint stripping and surface coating of motor vehicles and mobile equipment. DfE's best practices for auto-refinishing have been adopted in this regulation, including use of spray booths and prep stations with 98 percent efficiency filters, painter training, and spray technique that reduces overspray and improves overall efficiency. In addition, DfE is working with EPA's Green Building and Energy Star programs, other Federal agencies and industry to identify and promote best practices to reduce exposures to diisocyanates and other chemicals during spray application of polyurethane foam insulation, which is used to retrofit homes, schools and other buildings with the goal of reducing energy consumption.

DfE is developing a life-cycle assessment of nanomaterials in lithium-ion batteries for hybrid electric vehicles, and it is scheduled to be made final in FY 2011. The goal of this work is to identify those materials and processes within a product's lifecycle which are likely to pose the greatest impacts to public health and the environment. As nanotechnology is employed in lithium-ion battery products, this effort also will promote nanotechnology innovations in advanced batteries that will reduce overall environmental impacts, including greenhouse gas emissions¹¹⁰.

DfE is experienced in leveraging the resource needs for lifecycle assessment work. In addition, industry provides in-kind technical support and is responsible for furnishing accurate and comprehensive information and undertaking needed analysis.

EPA will allocate \$1.7 million to this work area in FY 2011. For more information, visit <http://www.epa.gov/dfe/>

Green Engineering

The Green Engineering Program (GE) will continue to provide leadership in promoting environmentally sound approaches such as life-cycle assessment, risk-based tools and advanced design techniques, and green chemistry in processes, systems and products as well as in engineering education. In FY 2011, GE will continue partnerships with industries, states and others to apply green engineering approaches to specific industrial projects. For example, GE is collaborating with other EPA offices, other Federal agencies, academia, and industry to advance the incorporation of green engineering approaches and tools in pharmaceutical processes with an aim towards reducing their environmental impact. Among other benefits, these partnerships are

¹¹⁰ http://www.epa.gov/dfe/alternative_assessments.html#

expected to help reduce pollution, save energy, and conserve water by achieving efficiencies in solvent distillation and reducing the need for incineration.

In addition to in-kind technical support, EPA Regional offices and other Federal Agencies are also requested to co-share project costs. GE also will consider the development of CRADAs particularly with industry to formalize project co-sharing. The program also partners with the Center for Sustainable Engineering (CSE), which was established via National Science Foundation (NSF) funding, to further disseminate green engineering educational materials that were developed through the GE Program. The GE Program will update the GE textbook in 2009 and 2010 for widespread notification of availability in 2011.

EPA will allocate \$0.5 million to this work area in FY 2011. 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.

EPA will allocate \$.16 million to this work area in FY 2011. For more information, visit <http://www.epa.gov/p2/pubs/psh.htm>.

Pollution Prevention 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. In FY 2011, EPA expects to award 20 to 30 grants, ranging 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 the 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 approximately \$4.9 million to this work area in FY 2011, which complements the \$4.9 million of P2 Categorical Grant resources.

Performance Targets

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Annual reductions of Design for the Environment (DfE) chemicals of concern per federal dollar invested in the DfE program	100	Data Avail 10/2010	110	120	Pounds/\$

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Gallons of water reduced by P2 program participants.	1.79 B	Data Avail 10/2010	26.2 B	24.9 B	Gallons

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Business, institutional and government costs reduced by P2 program participants.	130 M	Data Avail 10/2010	1,060 M	1,550 M	Dollars Saved

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Pounds of hazardous materials reduced by P2 program participants.	494 M	Data Avail 10/2010	1,625 M	1,880 M	Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Metric Tons of Carbon Dioxide Equivalent (MTCO _{2e}) reduced, conserved, or offset by Pollution Prevention (P2) program participants.	2 M	Data Avail 10/2010	5.9 M	11.6 M	MTCO _{2e}

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Energy savings per dollar invested in the Federal Electronics Challenge (FEC) program.	1.31 M	Data Avail 10/2010	1.89 M	2.19 M	BTUs/\$

The P2 program aggregates results from all of the programs listed above. The program strives to ensure that a transparent and consistent measurement framework is applied across the program. In September 2008, the P2 program went to the Science Advisory Board for a consultation on the issue of recurring results. Based on their feedback, each component of the P2 program will count recurring results for an appropriate and reasonable timeframe to fully realize the ongoing benefits of program intervention. Those adjustments are reflected in the FY 2011 targets.

In 2008, the most recent year for which data is available, the P2 program reduced 469.8 million pounds of hazardous materials, saved \$227.2 million dollars, and conserved 21.18 billion gallons of water. In 2011, the program has set targets to reduce 1.8 billion pounds of hazardous materials, save \$1.5 billion dollars, conserve 24.9 billion gallons of water, and reduce 11.6 million metric tons of carbon dioxide equivalent.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$336.0) This increase is the net effect of increases for payroll and cost of living for existing FTE, combined with a reduction based on recalculation of base workforce costs.
- (-\$1,329.0 / -9.4 FTE) This reduction includes payroll resources and reflects EPA’s workforce management strategy that will help the Agency better align resources, skills and Agency priorities. The EPP program will no longer provide support to EPA’s Office of Administration and Resources Management to green the Agency’s facilities and procurement actions. The program will eliminate its outreach and education efforts on green purchasing. The decrease will diminish environmental results by approximately 31 percent, including anticipated reductions in costs, water usage and CO2, other hazardous substances, and payroll.
- (-\$804.0) This reduction reflects the termination of ongoing Design for the Environment partnerships including those with the photovoltaic and automotive refinishing industries. The decrease will diminish environmental results by approximately 28 percent, including anticipated reductions in costs, water usage and CO2, and other hazardous substances.
- (-\$805.0) This reduction will reduce the Green Chemistry program’s communications and outreach efforts, resulting in fewer nominations received combined with the reduction in publication and marketing of award-winning technologies, possibly resulting in limitations on the technology transfer and adoption of these technologies. The decrease will diminish environmental results by approximately 28 percent, including anticipated reductions in costs, water usage and CO2, and other hazardous substances.

- (-\$5.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$17.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$7.0) This decrease reflects a redirection of resources to the Human Health and Ecosystems program which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife.

Statutory Authority:

Pollution Protection Act; Toxic Substances Control Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$6,802.7	\$6,025.0	\$6,260.0	\$235.0
Total Budget Authority / Obligations	\$6,802.7	\$6,025.0	\$6,260.0	\$235.0
Total Workyears	39.0	33.4	34.1	0.7

Program Project Description:

The Chemical Risk Management (CRM) Program supports national programs to lessen chemical risk and exposure through reductions in use and safe removal, disposal and containment of certain prevalent, high-risk chemicals, known generally as legacy chemicals. Some of these chemicals were used widely in commerce and 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 polychlorinated biphenyls (PCBs), reducing or eliminating the use of products containing mercury, and implementing statutory requirements to address asbestos risks in schools.

FY 2011 Activities and Performance Plan:

Polychlorinated Biphenyls (PCBs)

In FY 2011, EPA will develop a rule related to PCB manufacture, processing, use, and distribution in commerce. Some use authorizations for PCBs are over thirty years old and could benefit from being revisited. In FY 2010, assessments will be conducted to determine whether some existing uses need to be phased out through a regulatory effort in FY 2011. The Agency will develop and commence implementing regulatory and voluntary options, as appropriate.

Caulk containing PCBs was used in some buildings, including schools, in the 1950s through the 1970s and may pose risks over time. Therefore, EPA is currently providing school administrators and building managers with information and recommendations about managing PCBs in caulk and tools to help minimize possible exposure among both children and adults; these efforts will continue in FY 2011. The Agency also will assist communities and building and facility managers in identifying potential problems and, if necessary, assist with the development of plans for PCB testing and removal. EPA is conducting research to better understand the risks posed by caulk containing PCBs. The Pollution Prevention and Toxics program is working closely with the Resource Conservation and Recovery program and the Research and Development program on the PCBs in caulk issue which will have the lead on reviewing caulk removal and disposal plans. For more information on the Agency's PCBs in caulk work, see <http://www.epa.gov/pcbsincaulk/>.

Mercury

In FY 2011, EPA will continue to promote the reduction of mercury use in products, both domestically and internationally, as a component of its strategy to prevent mercury releases to air, water, and land. These releases may occur during manufacturing and industrial processes, during use or during the disposal or recycling of mercury-containing products and wastes. Domestically, EPA is focusing its reduction efforts on switches, relays, and measuring devices because these sectors represent the majority of mercury use in products and because cost-effective alternatives are generally available. The Agency has proposed a significant new use rule (SNUR) under TSCA Section 5(a) for flow meters, natural gas manometers, and pyrometers -- mercury products that are no longer manufactured or imported. The promulgation of a SNUR for these products serves to restrict their re-entry into the economy and, therefore, their use and the potential for human exposure. This SNUR is expected to be finalized in FY 2010. The Agency also is developing regulatory and voluntary options for other mercury products, specifically, button cell batteries, switches, relays, flame sensors, manometers, barometers, psychrometers/hygrometers, and non-ferrous thermometers. Work on developing these options was initiated in FY 2009 and will be ongoing in FY 2010, with proposed rule issuance expected in FY 2011 or FY 2012.

The Agency maintains a mercury use and products database¹¹¹ to identify products containing mercury and non-mercury product alternatives. To date, the database includes 4,677 products (4,522 mercury containing and 155 non-mercury containing alternatives) produced by 553 manufacturers in 16 industry sectors. The database supports identification of opportunities for risk reduction including collaborative efforts to reduce the use of mercury. For example, the database has been used to support development of the TSCA Section 5(a) SNUR on various types of meters (described above) and was used to support a tri-national (U.S./Canada/Mexico) mercury products partnership sponsored by the Commission for Environmental Cooperation. In FY 2011, updates and expansion of the mercury use and products database are planned to support the Agency's development and implementation of the regulatory and voluntary options selected for other mercury products and for negotiating the United Nations Environment Programme (UNEP) Mercury effort.

In February 2009, the UNEP Governing Council adopted a mandate for the initiation of negotiations on a legally binding agreement to develop a comprehensive and suitable approach to mercury, including provisions to reduce the supply, the demand, international trade, and emissions of mercury. At that meeting, the U.S. delegation agreed to support this mandate. Negotiations regarding the agreement will proceed until February 2013. In the interest of meeting the mandate, the Agency will continue to support voluntary reductions in the use of mercury through existing partnerships in the interim. The majority of the mercury deposition in the US originates outside of our borders. In FY 2011, the Agency will continue to implement a range of UNEP mercury partnerships, including a mercury waste partnership and a storage and supply partnership to address the use, storage and disposal of mercury in developing countries, with particular emphasis on reductions of mercury use in health care settings and schools and the development of options for proper mercury waste storage. Under these global partnerships, the Agency promotes the use of non-mercury products, develops mercury products inventory

¹¹¹ <http://www.epa.gov/mercury/database.htm>

assessments and databases, and implements 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. For more information, see <http://www.epa.gov/mercury/>.

Asbestos/Fibers

Congress passed the Asbestos Hazard Emergency Response Act (AHERA) in 1986 and the Agency finalized the implementing regulations in 1987. For schools, AHERA requires, among other things: an original asbestos inspection, an asbestos re-inspection every three years for schools that contain asbestos, the development and maintenance of an asbestos management plan, custodial training on asbestos, and a requirement that schools use trained professionals to perform asbestos inspections and abatement work. The Agency has been providing outreach and technical assistance under the asbestos program for schools, in coordination with other Federal agencies, states, and other organizations to help schools understand and comply with AHERA's requirements¹¹². These efforts are aimed at helping to ensure that children will be protected from the possibility of exposure to asbestos in school buildings.

More specifically, in FY 2011, the Agency will continue to provide Federal oversight and assistance in the following ways:

- Interpreting regulatory requirements to delegated state and local asbestos programs¹¹³,
- Responding to tips and complaints (e.g., calls from concerned parents and teachers) regarding the Asbestos-in-Schools Rule by conducting onsite inspections or coordinating with delegated states¹¹⁴,
- Responding to public requests for assistance such as information regarding AHERA asbestos¹¹⁵, and
- Helping asbestos training providers comply with the Model Accreditation Plan requirements by providing regulatory interpretation of its requirements¹¹⁶.

The Agency will continue to address risks related to some vermiculite inflation. Vermiculite is a naturally occurring mineral composed of shiny flakes, resembling mica. When heated to a high temperature, flakes of vermiculite expand as much as 8-30 times their original size. The expanded vermiculite is a light-weight, fire-resistant, and odorless material and has been used in numerous products, including insulation for attics and walls. A mine near Libby, Montana was the source of over 70 percent of all vermiculite sold in the U.S. from 1919 to 1990. There was also a deposit of asbestos at that mine, so the vermiculite from Libby was contaminated with asbestos. To identify whether vermiculite insulation is from Libby, in FY 2010 the Agency is developing qualitative analytical methods to identify the presence of asbestos fibers in vermiculite insulation in cooperation with a Federal partner, the United States Geological Service (USGS). In FY 2011, with methods in-hand, the Agency will continue and/or increase

¹¹² <http://www.epa.gov/oppt/asbestos/index.html>.

¹¹³ <http://www.epa.gov/oppt/asbestos/pubs/help.html#role>),

¹¹⁴ http://www.epa.gov/oppt/asbestos/pubs/asbestos_in_schools.html

¹¹⁵ <http://www.epa.gov/oppt/asbestos/pubs/regioncontact.html>

¹¹⁶ <http://www.epa.gov/oppt/asbestos/pubs/ndaac.html>

outreach activities to the public related to identifying and taking appropriate precautions in dealing with asbestos-contaminated vermiculite.

See <http://www.epa.gov/asbestos/pubs/verm.html>.

Performance Targets:

Work under this program project supports EPA's objective to manage risks from well known nationally recognized chemicals. Currently, the program has measures progress through a suite of internal measures. In FY 2011, the program will continue to explore option for an external measure to reflect progress under this program project. There are no specific measures for this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$166.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$104.0 / +0.7 FTE) This increase includes payroll resources and reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities; FTE are reprogrammed from the lead program to align formulation resources more closely with current FANs for IT staff. This reprogramming is based on a recent survey of IT staff utilization.
- (-\$35.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

Toxic Substances Control Act; Asbestos School Hazard Abatement Act; Asbestos Hazard Emergency Response Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$14,260.7</i>	<i>\$14,329.0</i>	<i>\$14,413.0</i>	<i>\$84.0</i>
Total Budget Authority / Obligations	\$14,260.7	\$14,329.0	\$14,413.0	\$84.0
Total Workyears	70.6	87.0	85.8	-1.2

Program Project Description:

Recent data show that significant progress has been made in the continuing effort to eliminate childhood lead poisoning as a public health concern. EPA has measured progress by tracking reductions in the number of children with elevated blood lead levels of 10 micrograms per deciliter or higher. Data released in 2009 by the Centers for Disease Control and Prevention indicates that the incidence of childhood lead poisoning has declined from approximately 1.6 percent of children in 2002 to 0.9 percent of children in 2006¹¹⁷. The data show that progress is being made to meet ambitious federal government-wide goal to eliminate childhood lead poisoning as a public health concern at those blood levels by 2010¹¹⁸.

At the same time, new data show adverse health effects to children at lower levels than previously recognized.¹¹⁹ Therefore, EPA plans to begin measuring progress by tracking reductions in the number of children with blood lead levels of 5 micrograms per deciliter or higher. EPA will continue to achieve further reductions in the incidence of children with these lower, but still elevated blood levels.

EPA's Lead Risk Reduction program contributes to the goal of minimizing the threat to human health, particularly to young children, from environmental lead exposure in the following ways:

- Establishes standards governing lead hazard identification and abatement practices and maintains a national pool of professionals trained and certified to implement those standards;

¹¹⁷ Federal Interagency Forum on Child and Family Statistics. 2009. **Children: Key National Indicators of Well-Being, 2009.** <http://www.childstats.gov/americaschildren/phenviro3.asp>.

¹¹⁸ "President's Task Force on Environmental Health Risks and Safety Risks to Children"
<http://www.cdc.gov/nceh/lead/about/fedstrategy2000.pdf>

¹¹⁹ U.S.EPA. Air Quality Criteria for Lead (September 29, 2006)
<http://cfpub.epa.gov/ncea/CFM/recordisplay.cfm?deid=158823>

Rogan WJ, Ware JH. Exposure to lead in children – how low is low enough? *N Engl J Med*.2003;348(16):1515-1516
<http://www.precaution.org/lib/rogan.nejm.20030417.pdf>

Lanphear BP, Hornung R, Khoury J, et al. Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. *Environ Health Perspect*. 2005; 113(7):894-899
<http://www.pubmedcentral.nih.gov/articlerender.fcgi?doi=10.1289/ehp.7688>

- 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 for renovation, repair and painting projects in homes and child-occupied facilities with lead-based paint; and
- Works to establish a national pool of renovation contractors trained and certified to implement those standards.

For more information see <http://www.epa.gov/lead>.

FY 2011 Activities and Performance Plan:

Implement the Renovation, Repair and Painting (RRP) Rule & Revisions

In FY 2011, EPA will implement the Renovation, Repair and Painting (RRP) Rule to address lead hazards created by renovation, repair and painting activities in homes and child-occupied facilities with lead-based paint, as a further measure to help reduce childhood lead poisoning. To implement this rule, EPA will accredit training providers in all non-authorized states, tribes and territories; certify renovation contractors and firms; review state applications for authorization to administer training and certification programs; provide oversight and guidance to all authorized programs; and disseminate model training courses for lead-safe work practices.

Since June 23, 2008, twenty-six states and one tribe have demonstrated interest in applying for program authorization. To date, one state has received authorization and several more are expected to apply in the first half of FY 2010. On April 22, 2009, the Agency began the accreditation of renovator and/or dust sampling technician training providers in all non-authorized states, a step toward certification of renovation firms. On October 22, 2009 renovation firms began to apply for certification, and on April 22, 2010 the rule will be fully implemented, except for forthcoming revisions as discussed below. By that time, all 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.

Shortly after the RRP rule was published, several petitions were filed challenging the rule. These petitions were consolidated in the Circuit Court of Appeals for the District of Columbia. On August 24, 2009, EPA signed an agreement with the environmental and children's health advocacy groups in settlement of their petitions. The agreement calls for the Agency to undertake two separate rulemakings to take comments on revised provisions of the RRP rule and two additional rulemakings, including an Advanced Notice of Proposed Rulemaking (ANPR), to cover public and commercial buildings not covered by the RRP rule. In FY 2010, work will begin to support the rule-making and in FY 2011, follow-on activities and final rule-making will be implemented as follows:

Revise Provisions of the RRP

- *Rule #1 – “Opt-out Rule”*

On October 21, 2009, EPA issued a Notice of Proposed Rulemaking (NPRM) proposing to remove the RRP provision allowing home owners to opt out of the rule if they: 1)

occupy the housing to be renovated, 2) no child under six or pregnant woman lives there, 3) no child under six is present on a regular basis; and 4) require renovation firms to provide owners and occupants with a copy of the recordkeeping checklist that firms are required to prepare/keep to demonstrate compliance with the RRP rule. Although final Agency action on the “Opt-out Rule” must be taken by April 22, 2010, in FY 2011, the Agency may need to make additional changes to existing outreach and training materials to address the actions taken in the final rule.

- *Rule #2: “Clearance Rule”*

By April 22, 2010, the Agency must issue an NPRM that proposes to require renovation firms to conduct quantitative dust wipe sampling after a subset of renovations; and to demonstrate, through quantitative dust wipe sampling, that they have achieved the established dust-lead clearance standards for a smaller subset of renovations that typically create large amounts of leaded dust. In FY 2011, the Agency will respond to comments on the NPRM and complete any additional analysis necessary to take final action on the Clearance NPRM by July 15, 2011, as stipulated in the settlement agreement. Changes to existing Agency outreach and training materials also may be needed to address the actions taken in the final Clearance rulemaking.

Extend RRP to Public and Commercial Buildings

By April 22, 2010, the Agency must issue an ANPR discussing its intention to propose work practice requirements for renovations on the exteriors of public and commercial buildings other than child-occupied facilities (schools and child care centers already covered by the final RRP rule); and evaluate whether renovations in the interiors of these buildings create lead-based paint hazards, and, if so, propose work practice requirements for those renovations.

- *Rule #3: “Exterior Rule”*

By December 15, 2011, the Agency must issue an NPRM to establish work practice requirements for renovations on the exterior of public and commercial buildings other than child-occupied facilities. Final action on the Exterior NPRM must be taken by July 15, 2013. Starting in FY 2010 and continuing in FY 2011, the Agency will be conducting technical and economic data analysis for the NPRM to meet the December 2011 deadline.

- *Rule #4: “Interior Rule”*

By September 30, 2011, the Agency must consult with the EPA Science Advisory Board (SAB) on a risk assessment methodology to evaluate the hazards posed by renovations in the interior of public and commercial buildings not covered by the final RRP rule. The Agency must either issue a NPRM to establish work practice requirements for interior renovations in public and commercial buildings or conclude that they do not create lead-based paint hazards within 18 months of receiving the SAB report. Starting in FY 2010 and continuing in FY 2011, the Agency will be preparing the data, analysis, and charge questions for the SAB consultation in FY 2011.

Additionally, a significant and comprehensive outreach effort is being implemented to support the RRP regulation and more generally increase public awareness about preventing childhood lead poisoning, including a national public service advertising initiative with the Ad Council and a companion marketing effort to target awareness messages to audiences affected by RRP and those at particular risk. In addition, 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.

Revisit the Lead Dust Standard and Definition of Lead-Based Paint

On August 10, 2009, EPA received a petition requesting the Agency to lower lead dust hazard standards and to modify the definition of lead-based paint in its regulations promulgated under sections 401 and 403 of the Toxic Substances Control Act (TSCA). Specifically, petitioners are requesting that EPA:

- Lower lead dust hazard standards at 40 CFR 745.65(b), 40 CFR 745.227(e)(8)(viii), and 40 CFR 745.227(h)(3)(i) from 40 micrograms of lead per square foot of surface area ($\mu\text{g}/\text{ft}^2$) to 10 $\mu\text{g}/\text{ft}^2$ or less for floors and from 250 $\mu\text{g}/\text{ft}^2$ to 100 $\mu\text{g}/\text{ft}^2$ or less for window sills.
- Modify the definition of lead-based paint at 40 CFR 745.103 and 745.223 for previously applied paint or other surface coatings in housing, child-occupied facilities, public buildings and commercial buildings to reduce the lead levels from 0.5 percent by weight (5,000 parts per million (ppm)) to 0.06 percent by weight (600 ppm) with a corresponding reduction in the 1.0 milligram per square centimeter standard.

The petition was filed by the National Center for Healthy Housing, the Alliance for Healthy Homes, the Sierra Club and others.¹²⁰ On October 22, 2009, EPA responded to the petition, and agreed to revisit the current lead dust hazards standard and to work with the U.S. Department of Housing and Urban Development (HUD) to modify the definition of lead-based paint in its regulations.

EPA's implementation of the RRP Rule will directly address this petition and reduce childhood lead poisoning.

¹²⁰ <http://www.epa.gov/fedrgstr/EPA-TOX/2009/October/Day-06/t23929.pdf>

Provide Education & Outreach

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 continue the ongoing administrative regulations that govern lead hazard identification and abatement practices and maintain a national pool of professionals trained and certified to implement those standards. The program will continue to provide technical and policy assistance to states, tribes, and other Federal agencies to help facilitate compliance with Federal requirements such as the lead disclosure standards applicable to sales and rentals of pre-1978 housing. 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. Please see the companion program project “Categorical Grant: Lead” for further information on EPA’s lead grant programs, including those supporting training of lead remediation and renovation contractors, development of authorized programs for abatement and inspections, lead outreach and education, enforcement activities, and targeted assistance to reduce lead poisoning among vulnerable populations.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative number of certified Renovation Repair and Painting firms			100,000	180,000	Firms

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of children (aged 1-5 years) with elevated blood lead levels (>5 ug/dl).			3.5	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of children (aged 1-5 years) with elevated blood lead levels (>10ug/dl)	No Target Established	Biennial		No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process.	92	97	92	92	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old.	No Target Established	Biennial	28	No Target Established	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. Recent data indicate that the incidence of childhood lead poisoning, defined as above, has declined from approximately 1.6 percent of children in 2002 to 0.9 percent of children in 2006. The data shows that progress is being made to meet ambitious Federal government-wide goals to eliminate childhood lead poisoning as a public health concern at those blood levels by 2010.

EPA's Lead Risk Reduction program is also beginning to track the percent of children with blood lead levels above 5 ug/dL. As of 2006, 4.1 percent of children had blood lead levels above 5 ug/dL¹²¹. CDC historical data are showing a slower rate of progress over time, reflecting increased challenges associated with reaching remaining vulnerable populations¹²². The opportunity for exposure through hazards posed by lead-based paint still exists in approximately 38 million homes built before 1978¹²³. The lead program also tracks the disparities in 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 vulnerable populations. EPA's long-term goal, reflected in the FY 2009-2014 draft 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 43.6 percent (1999-2002), to a difference of 26 percent by FY 2014. According to the NHANES survey, an overall downward trend with some variation has been observed with recent data showing a percent difference of 35.6 percent from 2003-2006 and 26.6 percent from 2005-2008.

The lead program introduced a supporting output measure in FY 2010 that tracks the number of firms 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 firms increase from zero in FY 2009 to several hundred thousand

¹²¹ Federal Interagency Forum on Child and Family Statistics. 2009. **Children: Key National Indicators of Well-Being, 2009**; <http://www.childstats.gov/americaschildren/phenviro3.asp>

¹²² National Center for Environmental Health. 2005. *Third National Report on Human Exposure to Environmental Chemicals* NCEH Pub. No. 05-0570, Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta, GA <http://www.cdc.gov/exposurereport/pdf/thirdreport.pdf>

¹²³ Jacobs, D.E.; Clickner, R.P.; Zhou, J.Y.; Viet, S.M.; Marker, D.A.; Rogers, J.W.; Zeldin, D.C.; Broene, P.; and Friedman, W. (2002). The prevalence of lead-based paint hazard in U.S. housing. *Environmental Health Perspectives*, 110(10): A599-A606

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. Since 2004, the percent of applicants processed under 20 days has increased from 77 to 92 percent, with most recent progress in 2009 jumping to 97percent. The FY 2011 targets sustain this high level of achievement.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$307.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$188.0/-1.2 FTE) This reduction includes payroll resources and reflects EPA's workforce management strategy that will help the Agency better align resources. FTE are reprogrammed to the chemical risk programs to optimize IT staff utilization.
- (-\$2.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$33.0) This decrease in travel costs reflects efforts to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

Toxic Substances Control Act.

Program Area: Underground Storage Tanks (LUST / UST)

LUST / UST

Program Area: Underground Storage Tanks (LUST / UST)

Goal: Land Preservation and Restoration

Objective(s): Preserve Land; Restore Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$13,581.6	\$12,424.0	\$14,647.0	\$2,223.0
Leaking Underground Storage Tanks	\$12,234.1	\$11,613.0	\$12,162.0	\$549.0
<i>Budget Authority</i>	<i>\$10,887.1</i>	<i>\$11,613.0</i>	<i>\$12,162.0</i>	<i>\$549.0</i>
<i>Recovery Act Budget Authority</i>	<i>\$1,347.0</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$25,815.7	\$24,037.0	\$26,809.0	\$2,772.0
Total Workyears	124.9	132.0	136.0	4.0

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 underscore 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)¹²⁴ 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.¹²⁵

In the FY 2009 American Recovery and Reinvestment Act (ARRA), the LUST cleanup program received \$200 million in budget authority, of which a total of \$1.3 million was obligated under LUST/UST. Additional details can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>.

FY 2011 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.¹²⁶ In FY 2011, EPA will continue to work to bring all UST systems into compliance and keep them in compliance with the release detection and release prevention requirements. These activities

¹²⁴ 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.

¹²⁵ Refer to <http://www.epa.gov/oust/ustsystem/index.htm>

¹²⁶ For more information on these and other activities please refer to http://www.epa.gov/oust/fedlaws/epact_05.htm.

include assisting states in conducting inspections, enforcing violations discovered during the inspections, and assisting other Federal agencies to improve their compliance at UST facilities.

In FY 2011, EPA will continue to support core development and implementation of state and Tribal UST programs; strengthen the network of its Federal, state and local partners, specifically communities and vulnerable populations; and provide technical assistance, compliance assistance, and training to promote and enforce UST facilities' compliance. To help states and tribes implement the UST prevention program, EPA expects to incorporate community input, as appropriate, and issue a final regulation in FY 2011 to ensure full implementation of the EPCRA requirements. EPA will provide training opportunities and assistance tools to better prepare UST inspectors and better inform UST owners. EPA will explore the opportunities for financial assurance mechanisms to create incentives for improved compliance by tank owners and operators.

EPA has the primary responsibility to implement the UST Program in Indian country and to maintain information on USTs located in Indian country. EPA will continue implementing the FY 2006 UST Tribal strategy¹²⁷, engaging and protecting those most vulnerable, including developing regulatory requirements for secondary containment, delivery prohibition, and operator training in Indian country. EPA also will continue to work to improve compliance rates in Indian country.

The Agency and states also will continue to use innovative compliance approaches, rely on sound science and emerging technology, along with outreach and education tools, to bring more tanks into compliance and to prevent releases. EPA's UST program will continue its commitment to scientific integrity through support for research on emerging issues, such as alternative fuels. The emergence of alternative fuels poses several challenges for the UST program, requiring innovative policy solutions. In order to help address these challenges in FY 2011, the Agency will invest in a cross-program initiative, the Climate and Clean Energy Challenge. To ensure an effective and safe migration toward alternative fuels and to identify potentially widespread and avoidable environmental and health impacts, EPA will work with states and tribes to assess UST compatibility with alternative fuels and evaluate the transport and degradation characteristics of ethanol and biodiesel as well as other blends. This will lead to tools, models, and technologies to assist in the remediation of biofuels. The Agency will monitor releases and conduct damage case assessments. Progress will be measured through the development of recommendations to prevent contamination of land and groundwater as a result of transition to alternative fuels.

Additionally, there are an unknown number of petroleum brownfields sites (estimated to be at least 200 thousand) that are predominately old gas stations that blight the environmental and economic health of surrounding neighborhoods. The EPA Office of Underground Storage Tanks and the EPA Brownfields program jointly focus attention and resources on the cleanup and reuse of petroleum-contaminated sites. In FY 2008, EPA developed a new plan of action to promote reusing petroleum brownfields.¹²⁸ The plan outlines EPA's commitment to cleaning up

¹²⁷ Refer to *Strategy for an EPA/Tribal Partnership to Implement Section 1529 of the EPCRA of 2005*, August 2006, EPA-510-F-06-005, <http://www.epa.gov/oust/fedlaws/tribalst.htm>

¹²⁸ Petroleum Brownfields Action Plan, <http://www.epa.gov/oust/pubs/petrobfactionplan.htm>

petroleum-contaminated sites and fostering their reuse. In FY 2011, EPA will continue to 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 continue to pursue corridor and Smart Growth projects with the states to promote investment in and the sustainable reuse of petroleum brownfields. In FY 2011, EPA will also analyze tools that promote assessment, cleanup and reuse of petroleum brownfields; introduce a petroleum brownfields community workbook that showcases successful reuse, such as successful redevelopment on former petroleum-affected brownfields highlighting “green” practices and reuse strategies; support the reuse of petroleum brownfields by small business owners; and continue cross-media and geographic multi-site petroleum brownfields 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:

Work under this program also supports performance results in Categorical Grant: Underground Storage Tanks Program Project and can be found in the Performance Four Year Array.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$362.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$18.0) This decrease in travel costs reflects an effort to reduce the Agency’s travel footprint by promoting green travel and conferencing.
- (+\$2,000.0/ +5.0 FTE) This will support efforts for meeting the Climate and Clean Energy Challenge, including 5.0 FTE and associated payroll of \$643.0. These resources and FTE will support activities to assess the UST compatibility with alternative fuels.
- (-\$121.0/ -1.0 FTE) This reflects a realignment of resources from the LUST/UST program to the Civil Enforcement and Compliance Monitoring programs to improve National Pollutant Discharge Elimination System (NPDES) data quality. The reduced resources include 1.0 FTE and associated payroll of \$121.0

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 EPCRA, 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; Tribal Grants Public Law 105-276.

Program Area: Water: Ecosystems

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$27,082.7	\$32,567.0	\$27,233.0	(\$5,334.0)
Total Budget Authority / Obligations	\$27,082.7	\$32,567.0	\$27,233.0	(\$5,334.0)
Total Workyears	48.7	48.1	49.1	1.0

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) through (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;
- Supporting enhancement of NEP climate change adaptation activities;
- Addressing threats like hypoxia in the Gulf of Mexico in non-NEP estuary/coastal watersheds; and
- Integrating the NEP/coastal waterways program into Federal agency management of oceans, coasts, and the Great Lakes, which will be established by the National Ocean Policy.

See <http://www.epa.gov/owow/estuaries> for more information.

FY 2011 Activities and Performance Plan:

Estuarine and coastal waters are among the most environmentally and economically valuable natural resources in the nation. Resources in FY 2011 will support implementation of the National Ocean Policy and EPA's goal of protecting estuaries of national 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 other partners.

The National Estuary Program

In FY 2011, EPA will continue support of the National Estuary Program by providing \$16.8 million in CWA Section 320 grants for the 28 NEPs (\$600 thousand per NEP). Continued support of this flagship watershed protection program will help address continuing and emerging threats to the nation's estuarine resources.¹²⁹ EPA will continue support of NEP CCMP implementation as well as implementation of CWA core programs. Specifically, EPA's activities include:

- Supporting all 28 NEPs' continued efforts to exercise local and regional leadership by targeting protection and restoration of estuarine resources and promoting environmental sustainability, including sustainable land practices, through CCMP implementation. EPA oversight of NEP CCMP implementation includes the ongoing review of NEP's environmental programs, projects, and results and of the NEP's leveraging of partner resources. In addition, every three years EPA conducts a performance evaluation of each NEP to assess overall progress toward CCMP implementation made by the NEP.
- Supporting NEP efforts to achieve EPA's goal of protecting and restoring 250,000 additional acres of habitat by FY 2012 and promoting alignment of NEP restoration goals with those of Federal, Tribal, state, regional, and local agencies.

The effects of climate change, such as sea level rise, changes in precipitation patterns, increases in intensity of and damage from storms, and changes in commercially 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 strategies whose goal is to enable coastal watershed communities to adapt to emerging climate change impacts (e.g., promotion of "climate-ready estuaries" in coastal communities).

The program will continue implementing its enhanced NEP data reporting and tracking system and supporting NEP efforts to attain ambitious annual and long-term habitat protection and restoration targets. Also, the Agency will conduct the third round of program evaluations using a Performance Evaluation Review process implemented in September 2007. During a program evaluation, the agency evaluates each NEP's progress toward achieving its environmental and programmatic goals. This process has made evaluation of the NEPs more objective and consistent.

Coastal Monitoring and Assessment

In FY 2011, the program will lead the effort to strengthen knowledge of our coasts and oceans by monitoring and assessing 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

¹²⁹ 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 that are integral to the Agency's efforts to facilitate the ecosystem scale protection and restoration of natural areas.

(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 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 2011, 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. A key goal is to improve water quality in the Mississippi River Basin and the Gulf of Mexico by implementing sustainable land use practices. One important action involves Federal approaches that provide a framework for state nutrient strategies. EPA's role in this action will include identification of 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 2011 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. Resources in this program project supplement resources in the Geographic Program: Mississippi River Basin, Geographic Program: Gulf of Mexico, and Surface Water Protection program projects.
- *Large Aquatic Ecosystems*: EPA's Council of Large Aquatic Ecosystems (LAEs) is working to foster collaboration among the Agency's ecosystem-based efforts, such as the Chesapeake Bay and the Great Lakes, and national water programs. The goals are to improve the health of the nation's large aquatic ecosystems, strengthen links to the national water programs, and establish a comprehensive management system across the LAEs. 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. Resources in other program projects fund activities in individual ecosystems (e.g. Great Lakes, Long Island Sound, Puget Sound and San Francisco Bay).

- *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.
- *Climate Ready Estuaries:* EPA will continue to strengthen 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" to address NEP and coastal watershed adaptation issues. The program office will work with the NEPs to: (1) develop and implement "Climate-Ready Estuary" models assessing watersheds' vulnerabilities to climate change; (2) develop and implement adaptation strategies; (3) engage and educate stakeholders; and (4) share lessons learned with other coastal managers. In FY 2011, the Climate Ready Estuaries program will designate NEPs and other coastal communities as "climate ready," allowing coastal leaders to implement climate adaptation strategies within their communities and to market their needs and actions to local public and private interests.

National Ocean Policy

EPA will continue to participate in the implementation of the objectives laid out in the Interagency Oceans Policy Task Force in 2009. The Task Force, led by the Council of Environmental Quality, is charged with developing a recommendation for a national policy that ensures protection, maintenance, and restoration of oceans, our coasts and the Great Lakes. It also will recommend a framework for improved stewardship, and effective coastal and marine spatial planning. (For more info: <http://www.whitehouse.gov/administration/eop/ceq/initiatives/oceans>.) The National Oceans Policy and the Framework for Coastal and Marine Spatial Planning strengthen the work that the Federal government conducts with states, tribes, partners and other stakeholders to protect vital resources in our oceans, coasts, and the Great Lakes. The Policy will help EPA and the rest of the Federal family to leverage information and sound science to promote a healthy environment and a healthy economy. Coastal and Marine Spatial Planning will help EPA achieve its goals for clean and safe water, especially for its geographic programs for the Great Lakes, Chesapeake Bay, Puget Sound, San Francisco Bay, and the 28 estuaries that make up the National Estuary Program. Its emphasis on ecosystem-based management is closely related to EPA's work on healthy watersheds and sustainable communities. The role that EPA will continue to play within this new framework will be especially linked to the areas of emphasis concerning water quality and sustainable practices on land, resiliency and adaptation to climate change and ocean acidification, and regional ecosystem protection and restoration.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Acres protected or restored in National Estuary Program study areas.	100,000	125,437	100,000	100,000	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Program dollars per acre of habitat protected or restored.	500	659	500	500	Dollars

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$111.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$155.0 / +1.0 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. These resources are shifting to support the National Estuary Program.
- (-\$5,600.0) This reduces Congressionally-directed funding in FY 2010 for the CWA Section 320 grants. This request proposes \$16.8 million for \$600 thousand for each NEP.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$23,124.1</i>	<i>\$25,940.0</i>	<i>\$28,231.0</i>	<i>\$2,291.0</i>
Total Budget Authority / Obligations	\$23,124.1	\$25,940.0	\$28,231.0	\$2,291.0
Total Workyears	152.1	159.1	164.0	4.9

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 development and dissemination of rules, guidance, information 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. In FY 2009, the Agency significantly enhanced collaboration with the Department of Interior and the Army Corps of Engineers (Corps) to implement an Interagency Action Plan (IAP) to significantly reduce the harmful effects of Appalachian surface coal mining operations.

EPA works with the Corps of Engineers to implement the provisions of Section 404 of the CWA to protect wetlands and other waters of the U.S. 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/> or <http://www.cfda.gov> for more information.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will work with its state and Tribal partners to strengthen their wetland programs in the areas of monitoring and assessment, voluntary restoration and protection, regulatory programs including CWA 401 certification, and wetland water quality standards. The Agency will assist states and 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 2011 on achieving program development outcomes and providing targeted technical assistance to states and tribes as resources allow.

In FY 2011, resources are requested to continue to implement the Interagency Action Plan (IAP) that was signed with the Department of Interior and the Corps on June 11, 2009, to significantly reduce the harmful effects of Appalachian surface coal mining operations (http://www.epa.gov/owow/wetlands/pdf/Final_MTM_MOU_6-11-09.pdf). Coordinating with the Corps, states, resource agencies, and the public, EPA will review CWA 404 permits of concern and negotiate resolution to outstanding environmental issues with the Corps and mine operators. In addition, the Agency will work with Federal partners to develop guidelines for compensatory mitigation for stream impacts and on CWA S. 402 permit issues. Based on its review in 2010 of existing regulatory authorities and procedures, EPA will consider regulatory and/or policy modifications to better protect the environment and public health from the impacts of Appalachian surface coal mining. In addition, the Agency will develop guidance and policies related to the application of CWA Section 404(b)(1) guidelines to surface coal mining, compensatory mitigation of stream and wetland impacts, and working with the affected states to improve CWA Section 401 certifications for mining permits.

The Agency, working with the Corps 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 2011 will be implementing the 2006 decision of the U.S. Supreme Court in the *Rapanos* and *Carabell* cases. The decision in *Rapanos* resulted in an increased demand on EPA and the Corps 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 and other stressors. 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 FWS to help ensure the map is updated and maintained. In FY 2011, EPA will continue to work closely with Federal partners

and others to accelerate the acquisition and uploading of new wetlands data. The Wetlands Data Layer is the main source of coastal wetlands data for EPA's sea level rise model and is used by a number of Federal agencies. SLAMM (Sea Level Affecting Marshes Model) 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, a key factor in understanding and addressing climate change.

Although wetland acreage is increasing nationally, wetlands in coastal watersheds are declining. This is a concern because wetlands are nurseries for many fish and shellfish of commercial and recreational importance, and are also important as storm buffers and for floodwater storage. 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of acres restored and improved, under the 5-Star, NEP, 319, and great waterbody programs (cumulative).	88,000	103,507	110,000	118,000	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	No Net Loss	No Net Loss	No Net Loss	No Net Loss	Acres

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$545.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$1,760.0/ +4.9 FTE) This reflects resources to support implementation of the Appalachian Coal Mining Interagency Action Plan by providing additional Section 404

permit reviewers and issuing guidance to implement plan recommendations, including 4.9 FTE and associated payroll of \$657.0.

- (-\$14.0) This decision reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	\$3,102.2	\$2,944.0	\$2,974.0	\$30.0
Total Budget Authority / Obligations	\$3,102.2	\$2,944.0	\$2,974.0	\$30.0
Total Workyears	7.4	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 2011 Activities and Performance Plan:

In FY 2011, EPA will pursue the following:

Beaches Program:

States and territories monitored 3,740 beaches in 2008. To continue making progress on monitoring beaches in FY 2011, EPA expects to:

- Make grant funds available to all 35 eligible states and territories, as well as eligible tribes, to monitor beach water quality and to notify the public of beach warnings and closings;
- Oversee beach program implementation and grant expenditures;
- 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, including an annual report;
- Continue to work with coastal and Great Lakes states, territories, and tribes to address monitoring issues; and
- Continue to 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; and
- 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of women of childbearing age having mercury levels in blood above the level of concern.	5.2	Data Avail 2013	5.1	4.9	Percent Women

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of waterborne disease outbreaks attributable to swimming in or other recreational contact with coastal and Great Lakes waters measured as a 5-year average.	2	Data Avail 2012	2	2	Outbreaks

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	93	95	95	95	Percent Days/Season

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$27.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$3.0) This increase reflects small technical changes such as realignment of IT, travel or other support costs across programs.

Statutory Authority:

CWA; BEACH Act of 2000.

Drinking Water Programs

Program Area: Water: Human Health Protection

Goal: Clean and Safe Water

Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$98,250.4</i>	<i>\$102,224.0</i>	<i>\$105,328.0</i>	<i>\$3,104.0</i>
Science & Technology	\$3,359.7	\$3,637.0	\$3,827.0	\$190.0
Total Budget Authority / Obligations	\$101,610.1	\$105,861.0	\$109,155.0	\$3,294.0
Total Workyears	565.9	589.4	589.1	-0.3

Program Project Description:

EPA's Drinking Water program is based on the multiple-barrier approach to protect 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; underground injection control programs; 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> and <https://www.cfda.gov/> for more information.)

FY 2011 Activities and Performance Plan:

Safe drinking water is 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.¹³⁰ In FY 2011, 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; promote sustainable management of drinking water infrastructure; and implement the underground injection control program. As a result of these efforts, the Agency will ensure that 91 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 2011, the Agency will continue implementing requirements for newer risk based rules that require a higher degree of involvement by states to ensure that systems do not install more treatment than is necessary to comply. These include provisions to protect against *Cryptosporidium* (Long Term 2 Enhanced Surface Water Treatment Rule or "LT2"), to control

¹³⁰ U.S. Environmental Protection Agency Safe Drinking Water Information System (SDWIS/FED), <http://www.epa.gov/safewater/data/getdata.html>.

disinfection by-products (Stage 2 Disinfectants and Disinfection Byproducts Rule or “Stage 2”), and to ensure quality water from ground water sources (Ground Water Rule). EPA also will assist states in implementing public water system health requirements for high-priority drinking water contaminants, including those covered under the Arsenic Rule and revised Lead and Copper Rule. By FY 2011, most water systems should be in compliance or on schedule to install treatment or develop alternative solutions to reduce their arsenic levels below the new standard. However, a small number of systems may be under exemptions or completing activities pursuant to an enforcement schedule. EPA will assist small water systems in choosing cost effective treatment technologies by maintaining and enhancing its Arsenic Virtual Trade Show website, continuing to disseminate results from its Arsenic Treatment Demonstration Program, and 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 addition, EPA will provide assistance to state staff on technical issues with regulations, including recognizing and preventing the potential unintended consequences of treatment decisions. EPA also will significantly expand its oversight and tracking of state programs as part of its small systems approach to improve compliance and sustainability, including development of new performance measures for the Agency. EPA will increase its guidance and oversight of the DWSRF to focus funding on compliance issues, and will produce new guidance to improve state capacity development programs. EPA also will develop information to promote voluntary restructuring of unsustainable water systems. Finally, EPA will work with states to better target drinking water infrastructure dollars toward rule compliance and system sustainability, and will partner with other Federal funding authorities to support these efforts.

In order to facilitate compliance with these newer rules, as well as existing rules, EPA will:

- Continue direct implementation of the Aircraft Drinking Water Rule, which will affect 63 airlines and over 7000 aircraft. EPA will provide training to the air carrier industry to facilitate compliance with the new requirements;
- 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, revised Lead and Copper Rule, and Total Coliform Rule, as well as simultaneous compliance. Monitoring under the Ground Water Rule begins in FY 2010. EPA will promote best practices related to operation and maintenance of small systems in support of long term compliance success with existing regulations;
- Provide training and technical assistance to states and to water systems that need to increase their treatment to comply with Stage 2 and LT2. Over 59,000 water systems will need to comply with the rules during 2011;

- 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. Additionally, EPA will continue working with states to identify underlying causes of data quality problems and take actions to improve quality;
- Work with states and regulated water systems to consider and develop alternatives for exchanging compliance data. This effort will include monitoring results to leverage technology, reduce costs, and provide the data more broadly;
- Work with state and local governments to better target Federal funding and other SDWA tools toward disadvantaged water systems to help small water systems meet the costs of complying with current and future drinking water standards; and
- 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).

Drinking Water Standards

In FY 2011, the Agency will assess the available information on health effects and occurrence data in drinking water to determine which Contaminant Candidate List (CCL 3) contaminants have sufficient information on which to evaluate the public health concern and make a decision whether or not to regulate the contaminant under the Safe Drinking Water Act. EPA will work to compile this information to make such determinations for at least five CCL 3 contaminants by 2012. The Agency also will continue to evaluate and address drinking water risks through activities to implement the Safe Drinking Water Act (SDWA) including:

- Responding to public comment on proposed revisions to the Total Coliform Rule. In addition, EPA will prepare a final rule which is scheduled for publication in 2012;
- 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;
- Analyzing three years of data on the frequency and level of occurrence of 25 unregulated contaminants in public water systems collected during the second Unregulated Contaminant Monitoring Rule (UCMR). EPA will propose the third round of UCMR monitoring (UCMR3) in FY 2011 and publish the final UCMR3 in FY 2012;

- Collaborating with stakeholders to undertake the highest priority research and information collection activities to better understand water quality issues in distribution systems;
- 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; and
- Compiling and analyzing information to support reviews of existing drinking water regulations for candidate contaminants as identified as part of the Agency's Six Year Review

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.

EPA will continue to assist drinking water utilities to be sustainable through successful business practices, by providing funding and technical assistance including the following:

- Providing states with funds for low-interest loans to assist utilities with financing drinking water infrastructure needs. In FY 2011, EPA will work with states to encourage targeting Federal financial assistance to support utility compliance with safe drinking water standards; EPA also will work with utilities to promote technical, financial, and managerial capacity as a critical means to meet infrastructure needs; further enhance program performance and efficiency; and ensure compliance;
- Continue to implement the Agency's multi-faceted DWSRF management strategy to ensure effective oversight of these funds and optimization of program outcomes;
- EPA will partner with states to leverage capacity development and operator certification work with asset management initiatives including source water protection approaches to manage water resources;
- EPA will engage states and other stakeholders to facilitate the voluntary adoption of sustainable practices by drinking water utilities; and
- Further, 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.

Additionally, in FY 2011, the Agency will collect data for the required fifth Needs Survey. The survey will document 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 survey to allocate DWSRF funds to the states and tribes beginning in FY 2014.

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 2011, 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; and
- 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.

Underground Injection Control (UIC)

The UIC Program safeguards current and future drinking water from the underground injection of contaminants. The UIC Program is responsible for regulating the construction, operation, permitting, and closure of injection wells that place fluids underground for storage or disposal. In FY 2011 the Agency will:

- Direct national UIC program efforts to protect underground sources of drinking water (USDW) by establishing priorities, developing guidance, measuring program results, administering the UIC Grants;

- Support a database for the UIC program. Specifically, EPA will implement the UIC database through orientation and training of users and leveraging opportunities to reach users through their national association. The Agency will continue activities to work with the states to fully populate the UIC database, targeted to include 68 UIC programs and 500,000 wells by 2012. EPA will support mapping of each state's data for initial submissions and transition from paper reporting to electronic reporting for states that pass Quality Assurance/Quality Control parameters;
- Expand permitting associated with disposal of wastes for energy extraction to keep pace with the nation's burgeoning energy exploration and development. By FY 2011, U.S. energy production is expected to grow by almost nine percent from FY 2006 levels, according to the Department of Energy's (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's 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 USDWs; and
- Carry out responsibilities in permitting current and future geologic sequestration (GS) of carbon dioxide projects. FY 2011 funding for carbon sequestration work is increased to \$3.7million. Activities planned for FY 2011 include:
 - Complete development of the rule and supporting documents (i.e., technical support documents, guidance documents, a response to comments document, and implementation materials) for the GS of carbon dioxide recovered from emissions of power plants and other facilities;
 - Analyze data collected through DOE pilot projects and industry efforts to inform the regulatory development process;
 - Coordinate with national laboratories conducting research on GS (including modeling, USDW protection, and site-specific studies on ground water and drinking water issues related to GS);
 - Engage states and stakeholders through meetings, workshops, public outreach, and other avenues, as appropriate; and
 - Provide technical assistance to states that provide permits for GS projects.
- Continue work with the Office of Research and Development to understand key issues, identify knowledge gaps, and answer complex technical questions on GS in order to ensure USDWs are not placed at risk;
- Review and revise the UIC Grant Allocation Funding Model to account for the GS well class definitions, national Class V inventories, and primacy; and

- In FY 2011, EPA is requesting an additional \$1.1 million to work with states and regions implementing UIC regulations for GS. This includes completing guidance to implement the rule (e.g., monitoring, modeling, and Area of Review determinations), training permit writers to review complex data, and communicating that there is a protective program in place for GS wells.

Work under this program project supports the Agency's new High Priority Performance Goal (HPPG), addressing water quality (specified in full in Appendix A).

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	People receiving drinking water that meets all applicable health-based standards per million dollars spent to manage the national drinking water program.				131,000	People/Million

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance.)	95	88	95	95	Percent CWSs

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	90	89.1	90	90	Percent Systems

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of person months during which community water	95	97.2	95	95	Percent Months

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	systems provide drinking water that meets all applicable health-based standards.					

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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	87	81.2	87	87	Percent Population

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 including effective treatment & source water protection.	90	92.1	90	91	Percent Population

*Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,875.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$1,116.0) This increase will enable EPA to work with the states to implement UIC regulations for GS of carbon dioxide including: completing guidance, training permit writers, and providing communication and outreach as part of the Clean Energy and Climate Change Initiative.
- (+\$250.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a web or video conference format. In order to be successful, strategic investments in video/web conferencing capabilities are

necessary. Funds will support the creation of multi-use conference rooms in selected locations, as well as the needed internet capacity.

- (-\$119.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$18.0) This reflects a realignment of the Agency's IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the IT/Data Management program.
- (-0.3 FTE) This change reflects EPA's Workforce management strategy that will help the Agency better align resources, skills and Agency priorities. This reduction realigns funds to support Clean Energy, Climate Change, and Children's Health activities.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$13,064.7</i>	<i>\$13,397.0</i>	<i>\$13,590.0</i>	<i>\$193.0</i>
Total Budget Authority / Obligations	\$13,064.7	\$13,397.0	\$13,590.0	\$193.0
Total Workyears	44.0	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, invasive species, sustainable ports, and the marine transportation system. EPA will integrate its management of the oceans and coasts across Federal agencies and with state, Tribal and local management.

Major areas of effort include:

- Developing and implementing regulations and technical guidance to control pollutants from vessel operational discharges 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.
- Strengthening our knowledge of the oceans and coasts by operating the Ocean Survey Vessel (OSV) *Bold* to monitor coastal and ocean waters. This includes supporting ocean disposal site management and conducting baseline and trends assessments (e.g., Gulf of Mexico hypoxic zone, climate change indicators, and coral reefs).
- Participating in international marine protection programs with other Federal agencies through negotiations of international standards that address vessel-related sources of aquatic invasive species, harmful antifoulants, operational discharges from vessels, dumping of wastes at sea, and marine debris.
- Working with a wide variety of stakeholders to develop and implement ecosystem-based 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 2011 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 actively support implementation of the National Ocean Policy by working with states, tribes, interstate agencies, and others on enhancing the quality of our valuable coastal and ocean resources and by implementing sustainable marine and land use practices. The health of ocean and coastal waters, as well as progress toward meeting strategic targets, will be tracked through periodic issuance of National Coastal Condition reports, which are a cooperative project with other Federal agencies, and using the *OSV Bold* to improve our knowledge of our oceans and coasts. Key FY 2011 actions include:

Controlling Vessel Operational Discharges

- Develop management practices and associated performance standards for discharges incidental to the normal operation of recreational vessels.
- Continue support of implementation and reissuance of the Clean Water Act Vessel General Permit.
- Continue to participate in site visits and the review of clean up plans for individual Navy and Maritime Administration vessel-to-reef projects.
- Continue to coordinate and support the U.S. Coast Guard activities to develop and implement ballast water discharge standards.
- Continue to participate on U.S. delegation to the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO) to develop international standards and guidance under MARPOL (the International Convention for the Prevention of Pollution from Ships) and other IMO Conventions addressing operational discharges from ships.
- Continue assessing program success in reducing sewage discharges from vessels and enhancement of controls for sewage discharges from vessels.
- 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:

- 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.
- 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 2011, the *OSV Bold* will continue to support 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 the 65 active ocean disposal sites, monitoring 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.

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.
- 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

EPA will continue to participate in the implementation of the objectives laid out in the Interagency Oceans Policy Task Force in 2009. The National Oceans Policy and the Framework for Coastal and Marine Spatial Planning strengthen the work that the Federal government conducts with states, tribes, and other stakeholders to protect vital resources in our oceans, coasts, and the Great Lakes. The Policy will help EPA and the rest of the Federal family to leverage information and sound science to promote a healthy environment and a healthy economy. Coastal and Marine Spatial Planning (CSMP) will help EPA achieve its goals for clean and safe water, especially for its geographic programs for the Great Lakes, Chesapeake Bay, Puget Sound, San Francisco Bay and the 28 estuaries that make up the National Estuary Program. The proposed geographic scope of CSMP extends inland to the mean high water line, and includes inland bays and estuaries in both coastal and Great Lakes settings. By bringing together all relevant Federal government datasets pertaining to interactions and impacts across the land-sea boundary, CMSP provides an important new tool for implementing EPA programs and those of other Federal agencies. EPA also will:

- Participate 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.
- Continue participation on the Committee on Marine Transportation System (CMTS) regarding environmental issues such as dredging and ship channel configuration, as well as reducing pollutant sources during operations and cargo handling. The CMTS is a cabinet-level committee and has an established partnership amongst 18 different Federal agencies.
- Continue participation on an interagency working group tasked to review and make recommendations in a report to Congress on best management practices for the storage and disposal of obsolete vessels owned or operated by the Federal Government.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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).	98	99	98	95	Percent Sites

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$177.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$16.0) This reflects an increase to support marine ecosystem monitoring and protection.

Statutory Authority:

Certain Alaskan Cruise Ship Operations Act (PL 106-554); Clean Boating Act (PL 110-288); CWA; CZARA of 1990; FIFRA; Liberty Ship Act (16 U.S.C. §§ 1220, et seq.), 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program & Management</i>	<i>\$200,635.0</i>	<i>\$208,626.0</i>	<i>\$226,471.0</i>	<i>\$17,845.0</i>
Total Budget Authority / Obligations	\$200,635.0	\$208,626.0	\$226,471.0	\$17,845.0
Total Workyears	1,064.1	1,106.5	1,129.5	23.0

Program Project Description:

The 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 implement programs on a watershed basis.

The Surface Water Protection program supports the Healthy Communities initiative which will address pressing water quality challenges facing America's urban watersheds. The program will target the Mississippi River Basin to demonstrate how effective implementation strategies and enhanced partnerships can yield significant progress in addressing non-point source driven pollution.

FY 2011 Activities and Performance Plan:

In FY 2011, 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) (\$43 million), water monitoring (\$24 million, including \$5.1 million for the Monitoring Initiative), Total Maximum Daily Loads (TMDLs) (\$29 million), watershed and nonpoint source management (\$39 million), sustainable infrastructure management (\$19 million), water infrastructure grants management (\$13 million), and CWA Section 106 program management (\$7 million). New in FY 2011 are programs for Community Water Priorities and the Mississippi River Basin.

As part of the Healthy Communities Initiative, EPA will launch the Community Water Priorities program to address issues related to urban waters. Many urban waters are impaired by pathogens, excess nutrients, and contaminated sediments that result from sanitary sewer and combined sewer overflows, polluted runoff from urban landscapes, and legacy contamination. Under this initiative, EPA will assist communities, particularly underserved communities, in restoring urban waterways and the surrounding land through partnerships with governmental and non-governmental organizations. Areas of focus may include innovative civic engagement and public outreach,

youth involvement, risk screening, environmental education, sustainable financing, technical support and training, and development of an urban waters vision plan. The Agency also will provide targeted technical assistance to showcase communities and small grant recipients to help them achieve their water restoration and community engagement goals. Activities include immediate support to on-the-ground projects, specialized expertise on sediment issues, and an urban waters strategy and action plan. This new grant program will be funded under the Environmental Programs and Management Appropriation under a grant authority in section 104 of the Clean Water Act. It will be developed based on a pilot conducted in 2010 under the Targeted Watershed Grants under the State and Tribal Assistance Grants Appropriation. The 2010 pilot was competed to answer issues regarding urban water impairments and lack of community engagement and how to best address water quality issues through capacity building activities using a watershed approach.

EPA requests resources to establish a Mississippi River Basin program to address excessive nutrient loadings that contribute to water quality impairments in the basin and, ultimately, to hypoxic conditions in the Gulf of Mexico. Working with the Gulf of Mexico Alliance and other states within the Mississippi/Atchafalaya River Basins, and other Federal agencies – in particular with the Department of Agriculture (USDA) and the U.S. Geological Survey (USGS) – EPA will help target efforts within critical watersheds to implement effective strategies that can yield significant progress in addressing nonpoint source nutrient pollution. Specifically, EPA will increase support of state efforts to design watershed plans in the Mississippi River Basin watershed; promote sustainable agricultural practices; collaborate to leverage and focus the most effective nutrient and sediment reduction practices; work with Federal and state partners to focus wetland restoration and development; and support critical monitoring needs in the Basin to inform decision-making. This initiative also will support other key goals outlined in the Hypoxia Action Plan 2008, as well as the Gulf of Mexico Alliance Governor’s Action Plan II, that target the reduction of nonpoint source nutrient pollution in the Mississippi watershed, including investigating the economic costs of hypoxia and the benefits of nutrient reduction, and developing key indicators of progress. This initiative will also support a grant program targeted to the Mississippi River Basin to assist states, local communities and agricultural organizations in developing and implementing strategies that will create results for the Mississippi River and Gulf ecosystems.

EPA will continue to implement an Appalachian Coal Mining Interagency Action Plan (IAP) that was signed with the Department of Interior and the Army Corps of Engineers on June 11, 2009, to significantly reduce the harmful effects of Appalachian surface coal mining operations (http://www.epa.gov/owow/wetlands/pdf/Final_MTM_MOU_6-11-09.pdf). Sections 404 and 402 activities will include development of program guidance, permit reviews and technical assistance. Based on its review in 2010 of existing regulatory authorities and procedures, EPA will consider regulatory and/or policy modifications to better protect the environment and public health from the impacts of Appalachian surface coal mining.

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 2011, EPA requests an additional \$2 million to complete funding requested in FY 2010 to 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, pathogens and chemical pollutants 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 2011.

Excessive nutrients continue to be one of the leading causes for impaired waters. Although some progress has been made, much remains to be done. A key element to making progress is the development of numerical nutrient water quality standards. However, many states lack the technical and financial resources to develop them. EPA will continue to provide assistance to the states to accelerate adoption of numerical nutrient standards and to support Federal determinations or promulgations.

In FY 2011, 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 also recent increases in the scope of the program arising from court orders and environmental issues. EPA also will focus on several other key strategic objectives for the NPDES and effluent guideline programs:

- Conduct 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 the use of electronic and other streamlining tools. The foundation of these efforts is to reinforce nationally the importance of strong science and the adherence to the law.
- 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 using integrated wet weather management.
- Implement strategies to improve management of pretreatment programs. Strategies include: pretreatment training for regions and states, including onsite and web-based and self-directed courses; implementation of pretreatment program results-based measures based on a pilot study evaluating nine draft results-based measures; a Measures Handbook for Publicly Owned Treatment Works (POTWs) finalized in FY 2010 to discuss the environmental links between the regulation, their oversight activities, and their watershed impact; and updated checklists and guidance for POTW program development.

- Issue the annual plan that describes the CWA-mandated review of industrial categories to determine if new or revised effluent guidelines are warranted.
- Respond to public comment and continue development of regulations for discharges from airport deicing facilities, and also for aquatic protection at cooling water intakes.
- Continue development of regulatory options to control wastewater discharges from coal-fired power plants.

In FY 2011, EPA will continue to focus on a number of relatively new NPDES, effluent guideline, and nonpoint source program areas. These areas of increased environmental concern emphasize the need to engage the network of Federal, state, and local partners to take actions that are needed to protect the environment.

- The Clean Water Act regulations for Concentrated Animal Feeding Operations (CAFOs) were revised in 2003 and further revised in 2008 in response to a 2nd Circuit Court ruling. This effort continues to evolve as a result of litigation. EPA expects to continue to develop implementation guidance and work with states and tribes to fully implement the CAFO rule to assure that all CAFOs that discharge waste obtain NPDES permit coverage. EPA also will work with permitting authorities to identify which CAFOs need to obtain 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.
- In response to the Chesapeake Bay Executive Order, EPA will conduct significant new regulatory, permitting, modeling, reporting and planning efforts for the Agency. Examples of these actions include the development of a stormwater regulation and the development of revised CAFO implementation guidance and regulations. In addition, EPA will continue to support states and EPA Regional Offices in effectively implementing the NPDES program to improve the health of the watershed.
 - The Agency is developing a rule to strengthen stormwater regulations, which includes a set of provisions that are national in scope, while building a record to support options for going beyond national requirements in the Chesapeake Bay watershed. The national rulemaking will propose requirements for stormwater discharges from, at a minimum, newly developed and redeveloped sites. As part of this effort, EPA will consider redefining the area subject to Federal regulation. EPA also will consider imposing more stringent requirements within the Chesapeake basin, such as: more extensively redefining municipal separate storm sewer system (MS4)-regulated areas, establishing more stringent post-construction requirements, and applying these requirements to smaller sites.
 - The Agency intends to propose regulations for CAFOs to more effectively address pollution reductions necessary to achieve the objectives of the TMDL for the Chesapeake Bay Watershed. The CAFO rulemaking process may

consider expanding the universe of CAFOs and requiring more stringent standards for permits (e.g. better nutrient management planning) for CAFOs in the Bay. Additionally, options for a streamlined designation process and better off-site manure management may be considered for the Bay or nationally.

- As a result of a 2006 court ruling, approximately 70,000 vessels that were previously exempt from permitting are now covered by an NPDES permit. On December 18, 2008, EPA issued a new NPDES general permit to regulate 26 types of discharges from vessels operating in U.S. waters. EPA will develop tools and training to implement the vessel permit, to review and approve state vessel permitting programs, and to provide outreach to the regulated community. In addition, EPA is developing scientific protocols and models to determine how to more effectively control the introduction of numerous aquatic invasive species into our nation's waters from ballast water discharges. Ballast water discharges have resulted in the introduction of numerous aquatic invasive species, resulting in severe degradation of many ecosystems and billions of dollars of economic damages.
- In late 2008, the National Academies of Sciences/National Research Council (NRC) issued an assessment of the national stormwater program. EPA is engaged in data collection and analysis to revise the stormwater regulation to better address pollutants from stormwater to be consistent with NRC recommendations. Stormwater is a main contributor of nutrients and sediments which are two of the top three pollutants impairing waters in the U.S.
- As a result of a January 7, 2009 court ruling, EPA is required to issue permits to pesticide applicators that discharge to waters of the U.S. EPA will issue and develop a precedent setting general permit for the application of pesticides to waters of the U.S. EPA will propose the permit in 2010 and finalize the permit in 2011. EPA must assist the 45 authorized states in developing their own general permits and assist in a national effort to educate the pesticides application industry regarding how to comply with the new permits. As a result, EPA will collect data, issue permits, and conduct inspections for a large universe of pesticide applications. EPA also must develop and assist states in implementing enforcement programs for pesticides. Pesticides that are applied to water—or that enter water as a result of off-target application of specific pesticides—may be highly toxic and may cause fish kills, die-offs of crabs, lobsters, bird deaths and human illnesses.
- EPA will be reconsidering the 2006 NPDES regulations for water transfers to determine how best to address adverse environmental impacts from water transfers. EPA will be coordinating with other Federal agencies including USDA, US Army Corps of Engineers, and Department of Interior on this effort.

In FY 2011, 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 2011,

EPA, states, and tribes will collaborate to conduct field sampling for the wetlands baseline survey to be completed and published in an FY 2013 report, and will be analyzing data from the fifth statistically-valid survey of coastal waters to report trends in FY 2012. EPA, states, and tribes also will prepare the second report on the condition of wadeable streams, which will track changes since the baseline survey issued in 2006. This report will include a baseline assessment of the condition of rivers nationally. A portion of the FY 2011 CWA Section 106 Monitoring Initiative funds will be used for sampling and analysis for the second statistically-valid survey of lakes nationwide, with a report scheduled in 2014.

In FY 2011, 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 publicly accessible STORET Data warehouse, using the Water Quality Exchange (WQX) framework, makes it easier for states, tribes and other organizations to submit data directly and share water quality monitoring data over the Internet. 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 and programs. In FY 2011, EPA will continue to 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 development of watershed TMDLs, EPA 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. To assist in developing TMDLs for waters impaired by stormwater-source pollutants, EPA recently released two documents: 1) TMDLs to Stormwater Permits Draft Handbook (<http://www.epa.gov/owow/tmdl/stormwater/>), and 2) Incorporating Green Infrastructure Concepts into Total Maximum Daily Loads (TMDLs) (www.epa.gov/owow/tmdl/stormwater/pdf/tmdl_lid_final.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. Cumulatively, states and EPA have made significant

progress in the developing and approving of TMDLs, and have completed more than 41,800 total TMDLs through FY 2009.

Nonpoint source management is the integral piece 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 2011, 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.

In FY 2011, EPA will continue to provide nonpoint source program leadership and technical support to states, municipalities, watershed organizations and concerned citizens by:

- Creating, supporting, and promoting technical tools that states and tribes need to accurately assess water quality problems and analyze and implement solutions.
- Continuing a Web-based tool to support watershed planning called Watershed Central. The website includes a “wiki” - which is a Web tool designed to provide fast access to locally provided information on watershed management. EPA will organize this information, check it for accuracy, and promote access via the wiki and Watershed Central website. In addition, EPA will add a component to Watershed Central specifically for urban, underserved communities in support of the EPA’s Community Water Priorities program activities to promote information sharing within communities (<http://www.epa.gov/watershedcentral>).
- 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 also will 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 the 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 publication of a guide to protect aquatic ecosystems, the publication of a detailed Healthy Watersheds agenda with both short-term and long-term components, and enhancement of EPA's recently established Healthy Watersheds Website, www.epa.gov/healthywatersheds, which is 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.

EPA will continue to implement its Sustainable Infrastructure Strategy and work with its partners to facilitate the voluntary adoption of effective management practices by water sector utilities. The framework for EPA's efforts will be built around the promotion of a series of Attributes of Effectively Managed Utilities and Keys to Management Success, which are being promoted in partnership with six major water and wastewater professional associations. These Attributes define the outcomes that EPA and our partners believe all water utilities should strive to achieve in order to ensure the 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 three product categories (residential High-Efficiency Toilets (HETs) and bathroom faucets and accessories, and commercial urinals). In late 2009, the program also will release a new homes specification that provides benchmark criteria for water-efficient new homes, designed to save water indoors as well as outdoors. 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. Products may only bear the WaterSense label after being tested by an independent laboratory to ensure that they meet WaterSense specifications.

In FY 2011, the Agency will release its first voluntary specification for residential showerheads and for irrigation controllers. Additional specifications will be developed based on research done and input gathered in FY 2010, including for pre-rinse spray valves and other water-using products in the commercial sector. The Agency is considering other additional future product and

service categories in areas including residential plumbing and irrigation, commercial kitchens, and laboratories.

In less than four 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. At the end of FY 2009, close to 400 different models of high-efficiency toilets had earned the label, and more than 1,400 faucet models and accessories had 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 the end of fiscal year 2009, the program had more than 1,500 partners, including utilities from across the country that are adopting WaterSense as a key component of their water-efficiency efforts.

The partners are a key to building a strong network of stakeholders across the Nation to build awareness of the need for efficient use of water. EPA 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.

Policy and oversight of the Clean Water State Revolving Funds (CWSRFs), which provide low interest loans to help finance wastewater treatment facilities and other water quality projects, are supported by this program. In managing the CWSRF, EPA continues to work with states to meet several key objectives:

- Fund projects designed as part of an integrated watershed approach to sustain communities, encourage and support green infrastructure, and preserve and create jobs;
- Link projects to environmental results through the use of water quality and public health data;
- Maintain the excellent fiduciary condition of the funds;
- Continue to support states' efforts in developing integrated priority lists to address nonpoint source pollution, estuary protection, and wastewater projects; and
- Work with state and local partners to implement a sustainability policy including management and pricing to encourage conservation and to provide adequate long-term funding for future capital needs.

In FY 2011, several states will voluntarily submit data and documents for review and potential inclusion in the Clean Watersheds Needs Survey (CWNS) 2012 Report to Congress. The CWNS documents capital needs and compiles technical information for publicly-owned wastewater collection and treatment facilities, combined sewer overflows (CSOs) control facilities, stormwater management facilities, decentralized wastewater (septic) treatment systems, and nonpoint source (NPS) pollution control. CWNS data supports funding prioritization and outreach activities as well as 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of high priority EPA and state NPDES permits (including tribal) that are issued in the fiscal year.	95	144	95	95	Percent Permits

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	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.]	38,978	41,866	44,560	47,100	TMDLs

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of waters assessed using statistically valid surveys.	65	65	82	100	Percent Waters

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of submissions of new or revised water quality standards from States and Territories that are approved by EPA.	85	93.2	85	85	Percent Submissions

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Loading (pounds) of pollutants removed per program dollar expended.	368	368	371	377	Pounds

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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).	2,270	2,505	2,809	2,910	Segments

*Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$4,085.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$3,853.0/ +12.5 FTE) This reflects an increase for targeted technical assistance to assist underserved communities in restoring urban waterways for the Community Water Priorities program. This includes 12.5 FTE and \$1,650.0 in associated payroll to manage the program. In addition, a portion of the increase will provide a plain language Web presence and two Web 2.0 tools to demonstrate the value of access to information in underserved communities. These tools will allow communities to share information and collaborate on water quality issues.
- (+\$3,782.0/ +15.0 FTE) This funding supports new work in the upper Mississippi River Basin. Funds will support the applicable nonpoint source control recommendations of the Nutrients Innovations Task Group and Gulf of Mexico Hypoxia Action Plan in the Upper Mississippi River Basin. This includes \$1,986.0 in associated payroll and 15.0 FTE.

- (+\$5,500.0) This increase reflects grants for the Community Water Priorities program to address water quality challenges in urban watersheds and to build the capacity of disadvantaged communities through projects that revitalize these watersheds.
- (-\$1,094.0/ -4.1 FTE) This reflects a redirection of Mountaintop Mining resources for the Appalachian Coal Mining Interagency Action Plan from Surface Water Protection to the Wetlands program project. This change includes associated payroll of -\$525.0 and -4.1 FTE. Intensive measures were needed in FY 2010 but workload will stabilize in FY 2011.
- (-\$730.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$250.0) This decrease reflects a redirection of resources to the Research Human Health and Ecosystems program which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife. Various programs have contributed to maintaining this database.
- (+\$2,000.0) This increase will complete funding requested in 2010 for important work to reduce nutrients and to improve water quality.
- (-\$51.0/ -0.4 FTE) This change reflects EPA's Workforce management strategy that will help the Agency better align resources, skills and Agency priorities. This reduction realigns funds to support Clean Energy, Climate Change, and Children's Health activities.

Statutory Authority:

CWA.

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**APPROPRIATION: Inspector General
Resource Summary Table
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Inspector General				
<i>Budget Authority</i>	\$40,605.1	\$44,791.0	\$45,646.0	\$855.0
<i>Recovery Act Budget Authority</i>	\$1,767.6			
Total Dollars	\$42,372.7	\$44,791.0	\$45,646.0	\$855.0
Total Workyears	232.4	296.0	296.0	0.0

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]\$45,646,000, to remain available until September 30, [2011]2012.(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010)

**Program Projects in IG
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Audits, Evaluations, and Investigations				
Audits, Evaluations, and Investigations	\$40,605.1	\$44,791.0	\$45,646.0	\$855.0
Subtotal, Audits, Evaluations, and Investigations	\$40,605.1	\$44,791.0	\$45,646.0	\$855.0
Recovery Act Resources				
Recovery Act Resources	\$1,767.6			
TOTAL, EPA	\$42,372.7	\$44,791.0	\$45,646.0	\$855.0

Program Area: Audits, Evaluations And Investigations

Audits, Evaluations, and Investigations

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 2009 Actuals	FY 2010 Enacted	FY 2011 IG Request	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Inspector General</i>	<i>\$42,372.7</i>	<i>\$44,791.0</i>	<i>\$54,791.0</i>	<i>\$45,646.0</i>	<i>\$855.0</i>
<i>Budget Authority</i>	<i>\$40,605.1</i>	<i>\$44,791.0</i>	<i>\$54,791.0</i>	<i>\$45,646.0</i>	<i>\$855.0</i>
<i>Recovery Act Budget Authority</i>	<i>\$1,767.6</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
Hazardous Substance Superfund	\$10,314.2	\$9,975.0	\$9,975.0	\$10,156.0	\$181.0
Total Budget Authority / Obligations	\$52,686.9	\$54,766.0	\$64,766.0	\$55,802.0	\$1,036.0
Total Workyears	293.5	361.8	361.8	361.8	0.0

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. The Recovery Act provided the Office of Inspector General (OIG) \$20 million in additional Budget Authority in FY 2009 available for obligation through FY 2012.

FY 2011 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 identify and resolve major management challenges. In FY 2011, the OIG will continue focusing on areas associated with risk, fraud, and waste, and will make recommendations to improve operating efficiency leading to greater transparency and the cost effective attainment of EPA’s strategic goals and positive environmental impacts. The OIG plans to examine issues related to grants and contracts, homeland security, internal controls/risk assessment, enforcement, program management,

measurement data verification, project management, effective resource management, research and follow-up on OIG recommendations.

Audits

Audits will be focused in five areas: (1) assistance agreements and contracts; (2) financial statement audits and other audits of Agency financial management; (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 focus on:

- unliquidated grant obligations;
- justification for, and oversight of, subcontracts;
- prevention of cost overruns and project delays;
- Agency oversight of Recovery Act funds;
- maximization of fixed price competitive contract awards;
- Agency oversight of interagency agreements;
- grantee and contractor compliance with grant and contract terms and conditions;
- identification of cost efficiencies in the Agency's infrastructure;
- workforce planning and utilization;
- internal and external network traffic management practices;
- progress completing the Data Standards Corrective Action Plan;
- the Agency's new Financial Management System and Facility Access Systems;
- the Agency's Quality Management Program;
- the Agency's risk assessment process and the allocation of resources;
- use of program performance measurement to improve efficiency and effectiveness.

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) Superfund; (3) water and enforcement; (4) cross-media, and (5) special reviews. Specific areas of evaluation will include evaluation of:

- integration of sustainability criteria in all Agency programs and activities;
- various Agency Recovery Act activities and projects;
- use of interagency and assistance agreements to augment the Agency's research mission;
- Agency oversight of State and Regional penalty assessments;
- Agency oversight of investigations and reviews that document environmental conditions at Brownfield sites;
- the effectiveness of quality assurance in the Brownfields program;

- the Agency's Environmental Results Program;
- the Agency's oversight of the Clean Air Act Settlement Agreements;
- efforts by the agency to monitor, assess, and act on threats from the production, use, and disposal of nanomaterials;
- how the Agency responds to emerging trends;
- potential approaches for leveraging, controlling, and allocating Agency program resources to reduce duplication;
- the Agency's organizational methods and policies;
- the Agency's program data and performance results.

Investigations

The majority of investigative work is reactive in nature. The OIG will prioritize its work by evaluating 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 as well as seek civil judgments to obtain recovery and restitution of financial losses. 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, opportunities for 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Environmental and business actions taken for improved performance or risk reduction.	318	272	334	334	Actions

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Environmental and business recommendations or risks identified for corrective action.	903	983	903	903	Recommendations

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations.	120	150	120	120	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Criminal, civil, administrative, and fraud prevention actions.	80	95	75	80	Actions

*Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$873.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$14.0) This change reflects a realignment of the Agency's IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the IT/Data Management program.
- (-\$4.0) This change reflects a realignment of OIG contract resources between the IG and Superfund appropriations.

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:

The following information is provided pursuant to the requirements of the Inspector General Reform Act:

- the aggregate budget request from the Inspector General for the operations of the OIG is \$64,766,000 (\$54,791,000 Inspector General; \$9,975,000 Superfund Transfer);
- the aggregate request in the President's Budget for the operations of the OIG is \$55,802,000 (\$45,646,000 Inspector General; \$10,156,000 Superfund Transfer);
- the portion of the aggregate request in the President's Budget needed for OIG training is \$875,000; and
- the portion of the aggregate request in the President's Budget needed to support the Council of the Inspectors General on Integrity and Efficiency (CIGIE) is \$155,000.

Certification from the Acting Inspector General:

"I certify as the Acting IG of the Environmental Protection Agency that the amount I have requested for training satisfies all OIG training needs for FY 2011."

The OIG's requested budget for FY 2011 represents a \$10,000,000 increase over the OIG's portion of the FY 2010 Enacted Budget (\$54,766,000 to \$64,766,000). The additional funding is necessary as a result of the following:

In the FY 2010 Enacted Budget, EPA received: 1) \$1,410,920,000 increase for the Clean Water State Revolving Fund; 2) \$557,971,000 increase in the Drinking Water State Revolving Fund; and 3) \$475,000,000 for the Great Lakes Restoration Initiative. The State Revolving funds will provide grants to states for water infrastructure projects. The Great Lakes Restoration Initiative will use funds to support projects targeting the most significant problems of the Great Lakes.

Grants funds have been long identified as areas of high risk and management challenges in their potential for: misapplication from the intended environmental purpose; lack of accountability and potential for fraud. To help ensure essential transparency and the greatest public environmental benefit, the Office of Inspector General (OIG) will provide oversight of how these funds are used and whether desired results are achieved through financial, forensic, and performance audits of EPA's State Revolving Fund programs, grants, interagency agreements, and cooperative agreements. The OIG will also conduct assistance agreement investigations of these same areas.

This specific increase in EPA's 2010 budget for grants, without a specific corresponding increase in OIG audits and investigations, renders these funds vulnerable to fraud, waste and abuse without the appropriate oversight to ensure they will be accounted for and applied to the intended purpose.

The Acting Inspector General has submitted comments setting forth the Acting Inspector General's conclusion that this Budget's request for the Office of Inspector General "would substantially inhibit the Inspector General from performing the duties of the office" under Section 6(f)(3)(E) of the Inspector General Act of 1978, as amended. A copy of the Acting Inspector General's official statement to the Director of OMB is included in the Appendix section of the congressional justification.

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**APPROPRIATION: Building and Facilities
Resource Summary Table
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Building and Facilities				
Budget Authority	\$37,842.7	\$37,001.0	\$40,001.0	\$3,000.0
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, [\$37,001,000]\$40,001,000, to remain available until expended[, of which up to \$500,000 shall be made available for preliminary planning and design of a high-performance green building to consolidate the multiple offices and research facilities of the Environmental Protection Agency in Las Vegas, Nevada].(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010.)

**Program Projects in B & F
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Homeland Security				
Homeland Security: Protection of EPA Personnel and Infrastructure	\$8,559.9	\$8,070.0	\$8,070.0	\$0.0
Operations and Administration				
Facilities Infrastructure and Operations	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
Subtotal, Facilities Infrastructure and Operations	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
TOTAL, EPA	\$37,842.7	\$37,001.0	\$40,001.0	\$3,000.0

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$6,648.8	\$6,369.0	\$6,391.0	\$22.0
Science & Technology	\$587.0	\$593.0	\$594.0	\$1.0
<i>Building and Facilities</i>	<i>\$8,559.9</i>	<i>\$8,070.0</i>	<i>\$8,070.0</i>	<i>\$0.0</i>
Hazardous Substance Superfund	\$1,203.6	\$1,194.0	\$1,194.0	\$0.0
Total Budget Authority / Obligations	\$16,999.3	\$16,226.0	\$16,249.0	\$23.0
Total Workyears	5.1	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 2011 Activities and Performance Plan:

In FY 2011, 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 Project.

FY 2011 Change from FY 2010 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

Facilities Infrastructure and Operations
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
Science & Technology	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
<i>Building and Facilities</i>	<i>\$29,282.8</i>	<i>\$28,931.0</i>	<i>\$31,931.0</i>	<i>\$3,000.0</i>
Leaking Underground Storage Tanks	\$895.5	\$904.0	\$916.0	\$12.0
Oil Spill Response	\$576.1	\$505.0	\$534.0	\$29.0
Hazardous Substance Superfund	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
Total Budget Authority / Obligations	\$481,429.3	\$496,978.0	\$510,344.0	\$13,366.0
Total Workyears	390.2	411.1	415.1	4.0

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 costing 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 2011 Activities and Performance Plan:

The resources requested are used to maintain EPA's research facilities, most being 30 or more years old, alter research facilities to meet legislated research requirements and other programmatic needs, and fund facility-related construction. EPA's inventory includes WWII era buildings that continue to deteriorate with time. Good stewardship practices ensure physical conditions, functionality, and research capabilities are not compromised. Additionally, the Agency applies these funds to meet Federal facility environmental objectives related to energy efficiency (annual energy use reductions of three percent per year through FY 2015), water conservation (annual water use reductions of two percent per year through FY 2020), advanced metering, storm water management, upgrading 15 percent of EPA's existing real estate portfolio to meet the standards of "high performance sustainable" green building standards by FY 2015, and reducing fossil fuel use in new buildings. These requirements are set out in Executive

Orders (EO) 13514 and 13423¹, the Energy Policy Act of 2005, and the Energy Independence and Security Act of 2007 (EISA). These efforts also improve operating efficiency and sustain safe work environments.

EPA's efforts will include implementing the findings and recommendations of comprehensive facility audits (e.g. safety, health, environmental management, energy, and water usage). EPA will further emphasize improving operating efficiency and encouraging the use of new, advanced technologies and energy sources. EPA will direct resources towards acquiring and adopting measures to reduce greenhouse gas emissions, and implementing energy load reduction strategies.

In an effort to reduce the Agency's travel footprint, EPA is promoting green travel and conferencing by equipping more facilities with video conferencing capability.

Performance Targets:

Work under this program supports the performance measure in the Facilities Infrastructure and Operations program project under the EPM appropriation. This measure can also be found in the Performance Four Year Array.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,000.0) This increase provides additional funding to meet the requirements of EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, which expands upon EO 13423, and requires the Agency to plan for Greenhouse Gas emission reduction, which would require substantial investment of B&F funding to retrofit EPA buildings and infrastructure, and increase usage of green power.
- (+\$2,000.0) The Agency is working to reduce its carbon footprint by promoting green travel practices and moving routine meetings to a Web or video conference format. In order to be successful, strategic investments in video/Web conferencing capabilities are necessary. Funds will support creation of multi-use conference rooms in selected locations, as well as the needed internet capacity. This initiative will allow EPA to continue meeting the three percent annual energy reduction targets set for Federal facilities in compliance with Executive Order 13423.

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, 13423, and 13514; Emergency Support Functions (ESF) #10 Oil and Hazardous Materials Response Annex; Homeland Security Presidential Decision Directive 63 (Critical Infrastructure Protection).

¹ Information is available at <http://www.fedcenter.gov/programs/eo13514/>, *Federal Leadership in Environmental, Energy, and Economic Performance*; and <http://www.fedcenter.gov/programs/eo13423/>, *Strengthening Federal Environmental, Energy, and Transportation Management*.

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**APPROPRIATION: Hazardous Substance Superfund
Resource Summary Table
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Hazardous Substance Superfund				
<i>Budget Authority</i>	\$1,385,412.2	\$1,306,541.0	\$1,293,060.0	(\$13,481.0)
<i>Recovery Act Budget Authority</i>	\$572,908.2			
Total Dollars	\$1,958,320.4	\$1,306,541.0	\$1,293,060.0	(\$13,481.0)
Total Workyears	3,106.5	3,193.3	3,180.4	-12.9

**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) [\$1,306,541,000]\$1,291,560,000, to remain available until expended, consisting of such sums as are available in the Trust Fund on September 30, [2009] 2010, as authorized by section 517(a) of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and up to [\$1,306,541,000]\$1,293,060,000 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]\$10,156,000 shall be paid to the "Office of Inspector General" appropriation to remain available until September 30, [2011] 2012, and [\$26,834,000]\$24,527,000 shall be paid to the "Science and Technology" appropriation to remain available until September 30, [2011] 2012.(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010.)

**Program Projects in Superfund
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Air Toxics and Quality				
Radiation: Protection	\$2,299.2	\$2,495.0	\$2,593.0	\$98.0
Audits, Evaluations, and Investigations				
Audits, Evaluations, and Investigations	\$10,314.2	\$9,975.0	\$10,156.0	\$181.0
Compliance				

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Compliance Assistance and Centers	\$22.0	\$0.0	\$0.0	\$0.0
Compliance Incentives	\$129.3	\$0.0	\$0.0	\$0.0
Compliance Monitoring	\$1,265.2	\$1,216.0	\$1,220.0	\$4.0
Subtotal, Compliance	\$1,416.5	\$1,216.0	\$1,220.0	\$4.0
Enforcement				
Environmental Justice	\$624.6	\$795.0	\$806.0	\$11.0
Superfund: Enforcement	\$172,412.0	\$172,668.0	\$176,532.0	\$3,864.0
Superfund: Federal Facilities Enforcement	\$9,265.5	\$10,570.0	\$10,909.0	\$339.0
Civil Enforcement	\$167.2	\$0.0	\$0.0	\$0.0
Criminal Enforcement	\$9,058.1	\$8,066.0	\$8,142.0	\$76.0
Enforcement Training	\$776.9	\$899.0	\$0.0	(\$899.0)
Forensics Support	\$2,695.9	\$2,450.0	\$2,501.0	\$51.0
Subtotal, Enforcement	\$195,000.2	\$195,448.0	\$198,890.0	\$3,442.0
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
Decontamination	\$177.0	\$198.0	\$0.0	(\$198.0)
Homeland Security: Critical Infrastructure Protection (other activities)	\$1,590.0	\$1,562.0	\$0.0	(\$1,562.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	\$1,767.0	\$1,760.0	\$0.0	(\$1,760.0)
Homeland Security: Preparedness, Response, and Recovery				
Decontamination	\$8,777.3	\$10,798.0	\$7,011.0	(\$3,787.0)
Laboratory Preparedness and Response	\$8,933.2	\$9,626.0	\$5,838.0	(\$3,788.0)
Homeland Security: Preparedness, Response, and Recovery (other activities)	\$37,768.9	\$33,156.0	\$29,425.0	(\$3,731.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	\$55,479.4	\$53,580.0	\$42,274.0	(\$11,306.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	\$1,203.6	\$1,194.0	\$1,194.0	\$0.0
Subtotal, Homeland Security	\$58,450.0	\$56,534.0	\$43,468.0	(\$13,066.0)
Information Exchange / Outreach				
Congressional, Intergovernmental, External Relations	\$7.3	\$0.0	\$0.0	\$0.0
Exchange Network	\$922.4	\$1,433.0	\$1,433.0	\$0.0

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Subtotal, Information Exchange / Outreach	\$929.7	\$1,433.0	\$1,433.0	\$0.0
IT / Data Management / Security				
Information Security	\$1,013.2	\$785.0	\$728.0	(\$57.0)
IT / Data Management	\$17,266.1	\$17,087.0	\$16,720.0	(\$367.0)
Subtotal, IT / Data Management / Security	\$18,279.3	\$17,872.0	\$17,448.0	(\$424.0)
Legal / Science / Regulatory / Economic Review				
Alternative Dispute Resolution	\$1,369.4	\$893.0	\$913.0	\$20.0
Legal Advice: Environmental Program	\$716.7	\$746.0	\$752.0	\$6.0
Subtotal, Legal / Science / Regulatory / Economic Review	\$2,086.1	\$1,639.0	\$1,665.0	\$26.0
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	\$45,071.8	\$44,300.0	\$41,888.0	(\$2,412.0)
Utilities	\$1,837.0	\$3,397.0	\$3,749.0	\$352.0
Security	\$6,056.1	\$8,299.0	\$8,412.0	\$113.0
Facilities Infrastructure and Operations (other activities)	\$21,245.8	\$22,486.0	\$22,588.0	\$102.0
Subtotal, Facilities Infrastructure and Operations	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
Financial Assistance Grants / IAG Management	\$2,932.5	\$2,945.0	\$3,318.0	\$373.0
Acquisition Management	\$23,521.1	\$24,684.0	\$24,337.0	(\$347.0)
Human Resources Management	\$5,475.1	\$5,580.0	\$7,081.0	\$1,501.0
Central Planning, Budgeting, and Finance	\$24,154.9	\$27,490.0	\$26,934.0	(\$556.0)
Subtotal, Operations and Administration	\$130,294.3	\$139,181.0	\$138,307.0	(\$874.0)
Research: Human Health and Ecosystems				
Human Health Risk Assessment	\$3,776.4	\$3,404.0	\$3,350.0	(\$54.0)
Research: Land Protection				
Research: Land Protection and Restoration	\$19,010.1	\$21,191.0	\$19,069.0	(\$2,122.0)
Research: Sustainability				
Research: Sustainability	\$96.0	\$73.0	\$0.0	(\$73.0)
Superfund Cleanup				
Superfund: Emergency Response and Removal	\$224,789.2	\$202,330.0	\$202,784.0	\$454.0

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Superfund: EPA Emergency Preparedness	\$9,934.8	\$9,632.0	\$9,776.0	\$144.0
Superfund: Federal Facilities	\$32,761.5	\$32,105.0	\$31,543.0	(\$562.0)
Superfund: Remedial	\$669,293.0	\$605,438.0	\$605,438.0	\$0.0
Superfund: Support to Other Federal Agencies	\$6,575.0	\$6,575.0	\$5,920.0	(\$655.0)
Brownfields Projects	\$106.7	\$0.0	\$0.0	\$0.0
Subtotal, Brownfields Projects	\$106.7	\$0.0	\$0.0	\$0.0
Subtotal, Superfund Cleanup	\$943,460.2	\$856,080.0	\$855,461.0	(\$619.0)
Recovery Act Resources				
Recovery Act Resources	\$572,908.2			
TOTAL, EPA	\$1,958,320.4	\$1,306,541.0	\$1,293,060.0	(\$13,481.0)

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$9,962.0	\$11,295.0	\$11,439.0	\$144.0
Science & Technology	\$2,484.4	\$2,095.0	\$2,127.0	\$32.0
<i>Hazardous Substance Superfund</i>	\$2,299.2	\$2,495.0	\$2,593.0	\$98.0
Total Budget Authority / Obligations	\$14,745.6	\$15,885.0	\$16,159.0	\$274.0
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 these sites, some of which are located near at-risk communities. Finally, the program ensures that appropriate technical assistance is provided on remediation approaches for National Priorities List (NPL) and non-NPL sites.

FY 2011 Activities and Performance Plan:

In FY 2011, 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. These nationally recognized 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 of these laboratories also provide specialized technical support on-site, including field measurements using unique tools and capabilities. In addition, they both provide data evaluation and assessment, document review, and field support through ongoing fixed and mobile capability. Thousands of radiochemical and mixed waste analyses are performed annually at NAREL on a variety of samples from contaminated sites. NAREL is EPA's only laboratory with this in-house mixed waste analytical capability. 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 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 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. Performance measures associated with this program project are included in Radiation Response Preparedness Programs under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$98.0) 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

Audits, Evaluations, and Investigations

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 2009 Actuals	FY 2010 Enacted	FY 2011 IG Request	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Inspector General	\$42,372.7	\$44,791.0	\$54,791.0	\$45,646.0	\$855.0
<i>Budget Authority</i>	<i>\$40,605.1</i>	<i>\$44,791.0</i>	<i>\$54,791.0</i>	<i>\$45,646.0</i>	<i>\$855.0</i>
<i>Recovery Act Budget Authority</i>	<i>\$1,767.6</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
<i>Hazardous Substance Superfund</i>	<i>\$10,314.2</i>	<i>\$9,975.0</i>	<i>\$9,975.0</i>	<i>\$10,156.0</i>	<i>\$181.0</i>
Total Budget Authority / Obligations	\$52,686.9	\$54,766.0	\$64,766.0	\$55,802.0	\$1,036.0
Total Workyears	293.5	361.8	361.8	361.8	0.0

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 Superfund program. OIG activities add value, promote transparency 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 and contract lab fraud. The Recovery Act provided the Office of Inspector General (OIG) \$20 million in additional Budget Authority in FY 2009 available for obligation through FY 2012.

FY 2011 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 identify and resolve major management challenges. In FY 2011, the OIG will focus on long term safety at Superfund sites, environmental data used to support actions and reported results, Superfund claims, amounts reported in financial statements, and areas associated with risk, fraud, and waste. The OIG will further identify high risk areas 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 and contractors 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 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. Therefore, the OIG will review:

- the reliability and validity of environmental data EPA receives from third parties;
- Agency actions to ensure long-term safety and appropriate reuse of Superfund sites;
- whether required five-year reviews have been completed for Federal facility Superfund sites;
- the use of remote sensing data reflecting environmental contamination of selected Superfund sites;
- the oversight of States' stewardship of land use restrictions and institutional controls;
- actions for preventing cost overruns and project delays, including the use of fixed-price contracts; and
- analyze the accuracy of Superfund claims.

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; and 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. OIG investigations will also pursue civil actions for recovery and restitution of financial

losses, and administrative actions to prevent unscrupulous persons and businesses from participating in EPA programs.

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, apprised of needed corrective actions, and will facilitate greater accountability for results from OIG operations. 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 also supports performance measures in the Audits, Evaluation, and Investigations program project under the OIG appropriation. These measures can also be found in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$177.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$4.0) This change reflects a realignment of OIG contract resources between the IG and Superfund appropriations.

Statutory Authority:

Inspector General Act, as amended; Inspector General Reform Act; SARA; CERCLA; TSCA.

Inspector General Reform Act:

The following information is provided pursuant to the requirements of the Inspector General Reform Act:

- the aggregate budget request from the Inspector General for the operations of the OIG is \$64,766,000 (\$54,791,000 Inspector General; \$9,975,000 Superfund Transfer);
- the aggregate request in the President's Budget for the operations of the OIG is \$55,802,000 (\$45,646,000 Inspector General; \$10,156,000 Superfund Transfer);

- the portion of the aggregate request in the President's Budget needed for OIG training is \$875,000; and
- the portion of the aggregate request in the President's Budget needed to support the Council of the Inspectors General on Integrity and Efficiency (CIGIE) is \$155,000.

Certification from the Acting Inspector General:

"I certify as the Acting IG of the Environmental Protection Agency that the amount I have requested for training satisfies all OIG training needs for FY 2011."

The OIG's requested budget for FY 2011 represents a \$10,000,000 increase over the OIG's portion of the FY 2010 Enacted Budget (\$54,766,000 to \$64,766,000). The additional funding is necessary as a result of the following:

In the FY 2010 Enacted Budget, EPA received: 1) \$1,410,920,000 increase for the Clean Water State Revolving Fund; 2) \$557,971,000 increase in the Drinking Water State Revolving Fund; and 3) \$475,000,000 for the Great Lakes Restoration Initiative. The State Revolving funds will provide grants to states for water infrastructure projects. The Great Lakes Restoration Initiative will use funds to support projects targeting the most significant problems of the Great Lakes.

Grants funds have been long identified as areas of high risk and management challenges in their potential for: misapplication from the intended environmental purpose; lack of accountability and potential for fraud. To help ensure essential transparency and the greatest public environmental benefit, the Office of Inspector General (OIG) will provide oversight of how these funds are used and whether desired results are achieved through financial, forensic, and performance audits of EPA's State Revolving Fund programs, grants, interagency agreements, and cooperative agreements. The OIG will also conduct assistance agreement investigations of these same areas.

This specific increase in EPA's 2010 budget for grants, without a specific corresponding increase in OIG audits and investigations, renders these funds vulnerable to fraud, waste and abuse without the appropriate oversight to ensure they will be accounted for and applied to the intended purpose.

The Acting Inspector General has submitted comments setting forth the Acting Inspector General's conclusion that this Budget's request for the Office of Inspector General "would substantially inhibit the Inspector General from performing the duties of the office" under Section 6(f)(3)(E) of the Inspector General Act of 1978, as amended. A copy of the Acting Inspector General's official statement to the Director of OMB is included in the Appendix section of the congressional justification.

Program Area: Compliance

Compliance Monitoring

Program Area: Compliance

Goal: Compliance and Environmental Stewardship

Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$98,457.1	\$99,400.0	\$110,467.0	\$11,067.0
Oil Spill Response	\$0.0	\$0.0	\$139.0	\$139.0
<i>Hazardous Substance Superfund</i>	<i>\$1,265.2</i>	<i>\$1,216.0</i>	<i>\$1,220.0</i>	<i>\$4.0</i>
Total Budget Authority / Obligations	\$99,722.3	\$100,616.0	\$111,826.0	\$11,210.0
Total Workyears	613.6	612.3	632.5	20.2

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, 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 2011 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 2011, the Compliance Monitoring program will include support and 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 2011, the Superfund portion of this program for ICIS-related work is \$190 thousand.

EPA will continue to make Superfund-related compliance monitoring information available to the public through the Enforcement and Compliance History On-line (ECHO) Internet website¹.

¹ For more information, refer to: <http://www.epa-echo.gov/echo/>

This site provides communities with information on compliance status. EPA will continue to develop additional tools and data for public use.

Performance Targets:

Work under this program also supports the performance measures in the Compliance Monitoring program project under EPM. These measures can also be found in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$4.0) This reflects an increase for payroll and cost of living for all existing FTE.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$5,460.3	\$7,090.0	\$7,317.0	\$227.0
<i>Hazardous Substance Superfund</i>	<i>\$624.6</i>	<i>\$795.0</i>	<i>\$806.0</i>	<i>\$11.0</i>
Total Budget Authority / Obligations	\$6,084.9	\$7,885.0	\$8,123.0	\$238.0
Total Workyears	19.6	32.9	32.9	0.0

Program Project Description:

EPA is committed to identifying and addressing the health and environmental burdens faced by communities disproportionately impacted by pollution. The EPA's Environmental Justice (EJ) program facilitates EPA's efforts to engage communities in key decision-making processes and to integrate environmental justice considerations in EPA programs, policies, and activities. The Superfund portion of the program focuses on issues that affect communities at or near Superfund sites. The EJ program complements and enhances the community outreach, like the Solid Water and Emergency Response program's Community Engagement Initiative, and other 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 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to enhance the integration of environmental justice principles into Agency decision-making process and collaborative problem-solving initiatives. The program conducts and supports work to "open its doors" to communities of color, Native Americans, the poor, and other historically underrepresented groups. It also promotes active engagement of community groups, other Federal agencies, states, local governments, and Tribal governments to recognize, support, and advance environmental protection and public health for vulnerable communities. The program will guide EPA's efforts to empower vulnerable communities to protect themselves from environmental harms and to build healthy and sustainable neighborhoods that enable disadvantaged groups to participate in the new green economy through financial and technical assistance. The program will partner with other Agency programs to create scientific analytical methods, a legal foundation, and public engagement practices that enable the incorporation of environmental justice considerations in EPA's regulatory and policy decisions. Finally, the EJ program will support Agency efforts to strengthen internal mechanisms to integrate environmental justice including communications and training, performance management and accountability measures, and workforce diversity.

² For more information on the Environmental Justice program, please refer to:
www.epa.gov/compliance/environmentaljustice/index.html.

Performance Targets:

EJ program performance is reflected in EPA program results that benefit disproportionately burdened minority, low-income, and Tribal populations. Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$11.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

Executive Order 12898; CERCLA, as amended.

Superfund: Enforcement
 Program Area: Enforcement
 Goal: Land Preservation and Restoration
 Objective(s): Restore Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Hazardous Substance Superfund</i>	<i>\$172,412.0</i>	<i>\$172,668.0</i>	<i>\$176,532.0</i>	<i>\$3,864.0</i>
Total Budget Authority / Obligations	\$172,412.0	\$172,668.0	\$176,532.0	\$3,864.0
Total Workyears	908.4	949.9	949.9	0.0

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 appropriated dollars to remediate the sites. In some cases, EPA takes both actions. When EPA uses appropriated 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 appropriated 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 reuse. 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 cleaning up more sites and preserving 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 \$30 billion (\$25.4 billion for cleanup work and \$5.4 billion in cost recovery).

FY 2011 Activities and Performance Plan:

Throughout FY 2011, 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 appropriated funds. 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 \$200 thousand. The Agency also will continue efforts to recover past costs at sites where total costs are below \$200 thousand in the most cost-efficient manner possible.

In FY 2011, the Agency will negotiate remedial design/remedial action cleanup agreements and removal agreements at contaminated properties to address contamination impacting local communities. 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 EPA's 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 2009, 948 site-specific special accounts were established and over \$2.96 billion was deposited into special accounts (including earned interest). Approximately \$1.43 billion from special accounts has been disbursed by EPA to finance site response actions and another \$184.3 million has been obligated but not yet disbursed. EPA is carefully managing the \$1.34 billion that was available as of October 1, 2009 and has developed multi-year plans to use these funds as expeditiously as possible.

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 2011, 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 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Refer to DOJ, settle, or write off 100% of Statute of Limitations (SOLs) cases for SF sites with total unaddressed past costs equal to or greater than \$200,000 and report value of costs recovered.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA.	95	100	95	95	Percent

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$4,204.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (+\$45.0) This increase in grants reflects support for the Superfund Enforcement activities, including PRP searches.
- (-\$316.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

- (-\$69.0) The reduction reflects a decrease of IT and telecommunications resources.

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

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Hazardous Substance Superfund</i>	\$9,265.5	\$10,570.0	\$10,909.0	\$339.0
Total Budget Authority / Obligations	\$9,265.5	\$10,570.0	\$10,909.0	\$339.0
Total Workyears	57.7	67.5	67.5	0.0

Program Project Description:

The Superfund Federal Facilities Enforcement program ensures that sites with Federal entities performing Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) responses 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 2011 Activities and Performance Plan:

Pursuant to 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 2011 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, take appropriate enforcement actions to address noncompliance, 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 Civil Enforcement measure of Pounds of Pollutants Reduced metric. 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$369.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (-\$30.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$45,527.6	\$49,637.0	\$51,312.0	\$1,675.0
<i>Hazardous Substance Superfund</i>	<i>\$9,058.1</i>	<i>\$8,066.0</i>	<i>\$8,142.0</i>	<i>\$76.0</i>
Total Budget Authority / Obligations	\$54,585.7	\$57,703.0	\$59,454.0	\$1,751.0
Total Workyears	271.5	291.8	291.8	0.0

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 identifies cases to be considered for prosecution. Where appropriate, it helps secure plea agreements or sentencing conditions that will require defendants to undertake projects to improve environmental conditions or develop environmental management systems to enhance performance. The Agency is involved in all phases of the investigative process and works with other law enforcement agencies to present a highly visible and effective force in the Agency’s overall enforcement strategy. Cases are presented to the Department of Justice for prosecution, with EPA special agents serving as key witnesses in the proceedings.

The program also participates in task forces with state and local law enforcement, and provides specialized training at the Federal Law Enforcement Training Center (FLETC) in Glynco, GA. FLETC provides one of the few opportunities for state, local, and Tribal environmental enforcement professionals to obtain criminal investigation training.⁴

FY 2011 Activities and Performance Plan:

In FY 2011, 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.

⁴ For more information visit: <http://www.epa.gov/compliance/criminal/index.html>.

The program will have completed its three-year hiring strategy of raising its special agent workforce to 200 criminal investigators by the end of FY 2010. These resources will allow the program to maximize its capacity in supporting efforts to address complex environmental cases in FY 2011.

The Criminal Enforcement program is developing a methodology to “tier” significant cases based upon categories of human health and environmental impacts (e.g., death, serious injury, human exposure, remediation), release and discharge characteristics (e.g., hazardous or toxic pollutants, continuing violations), and subject characteristics (e.g., national corporation, recidivist violator). Working with its international, 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. 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 that allow 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 2011, the program will continue to use data from the electronic Criminal Case Reporting System (CCRS). 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 and continue to use the Fugitive Website to enlist the public and law enforcement agencies to help apprehend defendants who have fled the country or are in hiding rather than face prosecution for alleged environmental crimes or sentencing for crimes for which they have been found guilty. During FY 2009, three fugitives were captured, and two more surrendered to law enforcement authorities.

Performance Targets:

Results will first become available for these measures at the end of FY 2010, and will be reported in the FY 2010 Performance and Accountability Report (PAR) and the FY 2012 Congressional Justification.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$130.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$20.0) This change reflects a realignment of IT and telecommunications resources.
- (+\$81.0) This change represents increased travel support for criminal investigations.
- (-\$155.0) This change reflects a redirection of contractor support for the criminal investigators to support travel.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$3,110.6	\$3,278.0	\$0.0	(\$3,278.0)
<i>Hazardous Substance Superfund</i>	\$776.9	\$899.0	\$0.0	(\$899.0)
Total Budget Authority / Obligations	\$3,887.5	\$4,177.0	\$0.0	(\$4,177.0)
Total Workyears	22.3	20.8	0.0	-20.8

Program Project Description:

The Pollution Prosecution Act of 1990 requires EPA to provide environmental compliance and enforcement training nationwide through the National Enforcement Training Institute (NETI). The Enforcement Training program oversees the design and delivery of core and specialized enforcement courses, through NETI⁵, that sustain a well-trained workforce to carry out the Agency's enforcement and compliance goals. Courses are provided to lawyers, inspectors, civil and criminal investigators, and technical experts at all levels of government.

FY 2011 Activities and Performance Plan:

In FY 2011, funding under the Enforcement Training program will be eliminated. There will be reductions to NETI's classroom training and the remaining resources supporting web-based training will be transferred to the Compliance Monitoring program.

Performance Targets:

Currently, there are no specific performance measures for this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$845.0/ -5.2 FTE) This reduction, including \$708.0 in payroll, streamlines NETI by eliminating Superfund funding for classroom training and taking advantage of web-based tools.
- (-\$54.0) This reduction reflects the transfer of remaining Enforcement Training activities to the Compliance Monitoring program.

Statutory Authority:

PPA; RLBPHRA; RCRA; CWA; SDWA; CAA; TSCA; EPCRA; TSCA; FIFRA; ODA; NAAEC; LPA-US/MX-BR; NEPA.

⁵ For more information, refer to: <http://www.epa.gov/compliance/training/neti/index.html>

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$14,450.6	\$15,351.0	\$15,909.0	\$558.0
<i>Hazardous Substance Superfund</i>	<i>\$2,695.9</i>	<i>\$2,450.0</i>	<i>\$2,501.0</i>	<i>\$51.0</i>
Total Budget Authority / Obligations	\$17,146.5	\$17,801.0	\$18,410.0	\$609.0
Total Workyears	97.6	105.2	105.2	0.0

Program Project Description:

The Forensics Support program provides specialized scientific and technical support for the nation's most complex Superfund (SF) 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 2011 Activities and Performance Plan:

Efforts to stay at the forefront of environmental enforcement in FY 2011 will include continuing use of customized laboratory methods to identify potentially responsible parties. In response to SF 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.

In FY 2011, NEIC will continue to function under rigorous ISO requirements for environmental data measurements to maintain its accreditation. The program also will continue development of emerging technologies in field measurement and laboratory analytical techniques, as well as identification of pollution sources at abandoned SF and other waste sites.

Performance Targets:

Currently, no specific performance measures exist for this Program Project.

⁶ For more information, refer to: <http://www.epa.gov/compliance/neic/index.html>.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$47.0) This reflects an increase for payroll and cost of living for all existing FTE.
- (+\$15.0) This change reflects an increase in support costs for the forensics laboratory at the National Enforcement Investigations Center.
- (-\$11.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$6,837.2	\$6,836.0	\$2,415.0	(\$4,421.0)
Science & Technology	\$23,961.7	\$23,026.0	\$16,105.0	(\$6,921.0)
<i>Hazardous Substance Superfund</i>	<i>\$1,767.0</i>	<i>\$1,760.0</i>	<i>\$0.0</i>	<i>(\$1,760.0)</i>
Total Budget Authority / Obligations	\$32,565.9	\$31,622.0	\$18,520.0	(\$13,102.0)
Total Workyears	47.8	49.0	28.0	-21.0

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 2011 Activities and Performance Plan:

There is no request for this program in FY 2011.

Performance Targets:

Work under this program supports multiple strategic objectives. There are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$1,760.0/-8.2 FTE) Beginning in FY 2011, EPA will not need to maintain separate capacity to support environmental criminal investigations and training for terrorism related investigations. This reduction reflects the increased capacity of other agencies to handle the environmental forensics work associated with potential homeland security related incidents. This reduction includes 8.2 FTE and associated payroll of \$1,418.0.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$3,054.1	\$3,423.0	\$2,012.0	(\$1,411.0)
Science & Technology	\$41,771.8	\$41,657.0	\$34,598.0	(\$7,059.0)
<i>Hazardous Substance Superfund</i>	<i>\$55,479.4</i>	<i>\$53,580.0</i>	<i>\$42,274.0</i>	<i>(\$11,306.0)</i>
Total Budget Authority / Obligations	\$100,305.3	\$98,660.0	\$78,884.0	(\$19,776.0)
Total Workyears	187.8	174.2	181.0	6.8

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. 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. The range of research programs and initiatives will both continue to develop a better understanding of the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

FY 2011 Activities and Performance Plan:

In FY 2011, efforts to develop the capability to respond to multiple incidents will concentrate on four core areas: 1) maintaining a highly skilled, well-trained, and equipped response workforce that has the capacity to respond to simultaneous incidents as well as threats involving WMD substances; 2) developing decontamination options, methods, and protocols to ensure that the nation can quickly recover from nationally significant incidents; 3) ensuring that current laboratory equipment maintains the capability to analyze Chemical Warfare Agent (CWA) fixed and mobile samples while continuing to leverage other agencies for biological agent analyses; and 4) implementing the EPA's National Approach to Response (NAR) to effectively manage EPA's emergency response assets during large-scale activations. The decrease in resources in FY 2011 is not expected to impede efforts to meet agency goals under this program.

EPA activities in support of these efforts include the following:

- Maintain the skills of EPA's On-Scene Coordinators (OSCs) through specialized training, exercises, and equipment. In FY 2011, EPA and its Federal, state, local, and Tribal homeland response partners will continue to participate in exercises and trainings designed to test and improve EPA's response capabilities.
- Develop the Agency's responder base during large-scale catastrophic incidents by training volunteers of the Response Support Corps (RSC) and members of Incident Management Teams (IMTs). 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 cadre of response personnel requires initial training and yearly refresher training to include opportunities to participate in exercises. Depending upon the level and complexity of the assigned position, volunteers may also participate in 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.
- Ensure that laboratories maintain the capacity and capability to analyze and verify CWA samples during nationally significant incidents. The Agency also will maintain and operate existing fixed CWA labs and develop the capability of two Portable High-Throughput Integrated Laboratory Identification Systems (PHILIS) units. The Agency will continue to participate with the Integrated Consortium of Laboratory Networks, maintaining a laboratory compendium of Federal, state, and commercial capabilities, and maintain a chemical surety program.
- Establish agreements with other Federal agencies to access biological warfare agent laboratory analyses.
- Operate 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.
- 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 are also 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.
- Maintain the Emergency Management Portal (EMP) modules. EMP ties together prevention, preparedness, and response information to allow EPA's emergency management community access to information they need to respond to and efficiently store data from large and small sites. The Decontamination Portfolio resides in the EMP.
- Conduct WMD decontamination course for EPA OSCs, Special Teams, and RSC personnel to improve decontamination preparedness for CBR agents.
- The Environmental Response Team (ERT) will maintain personnel and equipment in a state of readiness for response to potential homeland security incidents. It also will maintain capacity to provide required health and safety and response readiness training.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$31.0) This reflects a reduction for payroll and cost of living for existing FTE.
- (-\$289.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$11,000.0) This reduction reflects completion of ramp up of recent Agency investments in homeland security emergency preparedness and response activities, such as laboratory and decontamination preparedness.
- (+\$14.0) This reflects the net result of realignments of resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities. These realignments are based on FTE allocations as well as scientific equipment needs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$6,648.8	\$6,369.0	\$6,391.0	\$22.0
Science & Technology	\$587.0	\$593.0	\$594.0	\$1.0
Building and Facilities	\$8,559.9	\$8,070.0	\$8,070.0	\$0.0
<i>Hazardous Substance Superfund</i>	<i>\$1,203.6</i>	<i>\$1,194.0</i>	<i>\$1,194.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$16,999.3	\$16,226.0	\$16,249.0	\$23.0
Total Workyears	5.1	3.0	3.0	0.0

Program Project Description:

This program's activities 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 2011 Activities and Performance Plan:

In FY 2011, 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 2011, 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 Project.

FY 2011 Change from FY 2010 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

Exchange Network

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$17,440.8	\$17,024.0	\$18,702.0	\$1,678.0
<i>Hazardous Substance Superfund</i>	<i>\$922.4</i>	<i>\$1,433.0</i>	<i>\$1,433.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$18,363.2	\$18,457.0	\$20,135.0	\$1,678.0
Total Workyears	28.6	24.0	30.0	6.0

Program Project Description:

The Exchange Network⁷ (Network) is a standards-based partnership 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, such as along the Columbia, Missouri and Susquehanna 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 and first-responders. 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 vital Geographic Information System (GIS)-displayed information onto their laptops while in their fire truck on the way to a fire.

The Central Data Exchange⁸ (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, and standards-setting projects with states, tribes, and territories for e-reporting, as well

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/>

as significant security and quality assurance activities. By reducing administrative burden on EPA programs, CDX helps the Superfund (SF) program focus more manpower and resources on enforcement and programmatic work and less on data collection and manipulation.

Other tools and services in the CDX and Exchange Network program project include:

- The Facility Registry System (FRS) is a widely used source of environmental data about facilities and allows a multimedia display and integration of environmental information. This 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 a key data source.
- The National Geospatial Program⁹ 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 Registries¹⁰ (SOR) 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 resources pay for approximately 20 percent of selected work done under the Exchange Network, Information Security and IT/Data Management program projects. Superfund funds are selectively applied to projects that have Agency-wide benefits.

This program also supports efficient reporting under the 2009 American Recovery and Reinvestment Act (ARRA) requirements. Additional details can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>.

FY 2011 Activities and Performance Plan:

In FY 2011, 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.

Also in FY 2011, 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 continuing to add 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

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/

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.

EPA will continue to improve Network data security by implementing electronic reporting standards that support the authentication and electronic signatures of report submitters.

Performance Targets:

Work under this program also supports the performance measures in the Exchange Network program project under EPM. This measure can also be found in the Four Year Array.

FY 2011 Change from FY 2010 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. Exchange Network program funding has been provided by the annual appropriations for EPA: FY 2002 (Public Law 107-73), FY 2003 (Public Law 108-7), FY 2004 (Public Law 108-199) FY 2005 (Public Law 108-447) and FY 2006 (Public Law 109-54), FY 2007 (Public Law 110-5), FY 2008 (Public Law 110-161), and FY 2009 (Public Law 111-8).

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$4,565.3	\$5,912.0	\$7,030.0	\$1,118.0
<i>Hazardous Substance Superfund</i>	<i>\$1,013.2</i>	<i>\$785.0</i>	<i>\$728.0</i>	<i>(\$57.0)</i>
Total Budget Authority / Obligations	\$5,578.5	\$6,697.0	\$7,758.0	\$1,061.0
Total Workyears	8.7	15.8	15.3	-0.5

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 2011 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. In FY 2011, EPA's continuous integrated efforts will allow the Agency's Information Security Program to take a more proactive role in dealing with these threats under the Superfund program.

In FY 2011, EPA will continue to protect, defend and sustain its information assets related to the Superfund program by continuing improvement to the Information Security Program. The Agency will continue to focus initially on asset definition and management, compliance, incident management, knowledge and information management, risk management, and technology management. Secondary activities in FY 2011 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 Management and Budget (OMB) information security initiatives, which will be implemented throughout FY 2011, 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 will continue transitioning 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 continue analyzing and planning a long-term strategy for implementing, monitoring and securing an IPv6 environment in FY 2011.

Additionally, EPA will continue implementing 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:

Work under this program supports the performance measure in the Information Security program project under EPM. This measure can also be found in the Four Year Array.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$57.0/ -0.5 FTE) These resources are shifting from the Information Security program to IT/ Data Management program to support the Agency's Capital Planning and Investment Control (CPIC) projects and policy. This change includes \$57.0 in associated payroll and reflects EPA's workforce management strategy that will help the agency better align resources, skills and Agency priorities.

Statutory Authority:

FISMA; GPRA; GMRA; CCA; PRA; FOIA; PR; EFOIA.

IT / Data Management

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$90,809.5	\$97,410.0	\$98,060.0	\$650.0
Science & Technology	\$3,852.1	\$4,385.0	\$4,111.0	(\$274.0)
Leaking Underground Storage Tanks	\$164.3	\$162.0	\$0.0	(\$162.0)
Oil Spill Response	\$36.3	\$24.0	\$0.0	(\$24.0)
<i>Hazardous Substance Superfund</i>	<i>\$17,266.1</i>	<i>\$17,087.0</i>	<i>\$16,720.0</i>	<i>(\$367.0)</i>
Total Budget Authority / Obligations	\$112,128.3	\$119,068.0	\$118,891.0	(\$177.0)
Total Workyears	484.6	503.1	489.3	-13.8

Program Project Description:

In broad terms, IT/DM houses all of the critical IT infrastructure needed for: 1) rapid and efficient communication; 2) exchange and storage of data, analysis and computations; and 3) access to the scientific regulatory and best practice infrastructure needed by agency staff, the regulated community, and the public. These functions are integral to the implementation of Agency information technology programs and systems like the Exchange Network, the Central Data Exchange (CDX), and the Permit Compliance System (PCS). Recent partnerships include portals projects with the Research and Development and Air and Radiation offices to access scientific and program data.

This program manages and coordinates the Agency's Enterprise Architecture and develops analytical tools (e.g., Environmental Indicators and electronic Report on the Environment [ROE]) to ensure sound environmental decision-making. The program implements the Agency's e-Government (e-Gov) responsibilities and it designs, develops, and manages the Agency's internet and intranet resources, including the Integrated Portal.

In more specific terms, the program: (1) supports development, collection, management, and analysis of point source and ambient environmental data used to manage statutory programs and to support the Agency in strategic planning at the national, program, and regional levels; (2) provides a secure, reliable, and capable information infrastructure based on a sound enterprise architecture which includes data standardization, integration, and public access; (3) manages the Agency's Quality System ensuring EPA's processes and data are of quality and adhere to Federal guidelines; and (4) supports regional information technology infrastructure, telecommunications, and administrative and environmental programs.

FY 2011 Activities and Performance Plan:

In FY 2011, the following IT/DM activities will continue to be provided for the Superfund program:

- **Information Access** – FY 2011 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 eRulemaking – 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 2011, 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 2011, the Information Access activities will be funded, under the Superfund appropriation, at \$0.28 million)

- **Envirofacts** - FY 2011 activities in this area continue to 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 also is being used to help plan and conduct multi-media inspections, and to support emergency response and planning. In FY 2011 EPA will consolidate the Envirofacts data warehouse, the Facility Registry System and the System of Registries into a single operation under a single Federal manager. The scope of services being delivered will be narrowed and the manner in which users receive service will change. Rather than serving the public directly through a Web-based interface, these products will be retooled to offer Web services for other applications to consume. This will complete the transition from a series of EPA-funded databases to a services-orientation whereby

consumers get direct service from a secondary provider. (In FY 2011, the Envirofacts activities will be funded, under the Superfund appropriation, at \$0.44 million)

- **IT/Information Management (IT/IM) Policy and Planning** – FY 2011 activities in this area will continue ensuring 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 2011, the IT/IM Policy and Planning activities will be funded, under the Superfund appropriation, at \$1.9 million)
- **Geospatial Information and Analysis**¹¹ – In FY 2011, EPA will continue providing 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 2011, the Geospatial Information and Analysis activities will be funded, under the Superfund appropriation, at \$0.69 million)
- **Electronic Records and Content Management (ECMS)** – FY 2011 activities in this area continue developing systems and 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 2011 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, Regional offices, 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

¹¹ For more information on the Geospatial program, please visit: <http://www.epa.gov/geospatial/>

retention efforts. (In FY 2011, the Electronic Records and Content Management activities will be funded, under the Superfund appropriation, at \$0.29 million)

- **Internet Operations and Maintenance (IOME)** – FY 2011 activities in this area continue implementing and maintaining 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 2011, IOME activities will be funded, under the Superfund appropriation, at \$0.86 million)
- **IT/IM Infrastructure** – FY 2011 activities in this area continue supporting 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 2011, EPA will be upgrading its WAN infrastructure to keep pace with demands on bandwidth. Those demands increase as system capabilities and numbers of public users grow, and EPA also needs to keep pace with the states in the areas of data collection, management and utilization. (In FY 2011, the IT/IM Infrastructure activities will be funded, under the Superfund appropriation, at \$12.28 million)

Performance Targets:

Work under this program supports multiple strategic objectives. There are no specific performance measures under this Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$166.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$28.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$570.0) This reflects the efficiency gains from consolidating Envirofacts, Facility Registry System, and System of Registries and additional contractual savings.
- (+\$65.0/+0.5 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities. These resources are shifting from the Information Security program to IT/ Data Management to support the Agency's CPIC projects and policy, and they include \$65.0 in associated payroll.

Statutory Authority:

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

Program Area: Legal / Science / Regulatory / Economic Review

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$1,280.5	\$1,147.0	\$1,390.0	\$243.0
<i>Hazardous Substance Superfund</i>	<i>\$1,369.4</i>	<i>\$893.0</i>	<i>\$913.0</i>	<i>\$20.0</i>
Total Budget Authority / Obligations	\$2,649.9	\$2,040.0	\$2,303.0	\$263.0
Total Workyears	6.3	7.3	7.3	0.0

Program Project Description:

The General Counsel and Regional Counsel Offices provide environmental Alternative Dispute Resolution services (ADR). Funding supports the use of ADR in the Superfund program's extensive legal work with Potentially Responsible Parties (PRPs).

FY 2011 Activities and Performance Plan:

In FY 2011, the Agency will continue to provide conflict prevention and ADR services to EPA headquarters and Regional offices and external stakeholders on Superfund program 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$20.0) This reflects an increase for payroll and cost of living for all 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$41,917.2	\$42,662.0	\$44,002.0	\$1,340.0
<i>Hazardous Substance Superfund</i>	<i>\$716.7</i>	<i>\$746.0</i>	<i>\$752.0</i>	<i>\$6.0</i>
Total Budget Authority / Obligations	\$42,633.9	\$43,408.0	\$44,754.0	\$1,346.0
Total Workyears	242.6	250.6	252.2	1.6

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 2011 Activities and Performance Plan:

The Agency is committed to providing sound legal advice. In FY 2011, legal advice to environmental programs will continue to 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$6.0) This reflects an increase for payroll and cost of living for all existing FTE.

Statutory Authority:

EPA's General Authorizing Statutes.

Program Area: Operations and Administration

Facilities Infrastructure and Operations
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
Science & Technology	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Building and Facilities	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
Leaking Underground Storage Tanks	\$895.5	\$904.0	\$916.0	\$12.0
Oil Spill Response	\$576.1	\$505.0	\$534.0	\$29.0
<i>Hazardous Substance Superfund</i>	<i>\$74,210.7</i>	<i>\$78,482.0</i>	<i>\$76,637.0</i>	<i>(\$1,845.0)</i>
Total Budget Authority / Obligations	\$481,429.3	\$496,978.0	\$510,344.0	\$13,366.0
Total Workyears	390.2	411.1	415.1	4.0

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, environmental management functions, facilities maintenance and operations, space planning, shipping and receiving, property management, printing and reproduction, mail management, and transportation services.

FY 2011 Activities and Performance Plan:

EPA 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. The Agency also 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 2011, the Agency is requesting in the Superfund appropriation a total of \$41.89 million for rent, \$3.75 million for utilities, \$8.41 million for security, \$3.27 million for transit subsidy, and \$2.34 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) 13423¹², *Strengthening Federal Environmental, Energy, and Transportation Management*, and Executive Order 13514¹³, *Federal Leadership in Environmental, Energy, and Economic Performance*, which expands upon EO 13423 and requires additional reductions to green house gas emissions.

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 building standards.

EPA will continue to provide transit subsidy to eligible applicants as directed by EO 13150¹⁴ *Federal Workforce Transportation*. EPA will continue its integration of Environmental Management Systems (EMS) across the Agency, consistent with requirements of Executive Order 13423 and 13514. 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 the performance measure in the Facilities Infrastructure and Operations program project under the EPM appropriation. This measure can also be found in the Performance Four Year Array.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$197.0) This increase is the net effect of increases for payroll and cost of living for existing FTE.
- (-\$2,412.0) This reduction reflects rent reduction as a result of the space consolidation effort, as well as a rebalancing of cost methodologies between the EPM, S&T, and SF appropriations.
- (+\$352.0) This change reflects an increase in utility costs.
- (+\$113.0) This increase provides additional resources for security costs.
- (+\$265.0) This reflects an increase in transit subsidy.

¹² Information available at <http://www.fedcenter.gov/programs/eo13423/>

¹³ Information available at <http://www.fedcenter.gov/programs/eo13514/>

¹⁴ Additional information available at <http://ceq.eh.doe.gov/nepa/regs/eos/eo13150.html>

- (-\$84.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$818.0) This reduction reflects a decrease in the Regional Moves resources as a result of the completion of the Puerto Rico and Region 10 moves.
- (+\$311.0) This change reflects an increase in operations and maintenance costs at EPA's owned Regional laboratories.
- (+\$231.0/ +2.0 FTE) This increase reflects a transfer of resources. Region 10's increased workload in Facilities Infrastructure & Operations, which is associated with a large and complicated building renovation project spanning multiple years, demands the increased investment. Further, a decreased workload in Acquisition Management enables the transfer. This includes 2.0 FTE, and \$231.0 in associated payroll.

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).

Financial Assistance Grants / IAG 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$26,422.9	\$25,487.0	\$26,466.0	\$979.0
<i>Hazardous Substance Superfund</i>	\$2,932.5	\$2,945.0	\$3,318.0	\$373.0
Total Budget Authority / Obligations	\$29,355.4	\$28,432.0	\$29,784.0	\$1,352.0
Total Workyears	184.6	177.5	178.4	0.9

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 2011 Activities and Performance Plan:

In FY 2011, EPA will achieve key objectives under its long-term Grants Management Plan. These objectives include strengthening accountability, ensuring 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 provides 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

¹⁵ US EPA, *EPA Grants Management Plan*. EPA-216-K-08-001, October 2008, <http://www.epa.gov/ogd/EO/finalreport.pdf>.

specialists, and managers. Oversight activities will include a substantial program of post award monitoring to ensure that EPA's Recovery Act grant dollars are spent efficiently and effectively. EPA will continue 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 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 Project.

FY 2011 Change from the FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$282.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$35.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$126.0/ +0.9 FTE) This change reflects the realignment of resources to support the Agency's IA Shared Service Centers. This includes 0.9 FTE, and \$126.0 in associated payroll.

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; American Recovery and Reinvestment Act of 2009.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$31,332.7	\$32,404.0	\$33,934.0	\$1,530.0
Leaking Underground Storage Tanks	\$139.8	\$165.0	\$165.0	\$0.0
<i>Hazardous Substance Superfund</i>	<i>\$23,521.1</i>	<i>\$24,684.0</i>	<i>\$24,337.0</i>	<i>(\$347.0)</i>
Total Budget Authority / Obligations	\$54,993.6	\$57,253.0	\$58,436.0	\$1,183.0
Total Workyears	339.7	362.9	363.0	0.1

Program Project Description:

Sound contract management fosters efficiency and effectiveness assisting all of EPA's programs. Superfund resources in this program fund support contracts, and 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 2011 Activities and Performance Plan:

In FY 2011, 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 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; the Agency will be better able to meet internal and external reporting demands; and the system will integrate with the Agency's financial and government-wide shared services systems.

In FY 2011, resources are being added to EPA's budget for additional acquisition management support. The funds shall be available only to supplement, and not to supplant existing acquisition workforce activities. Such funds shall be available for training, recruitment,

retention, and hiring additional members of the acquisition workforce as defined by the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 401 et seq.). These funds shall also be available for information technology in support of acquisition workforce effectiveness or for management solutions to improve acquisition management.

In FY 2011, 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 and enhance contract oversight.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$637.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$186.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$348.0/ -2.9 FTE) This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities. This decrease reflects a transfer of resources to the Facilities Infrastructure and Operations program to assist with a multi-year renovation project in Region ten, and to the Grants Management program to support the Interagency Agreement (IA) shared service centers. This includes -2.9 FTE, and -\$348.0 in associated payroll.
- (+\$1,500.0/ +2.0 FTE) This reflects an increase in resources to supplement existing acquisition workforce activities for training, recruitment, retention, and hiring additional acquisition staff in an effort to enhance acquisition workforce effectiveness. This includes 2.0 FTE, and \$280.0 in associated payroll.
- (-\$1,950.0) This change reflects a reduction of additional funding received in FY 2010 for the development phase of the new Acquisition Management System (EAS) and lower funding levels as the system enters the implementation phase.

Statutory Authority:

EPA's Environmental Statutes; Annual Appropriations Acts; contract law.

Human Resources 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$43,373.2	\$42,447.0	\$44,842.0	\$2,395.0
Leaking Underground Storage Tanks	\$3.0	\$0.0	\$0.0	\$0.0
<i>Hazardous Substance Superfund</i>	<i>\$5,475.1</i>	<i>\$5,580.0</i>	<i>\$7,081.0</i>	<i>\$1,501.0</i>
Total Budget Authority / Obligations	\$48,851.3	\$48,027.0	\$51,923.0	\$3,896.0
Total Workyears	301.8	303.1	303.1	0.0

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 2011 Activities and Performance Plan:

In FY 2011, 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 2011, the Agency will continue its efforts to implement a Workforce Planning System:

- Closing competency gaps for information technology, human resources (HR), 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 (SSC). These SSC 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 FY2011, 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. Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,588.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$28.0) This reflects a decrease for Workers Compensation unemployment cost.
- (-\$59.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

Statutory Authority:

Title V USC, FAIR Act.

Central Planning, Budgeting, and Finance
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$89,875.3	\$82,834.0	\$86,039.0	\$3,205.0
Leaking Underground Storage Tanks	\$1,109.6	\$1,115.0	\$1,050.0	(\$65.0)
<i>Hazardous Substance Superfund</i>	<i>\$24,154.9</i>	<i>\$27,490.0</i>	<i>\$26,934.0</i>	<i>(\$556.0)</i>
Total Budget Authority / Obligations	\$115,139.8	\$111,439.0	\$114,023.0	\$2,584.0
Total Workyears	530.2	547.7	547.1	-0.6

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 2011 Activities and Performance Plan:

In 2011, the Agency will continue to ensure sound financial and budgetary management of the Superfund program through 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.

FY 2011 is a critical year in the Agency's efforts to develop and modernize the Agency's financial systems. The aggressive schedule includes final testing, data migration, and other vital implementation steps. 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.

In FY 2011, EPA will continue to make 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. EPA 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$843.0) This change reflects an increase of payroll and cost of living for existing FTE.
- (-\$49.0) This change in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$1,350.0) This change reflects a decrease in funding received in FY 2010 for the development of a new time and labor distribution system. The Agency's current system (PeoplePlus) has reached the end of its lifecycle and is no longer supported by the vendor. Replacement of PeoplePlus in concert with development of the Agency's new financial management system and the new human resources management system will alleviate the need to develop connectivity between the three systems.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$41,478.1	\$44,789.0	\$45,626.0	\$837.0
<i>Hazardous Substance Superfund</i>	<i>\$3,776.4</i>	<i>\$3,404.0</i>	<i>\$3,350.0</i>	<i>(\$54.0)</i>
Total Budget Authority / Obligations	\$45,254.5	\$48,193.0	\$48,976.0	\$783.0
Total Workyears	197.0	188.6	202.8	14.2

Program Project Description:

The Human Health Risk Assessment (HHRA) program provides health hazard assessments and develops assessment methods. The program, which receives resources under both the Science and Technology and the Superfund appropriations, provides the scientific foundation for the Agency's actions to protect Americans' public health and the environment and supports the Administrator's priorities for improving air quality, assuring the safety of chemicals and protecting America's waters. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

Risk assessments and methodologies to support EPA's Superfund program are detailed in the HHRA Multi-Year Plans (MYPs)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 stakeholders and outlines research needs and priorities. 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.

A subcommittee review from the Board of Scientific Counselors (BOSC)—a Federal advisory committee composed of qualified, independent scientists and engineers—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 reported that the HHRA program is making

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>.

substantial and satisfactory progress in each of the above areas based both on clearly defined milestones as well as additional support requested by EPA programs including technical support in response to unscheduled emergency needs. The BOSC's evaluation and recommendations provided guidance to EPA to help plan, implement, and strengthen the program. In mid 2010, the BOSC will review the progress HHRA has made in implementing its planned research as well as previous BOSC recommendations.

The Superfund portion of the program includes the following:

- The Integrated Risk Information System (IRIS)¹⁸, Provisional Peer-Reviewed Toxicity Values (PPRTVs), and other health hazard assessments (FY 2011 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. As of January 2010, more than 550 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. As of January 2010, new or renewed PPRTVs had been developed for 236 chemicals.
- Risk assessment guidance, methods, and model development (FY 2011 Request, \$1.0 million). As part of the Human Health Risk Assessment program's broader efforts to improve risk assessment guidance, methods, and models, Superfund resources 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.

FY 2011 Activities and Performance Plan:

In FY 2011, 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

¹⁸ Available at: <http://www.epa.gov/iris>.

prioritizes requests for these PPRTV's, which provide health hazard evaluations for priority pollutants to support Agency risk management decisions;

- 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 BOSC's independent evaluations have found that PPRTVs have substantial value even beyond their immediate purpose of supporting Superfund assessments and remediation, e.g., "In the absence of IRIS values for a chemical, PPRTVs can have a significant impact on regulatory decisions." To further strengthen program impact, HHRA is revising its management controls to better incorporate both programmatic priorities and the level of effort required to increase the number of IRIS assessments completed each year; implementing new performance measures to improve performance management; and investigating alternative approaches for measuring progress related to providing timely, high quality scientific assessments.

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.

A performance measure for research activities in this program is included under the Science and Technology Human Health Risk Assessment program. 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, including the on-time delivery of HHRA health assessments and technical support documents. The current IRIS process was streamlined in 2009 in response to GAO recommendations and the program's newest measures will be formalized and the targets for outputs adjusted accordingly.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$12.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.
- (-\$6.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

- (-\$20.0) 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.
- (-\$40.0) This reflects the net result of adjustments for critical equipment purchases, repairs, travel, contracts, and general expenses resulting from FTE realignments. Realignments are based on FTE allocations as well as scientific equipment needs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$11,696.8	\$14,111.0	\$13,800.0	(\$311.0)
Leaking Underground Storage Tanks	\$424.1	\$345.0	\$457.0	\$112.0
Oil Spill Response	\$382.8	\$639.0	\$689.0	\$50.0
<i>Hazardous Substance Superfund</i>	<i>\$19,010.1</i>	<i>\$21,191.0</i>	<i>\$19,069.0</i>	<i>(\$2,122.0)</i>
Total Budget Authority / Obligations	\$31,513.8	\$36,286.0	\$34,015.0	(\$2,271.0)
Total Workyears	141.4	154.7	150.7	-4.0

Program Project Description:

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 chemical risks to human health and the environment. 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, groundwater, and site characterization issues. The research program also provides site-specific technical support through EPA labs and centers, as well as liaisons in each Regional Office. The range of research programs and initiatives will both continue to develop a better understanding of the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering.

Research within this program is responsive to the Superfund law requirements under Section 209(a) of Pub. L. 99-499, which call 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)¹⁹ 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.²⁰ The site includes a description of the program; fact sheets on science issues, research activities, and research impacts; research publications and accomplishments; and links to tools and models.

¹⁹ 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>.

²⁰ For more information, see <http://www.epa.gov/landscience>.

The Land Protection and Restoration research program underwent an external evaluation by a subcommittee of EPA's Board of Scientific Counselors (BOSC)—a Federal advisory committee composed of independent, expert scientists and engineers. The 2009 BOSC report noted that the program has appropriate research goals and has been responsive to prior recommendations for strengthening the program. The program received a rating of "exceeds expectations."²¹

FY 2011 Activities and Performance Plan:

In FY 2011, research will continue to advance EPA's ability to accurately characterize the transport and uptake of chemicals from contaminated sediments and determine the range of and scientific foundation for remedies. Research will focus on improving site characterization and 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. Recent accomplishments include a study on the Ashtabula River in Ohio, which answered science questions on sediment resuspension during dredging remediation, as well as release and transport of contaminants from dredging sites. Similar work on evaluating the Ottawa River dredging project in Ohio is scheduled to continue in FY 2011. The application of Biota-Sediment Accumulation Factors (BSAF) was a key component in a recent Superfund technology transfer document on use of fish tissue data to monitor remedy effectiveness.

Protecting America's waters is one of EPA's top priorities and efforts from the Land Research program contribute significantly to that effort. In FY 2011, the program will collaborate with the Great Lakes National Program Office (GLNPO) on science to develop alternative technologies for sediment remediation.

Additional planned research products for FY 2011 include key reports that will determine the degree of resuspended sediments from dredging and assess the significance of changes in bioavailability of organic and inorganic contaminants following resuspension and redeposition during dredging of contaminated sediments. Consistent with the National Research Council's report, "Sediment Dredging at Superfund Megasites: Assessing the Effectiveness,"²² research will evaluate tools to assess remedy effectiveness using techniques such as:

- Passive samplers to measure bioaccumulation of persistent chemicals, BSAFs and PCB fish tissue models,
- Statistical methods to inform sampling for chemical and biological data, and
- Methods to assess remedy performance.

The Land Research program provides leadership in groundwater research to address fate, transport, and remediation issues. Research themes include characterization, analytical, and modeling methods to improve exposure estimates, and remediation technologies that include in-situ techniques, permeable reactive barriers (PRBs) for organic and metal contaminants, and monitored natural attenuation. Recent accomplishments in groundwater remediation research

³ BOSC Land Restoration and Preservation Research Mid-Cycle Subcommittee Report. For more information, see <http://www.epa.gov/osp/bosc/pdf/landmc0901rpt.pdf>.

²² For more information, see <http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=11968>

include research on the performance of PRBs as an alternative to traditional pump and treat methods. That research produced two key reports regarding application and performance of PRBs,²³ and application of this technology continues to occur at sites such as:

- ASARCO East Helena plant in Helena, Montana, where the application of PRBs results in the conversion and removal of mobile dissolved arsenic in groundwater, and
- Altus Air Force Base, Oklahoma, where PRBs replaced a failed pump and treat system, saving Air Force resources through the lifecycle of the clean up.

Research efforts also will address monitored natural attenuation, specifically in metal contaminated groundwater. The program published a key technical framework on monitored natural attenuation methods for inorganic contaminants, and the technology is being transferred to state remediation organizations. For organic contaminants, synthesis and state-of-the-science documents will provide EPA program offices, Regional Offices, and states with remediation technologies and long term stewardship for treatment of dense non-aqueous phase liquids, such as trichloroethylene, in groundwater. The transport of contaminants in groundwater and the subsequent intrusion of contaminant vapors into buildings is a critical research issue for EPA's Superfund remediation programs. Work is ongoing to provide vapor intrusion characterization, to develop reliable soil gas sampling methodologies, and to improve vapor intrusion modeling capability. In FY 2011, the research program will produce a comprehensive study looking at volatile organic compounds and radon concentration changes through a one year time frame.

Site characterization research under the Land Research program includes the development of analytical and statistical 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. Recent accomplishments included a methodology that provides for potentially rapid analysis of various forms of polychlorinated biphenyls (PCBs). Additionally, in-situ chemical oxidation (ISCO) methods were applied to Superfund sites in Nebraska, where ISCO actively remediated the source area materials and groundwater. Application of this method reduced the remediation timeframe (compared to several other alternatives), had the least short term impacts on the community, and was cost effective. It will reduce the highest groundwater contaminant concentrations without the need for an operations and maintenance intensive treatment system. In FY 2011, research themes will include:

- The development and application of chemical and bio-analytical methods, and
- Development of statistical methods to reduce data uncertainty in measurement processes.

EPA has provided site-specific technical support to more than 100 cleanup program sites annually by responding to scientific questions (e.g., engineering and groundwater issues) and technology transfer products to EPA program offices and other stakeholders. Technical Support Centers provide information based on research results to increase the speed and quality of Superfund cleanups and reduce associated cleanup costs.

²³ For more information, see <http://www.epa.gov/nrmrl/pubs/600r08093/600r08093.htm>

EPA also will conduct 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. Reports are scheduled for publication in FY 2011 on a field sampling device that may reduce the need for activity-based sampling at Libby and similar sites. One such report will include a manual for releasable asbestos field sampler testing for use on contaminated soil to determine if cleanup is needed.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Land publications in high impact journals.	No Target Established	Biennial	26.7	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Land publications rated as highly cited publications.	No Target Established	Biennial	27.8	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of contaminated sites long-term goal.	100	100	100	100	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Ouput	Percentage of Land publications in high impact journals.	No Target Established	Biennial	26.7	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of Land publications rated as highly cited publications.	No Target Established	Biennial	27.8	No Target Established	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percentage of planned outputs delivered in support of the mitigation, management and long-term stewardship of contaminated sites long-term goal.	100	100	100	100	Percent

Work under this program supports EPA's Strategic Plan Objective 3.3: Enhance Science and Research. Specifically, the program provides and applies sound science for protecting and restoring land by conducting leading-edge research, which, through collaboration, leads to preferred environmental outcomes. In FY 2011, the program plans to accomplish its goals of completing and delivering 100 percent of its planned outputs. 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$393.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$62.0) This represents a restoration of resources transferred in FY 2010 to the Research: Sustainability program to support Small Business Innovation Research (SBIR). For SBIR, 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 2011 budget is enacted, and the exact amount of the mandated requirement is known, FY 2011 funds will be transferred to the SBIR program.

- (+\$25.0) This increase reflects the net result of realignments of resources such as critical equipment purchases and repairs, travel, contracts, and general expenses to better align with programmatic priorities. Realignments of these resources are based on FTE allocations as well as scientific equipment needs. This change reflects EPA's workforce management strategy that will help the Agency better align resources, skills and Agency priorities.
- (-\$68.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$2,534.0 \ -2.5 FTE) This reduction reflects a decrease in scope for planned research in groundwater remediation and contaminated sediments research, and includes a reduction of 2.5 FTE with decreased associated payroll of \$337.0. This change reflects EPA's workforce management strategy that will help the agency better align resources, skills and Agency priorities.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$19,445.7	\$27,287.0	\$25,292.0	(\$1,995.0)
<i>Hazardous Substance Superfund</i>	\$96.0	\$73.0	\$0.0	(\$73.0)
Total Budget Authority / Obligations	\$19,541.7	\$27,360.0	\$25,292.0	(\$2,068.0)
Total Workyears	64.7	70.8	70.7	-0.1

Program Project Description:

Under the Small Business Research (SBIR) program²⁴, as required by the Small Business Act as amended²⁵, 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. The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering. SBIR, the only activity contained in this program, is currently not funded under the Superfund account.

Performance Targets:

Work under this program supports EPA's Enhance Science and Research objective. The performance measures that support this Program Project can be found in the Science and Technology appropriation Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$73.0) This reflects an adjustment for Small Business Innovation Research (SBIR). Enacted funding levels for this program include the amount EPA is required to set aside for contracts to small businesses to develop and commercialize new environmental

²⁴ For more information, see <http://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>

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 and the exact amount of the mandated requirement is known, the funds will be transferred to the SBIR program.

Statutory Authority:

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

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Hazardous Substance Superfund</i>	\$224,789.2	\$202,330.0	\$202,784.0	\$454.0
Total Budget Authority / Obligations	\$224,789.2	\$202,330.0	\$202,784.0	\$454.0
Total Workyears	291.7	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 releases, whether originating from an NPL site or not, that pose an imminent threat to public health or welfare and the environment. The Superfund Emergency Response and Removal program addresses removal actions.

Each year, more than 30,000 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 (e.g., uranium, radium, and thorium), to the environment are appropriately addressed through either a Federal-led action or by providing technical support and oversight to state, local, other Federal responders, and potentially responsible parties (PRPs). As the Federal On-Scene Coordinator (OSC)²⁶, EPA evaluates spills and responds with emergency and removal actions to both large and small releases. 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 2011 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.epa.gov/emergencies/content/er_cleanup.htm.

In FY 2011, EPA will continue to respond and conduct removal actions based upon the risk to human health and the environment in urban, rural and Indian country. 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 knowledge of specific hazardous 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, tribes, and local entities. This training offers courses on a variety of environmentally related emergency response topics designed to strengthen the knowledge and skills of Federal 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 strengthen partnerships with local, state, Tribal 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).

In an effort to improve the accountability, transparency, and effectiveness of EPA's cleanup programs, EPA initiated a multi-year effort in 2010 to explore better uses of assessment and cleanup authorities to address a greater number of sites, accelerate cleanups, and put those sites back into productive use while protecting human health and the environment. By bringing to bear the relevant tools available in each of the cleanup programs (Superfund Remedial, Superfund Emergency Response and Removal, Superfund Federal Facilities Response, and Brownfields Projects), EPA will better leverage the resources available to address needs at individual sites. One example of leveraging that EPA may explore is the use of Superfund Emergency Response and Removal resources to assist in Brownfields cleanup and redevelopment, when appropriate.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Superfund-lead removal actions completed annually per million dollars.	0.94	1.298	0.95	0.96	Removals

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	PRP removal completions (including voluntary, AOC, and UAO actions) overseen			170	170	Removals

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	by EPA.					

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Score on annual Core NAR.			55	60	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Superfund-lead removal actions completed annually.	195	214	170	170	Removals

Due to aggressive enforcement, EPA has been able to compel PRPs to conduct additional removal actions. A new measure has been developed to track our progress in this area. In FY 2011, EPA will oversee 170 PRP removal actions (including voluntary, Administrative Order on Consent [AOC], and Unilateral Administrative Order [UAO] actions). In addition, EPA will conduct 170 Superfund-lead removal actions.

For several years, EPA has been implementing an annual assessment of its response and removal preparedness, known as Core Emergency Response (ER). In FY 2009, Core ER was expanded to address Agency-wide implementation of EPA's National Approach to Response (NAR) and measure progress towards being ready to respond to multiple nationally significant events. 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 2011 is to maintain a readiness score of 60 percent. There are three components of Core NAR: headquarters, Regional offices, and Special Teams.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$1,180.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$645.0) This decrease reflects EPA's efforts to approach PRPs earlier in the process as releases or threatened releases of hazardous substances are identified to increase PRP involvement in conducting removal actions.
- (-\$81.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Hazardous Substance Superfund</i>	\$9,934.8	\$9,632.0	\$9,776.0	\$144.0
Total Budget Authority / Obligations	\$9,934.8	\$9,632.0	\$9,776.0	\$144.0
Total Workyears	41.1	44.1	44.1	0.0

Program Project Description:

EPA implements the Emergency Preparedness program in coordination with the Department of Homeland Security (DHS) and other Federal agencies to deliver Federal assistance to state, local, and Tribal governments during natural disasters and other major environmental incidents. The Agency carries out this responsibility under multiple statutory authorities as well as the National Response Framework (NRF), which provides the comprehensive Federal structure for managing national emergencies. EPA is the designated lead for the NRF's Oil and Hazardous Materials Response Annex - Emergency Support Function #10 which covers 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. These teams coordinate the actions of Federal partners to prevent, prepare for, and respond to emergencies.

FY 2011 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 2011 through ongoing internal and external coordination with those agencies.

In FY 2011, 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.

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, implement and test incident command/unified command systems across all levels of government and the private sector, and assist in the development of Regional Contingency Plans and Local Area Plans.

In FY 2011, EPA will provide and participate in 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 large scale 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, and the National Operations Center.

As part of its strategy for improving effectiveness, the Agency will continue to improve response readiness in FY 2011 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 restoring land. Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$178.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$34.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Hazardous Substance Superfund</i>	\$32,761.5	\$32,105.0	\$31,543.0	(\$562.0)
Total Budget Authority / Obligations	\$32,761.5	\$32,105.0	\$31,543.0	(\$562.0)
Total Workyears	138.1	144.1	162.0	17.9

Program Project Description:

The Superfund Federal Facilities Response program leads the government in achieving accelerated, protective, and efficient cleanup and reuse of Federal facility sites. Nationwide, there are thousands of Federal facilities that 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 military 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 assessing sites for potential listing on the Superfund National Priorities List (NPL), conducting oversight of NPL where cleanup is being done by other Federal agencies, such as the Department of Defense (DOD) and the Department of Energy (DOE), and enforcing statutorily required Federal facility agreements. EPA’s oversight authority helps Federal agencies to be more efficient and to cleanup their sites faster while protecting human health and the environment. 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 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to help ensure the safe reuse of former Federal properties and the safe continued use of facilities under the jurisdiction of the Federal government. EPA will continue working with state and local governments, tribes, communities, and transferees to ensure properties transferred will be reused in a safe and productive manner. At properties that remain under Federal jurisdiction and control, EPA will continue working with the other Federal agencies to ensure that cleanup remedies are appropriate for continued Federal use.

EPA will continue developing policies, tools, and measures to support green remediation principles. The Agency strives to utilize its resources so that cleanup 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.

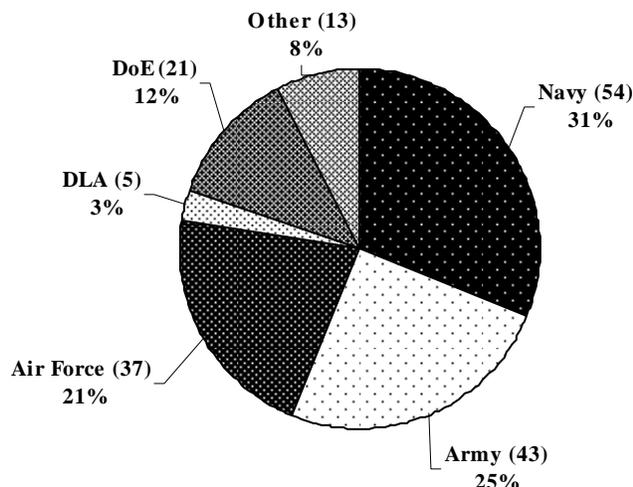
In an effort to improve the accountability, transparency, and effectiveness of the Superfund Federal Facility Response program, EPA initiated a multi-year effort in 2010 to explore better uses of assessment and cleanup authorities to address a greater number of sites, accelerate cleanups, and put those sites back into productive use while protecting human health and the environment. By bringing to bear the relevant tools in each of the cleanup programs (Superfund Remedial, Superfund Emergency Response and Removal, Superfund Federal Facilities Response, and Brownfields Projects), EPA will better leverage the resources available to address needs at individual sites.

For example, EPA is pursuing program efficiencies to improve the management of the program and increase joint efforts among programs as well as defining and implementing new performance measures that further describe the achievements of EPA's cleanup programs. As an early step toward an improved Superfund Remedial program measurement, in FY 2011, EPA will implement a new measure, Number of Remedial Action (RA) Projects²⁸ Completed at Superfund NPL Sites, to augment the site-wide construction completion measure described below.

In FY 2011, the Agency will continue focusing on achieving site-wide 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 2009, there were: 173 final and deleted NPL Federal facilities, 77 Federal facilities with a final remedy selected, 65 Federal facilities that had achieved site-wide construction completion, and 32 Federal facilities identified as site-wide ready for anticipated use. EPA provides oversight and technical assistance on 379 ongoing remedial investigations/feasibility studies and 200 ongoing remedial actions at NPL Federal facilities.

²⁸ Projects represent discrete actions taken to implement a site cleanup remedy as described in the Record of Decision. They are typically defined to address discrete problems, such as specific media (e.g., ground water contamination), areas of a site (e.g., discrete areas of contamination), or particular technologies (e.g., soil vapor extraction). A given remedy may contain multiple actions or projects depending on the nature of the remedy selected.

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), National Guard (1), Small Business Administration (1), U.S. Army Corps of Engineers (1), and U.S. Dept. Agriculture (2). Source: CERCLIS December 2009*

In FY 2011, EPA will continue providing oversight and technical assistance, as appropriate, at DOD's military munitions response sites. DOD's FY 2008 Defense Environmental Programs Report to Congress²⁹ states there are currently 3,674 munitions response sites in DOD's inventory.

EPA 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 2011, EPA will review approximately 32 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 Agency will continue working with the U.S. Army Corps of Engineers 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. EPA will continue working with DOE in maximizing the progress of cleanup and reducing the footprint of its legacy properties.

The Agency also will continue supporting DOD at selected Base Realignment and Closure (BRAC) installations that have been closed or realigned during the first four rounds of BRAC (BRAC I-IV). EPA's BRAC I-IV accelerated cleanup program is funded by DOD through an

²⁹ <http://deparc.xservices.com/do/home>

interagency agreement which is scheduled to expire on September 30, 2011. This includes, but is not limited to, meeting and expediting statutory obligations for overseeing cleanup and facilitating property transfer. EPA's FY 2011 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.

EPA will continue to take actions to improve program management and increase efficiency. In FY 2011, EPA will review how to reduce the overhead cost associated with the Superfund Federal Facilities Response program. This review is to find efficiencies in EPA contracting and similar or related processes used to support the program (e.g., contracts, interagency agreements, and cooperative agreements). EPA also will establish a Federal Advisory Committee (FAC) to support the Agency in implementing its national Federal Facility Superfund program. The FAC will provide advice and recommendations on environmental issues and programs related to ensuring long-term protectiveness and appropriate reuse/redevelopment of formerly contaminated Federal sites. The Advisory Committee, with the assistance of other Federal agencies, Tribes, state and local governments, and community groups will facilitate a more effective discussion of the technical issues and policy options that will support adequate evaluation of, and input into Agency positions and actions regarding contaminated Federal sites. The projected outcome of the FAC will be statutory and policy recommendations to improve the protectiveness and utilization of military and non-military properties.

As a result of an OMB program performance assessment in FY 2005, EPA has been strengthening its partnerships with other Federal agencies to achieve long-term environmental goals. These efforts will continue in FY 2011. In addition, the Agency conducted an evaluation in FY 2008 and 2009 to assess and improve performance accuracy of regional target-setting for site cleanup milestones. EPA is currently implementing several of the evaluation's recommendations and will continue to implement additional recommendations in FY 2011.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Program dollars expended annually per operable unit completing cleanup activities.	813	969	813	750	Thousand Dollar

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of Federal Facility Superfund sites where all remedies have completed construction.	64	65	68	70	Sites

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined.	77	77	92	104	Sites

Performance goals and measures in EPA’s Strategic Plan and Government Performance and Results Act for the Superfund Federal Facilities Response program are currently a component of the overall Superfund Remedial program’s measures. EPA’s ability to meet its annual Superfund targets is partially dependent on the performance of other Federal agencies that have the lead in cleaning up their facilities on the NPL.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$619.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$19.0) This decrease in travel costs reflects an effort to reduce the Agency’s travel footprint by promoting green travel and conferencing.
- (-\$1,162.0) This reduction implements an Agency review to streamline oversight of our Federal partners and to find program efficiencies in data management support.
- (+17.9 FTE) This change reflects a redirection of reimbursable FTE from the BRAC program to the Federal Facilities Response program. The additional FTE will support increased workload needs at non-BRAC I-IV sites, such as the U.S. Military’s buildup in Guam, DOE and U.S. Coast Guard. Sufficient reimbursable FTE are retained to support BRAC program needs, which continue to decline as more BRAC sites are cleaned up or transferred.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Hazardous Substance Superfund</i>	<i>\$1,242,201.2</i>	<i>\$605,438.0</i>	<i>\$605,438.0</i>	<i>\$0.0</i>
<i>Budget Authority</i>	<i>\$669,293.0</i>	<i>\$605,438.0</i>	<i>\$605,438.0</i>	<i>\$0.0</i>
<i>Recovery Act Budget Authority</i>	<i>\$572,908.2</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$1,242,201.2	\$605,438.0	\$605,438.0	\$0.0
Total Workyears	976.1	944.2	945.2	1.0

Program Project Description:

The Superfund Remedial program addresses risks to human health and the environment resulting from uncontrolled releases at Superfund sites in order to make our communities safer and healthier. Superfund sites with contaminated soils, sediments, surface water, and groundwater exist nationally in hundreds of communities and can encompass very large land areas. Many of these sites are located in urban areas and, therefore, may expose higher numbers of sensitive populations to contamination. Once contaminated, groundwater, surface water, sediments, and soils may be technically challenging and costly to remediate. Some Superfund sites require decades to clean up due to site-specific physical characteristics; their associated unique contamination footprints; the political, community, and legal complexities involved to address the site; and the resources required to cleanup the site. For some sites, removing or destroying all of the contamination is not possible, and residual contamination needs to be managed on-site, creating the need for site-specific long-term stewardship activities.

The Superfund Remedial program manages the risks to human health and the environment posed by these uncontrolled hazardous wastes at the nation’s highest priority sites through carefully selected cleanup, stabilization, or other actions. 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 releases are addressed by adding sites to the National Priorities List (NPL);
- engage with local communities as each site goes through the Superfund response process;
- 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 prevent the spread of contaminated groundwater;

- ensure long-term protectiveness of remedies by overseeing operations and maintenance and conducting five-year reviews;
- delete sites (or parts of sites) from the NPL where appropriate;
- identify where sites can be made available for reuse; and
- collaboratively work with other Federal agencies, Congress, states, tribes, local governments, and local communities from the time a site is discovered until it is cleaned up and returned to productive reuse in a community.

For more information about the Superfund Remedial program and its community involvement resources, please refer to <http://www.epa.gov/superfund>.

The Superfund Remedial program received funding in the FY 2009 American Recovery and Reinvestment Act (ARRA). Additional details can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>.

FY 2011 Activities and Performance Plan:

In FY 2011, as in prior years, reducing risk to human health and the environment by constructing long-term remedies to address contaminated sites on the NPL remains the top priority of the Superfund Remedial program. EPA will continue to address complicated environmental and human health problems such as contaminated soils in residential areas and contaminated sediments, surface water and groundwater. The Agency's goal is ultimately to provide long-term human health and environmental protection at the nation's most contaminated hazardous waste sites, and return sites to communities. In addition to its cleanup work, the Superfund Remedial program will, where appropriate, undertake interim response actions to protect people and the environment from the acute threats posed by uncontrolled hazardous wastes or contaminated groundwater. 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 actual or potential releases at sites where EPA has been notified by states, tribes, community members, 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 progress towards reducing the number of sites needing final assessment decisions. At the beginning of FY 2011, the Agency will have completed assessment work at nearly 41,000 sites and there will be approximately 3,800 sites that still need assessment. In addition, EPA has an active pre-screening process which allows prioritization of sites for efficient use of Agency resources. The number of final assessment decisions made each year exceeds the number of new sites being identified by EPA each year. EPA has revised its target to align with the current universe of sites that still require final decisions. EPA plans to complete 325 site assessment decisions in FY 2011.

For those sites requiring additional Federal actions to protect human health and the environment, EPA's NPL identifies sites that contain priority releases for long-term remedial evaluation and response. Only sites on the NPL are eligible for Fund-financed remedial action. Sites posing immediate risks also may be addressed under the Superfund Emergency Response and Removal program. In FY 2011, EPA will continue investigating sites to determine the best approach to address these sites, including listing them on the NPL. As in past years, EPA expects there will be two final NPL rule makings during FY 2011.

At NPL sites, EPA will continue to begin remedial work with remedial investigations and feasibility studies to review site conditions and evaluate strategies for cleanup, taking into consideration reasonably anticipated future land use. Multiple cleanup actions are required at many sites to address all the contamination. In FY 2011, 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. The Agency will continue to engage the community from the time a site is discovered until it is cleaned up in all aspects of its decision-making, remedy implementation and construction activities.

To support the scientific integrity in the Agency's decision making process of site cleanup alternatives, EPA maintains a full array of direct site support services. The Agency provides reliable and high quality analytical services for use at sites (e.g., support for the Contract Laboratory Program, support to staff Regional labs, and special analytical services and analyses) and maintains an Environmental Response Team which is available to support the site-specific needs of emergency responders, on-scene coordinators, and remedial project managers in conducting assessments, investigations and clean-ups. EPA also ensures the professional development of its staff through an extensive technical training program which is also available to States, tribes, and our Federal partners and employs an active and comprehensive technology assessment and integration program to provide staff with information on new technologies, direct site support to employ technologies, technology training, and support to optimize the clean-up process.

EPA has increasingly focused resources on constructing a remedy which prevents contaminants from spreading through the soil, surface water, or groundwater. However, prior to remedy construction, 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 projects³⁰, 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 2011, EPA will continue to work to improve long-term planning construction estimates, including planning for the use of resources received from settlements with PRPs that have been placed in special accounts for future response work.

In an effort to improve the accountability, transparency, and effectiveness of EPA's cleanup programs, EPA initiated a multi-year effort in 2010 to explore better uses of assessment and cleanup authorities to address a greater number of sites, accelerate cleanups, and put those sites back into productive use while protecting human health and the environment. By bringing to

³⁰ Projects represent discrete actions taken to implement a site cleanup remedy as described in the Record of Decision. They are typically defined to address discrete problems, such as specific media (e.g., ground water contamination), areas of a site (e.g., discrete areas of contamination), or particular technologies (e.g., soil vapor extraction). A given remedy may contain multiple actions or projects depending on the nature of the remedy selected.

bear the relevant tools available in each of the cleanup programs (Superfund Remedial, Superfund Emergency Response and Removal, Superfund Federal Facilities Response, and Brownfields Projects), EPA will better leverage the resources available to address needs at individual sites.

For example, EPA is pursuing program efficiencies to improve the management of the program and increase joint efforts among programs, as well as, defining and implementing new performance measures that further describe the achievement of EPA's cleanup programs. As an early step toward an improved Superfund Remedial program measurement, in FY 2011, EPA will implement a new measure, Number of Remedial Action (RA) Projects Completed at Superfund NPL sites, to augment the site-wide construction completion measure described below. The FY 2011 target is 103 RA Projects Completed, a portion of which are being funded using ARRA monies.

EPA tracks site-wide construction completions as an interim measure of progress toward making sites ready for reuse and achieving site cleanup goals. Sites qualify for construction completion when: (1) all necessary physical construction identified in a ROD is complete, whether 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 2011, EPA estimates it will achieve 25 site construction completions (as compared to 20 in FY 2009) for a cumulative total of 1127 NPL sites, and it will continue to delete sites from the NPL as appropriate. The increase in the FY 2011 construction completion target is due, in part, to the availability of ARRA funding that accelerated work being performed at certain Superfund sites.

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. A significant statutorily required post-construction activity is a Five-Year Review, which generally is necessary 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 all components of the implemented remedy and to determine whether the remedy remains protective of human health and the environment. The Five-Year Review includes not only the physical remedy itself, but also institutional controls necessary to manage the use of the site. In recent years, EPA has made significant improvements in the tracking and evaluation of institutional controls including launching a publicly accessible database. Five-Year Reviews are usually performed not once, but at five-year intervals so long as waste remains in place. EPA plans to conduct over 200 Five-Year Reviews in FY 2011.

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 remedy options. The Agency also is working with communities at sites that have already been remediated to ensure long-term stewardship of site remedies and to create opportunities for reuse. In May 2006, EPA established the Sitewide 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 mission for the Superfund program as well as the priority EPA is now placing on post-construction activities at NPL sites. In FY 2011, EPA anticipates achieving a net total of 65 sites qualified for this designation bringing the program's cumulative total to 538 sites.

EPA reports against two environmental indicator measures to document progress achieved toward providing short- and long-term human health protection. The Site-Wide Human Exposure environmental indicator is designed to document the progress achieved toward providing long-term human health protection by measuring the incremental progress achieved in controlling unacceptable current human exposures at a NPL site. In FY 2011, 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 1,339 sites under control. The Migration of Contaminated Groundwater Under Control environmental indicator applies to NPL sites that contain contaminated groundwater 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 groundwater is stabilized, and there is no groundwater discharge to surface water. In FY 2011, 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 1,041 sites under control.

During FY 2011, EPA will implement data management support cost reductions identified during reviews held in FY 2010 of data systems supporting the Superfund remedial program. For example, the Agency is consolidating existing data systems (e.g. CERCLIS, SDMS, etc.) into the replacement system [Superfund Enterprise Management System (SEMS)]. In addition, EPA will continue to take actions to improve program management and increase efficiency in other areas such as reducing overhead costs and finding efficiencies in contracting and similar or related processes used to support the program.

In FY 2011, the Superfund Remedial program will support the Agency's Healthy Communities initiative through strengthening our partnership with the U.S. Army Corps of Engineers on cleaning up contaminated sediments in urban rivers adjacent to Superfund sites. In addition, EPA will continue coordinating with the U.S. Army Corps of Engineers and consulting engineers to analyze staging options for large complex design and construction projects. The effort will augment the Agency's 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. EPA will work on optimizing groundwater remedies and sharing best practices with Regional offices for cost management and efficiency improvements.

The Agency strives to ensure 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 2011, EPA will continue its efforts to advance green remediation practices and identify new opportunities and tools to make "greener" decisions across Superfund cleanup sites.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Number of remedial action project completions at Superfund NPL Sites.	No Target Established	97	No Target Established	103	Completions

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of Superfund sites ready for anticipated use site-wide.	65	66	65	65	Sites

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Annual number of Superfund sites with remedy construction completed.	20	20	22	25	Completions

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Number of Superfund sites with human exposures under control.	10	11	10	10	Sites

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Superfund sites with contaminated groundwater migration under control.	15	16	15	15	Sites

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Human exposures under control per million dollars.	6.7	8.5	7	7.3	Sites

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Superfund final site assessment decisions completed.	400	400	330	325	Assessments

*Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.

The Superfund Remedial program reports its activities and progress toward 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 2009, the Superfund Remedial program met or exceeded all of its performance measure targets. In FY 2011, the program plans to continue to maintain progress achieving the program's long-term goals. In addition, as noted above, EPA has added a new measure for Superfund NPL RA project completions in order to measure and evaluate the progress of cleanup activities between the time a site is placed on the NPL and construction is completed, which often spans multiple years due to the complexity of cleanup efforts.

Performance goals and measures for the Superfund Federal Facilities Response program are a component of the Superfund Remedial program's measures.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$5,007.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$527.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$4,419.0) This reduction implements an Agency review intended to improve the effectiveness of our acquisition practices and to realize contract efficiencies in areas such as data management support.
- (-\$23.0) This reflects a realignment of Agency IT and telecommunications resources for the Computer Security Incident Response Center from across programs to the Information Security program.
- (-\$175.0) This reflects a redirection of resources to Human Health and Ecosystems which funds ECOTOX, a database for locating single chemical toxicity data for aquatic life, terrestrial plants and wildlife. Various programs have contributed to this database in the past.
- (+\$137.0/ +1.0 FTE) This change reflects the associated payroll of 1 FTE to support the Agency's Healthy Communities initiative. This FTE will coordinate with the U.S. Army Corps of Engineers on sediment cleanup projects in urban waters which will enable the Agency to leverage resources from our Federal partners as part of the overall site cleanup.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Hazardous Substance Superfund</i>	\$6,575.0	\$6,575.0	\$5,920.0	(\$655.0)
Total Budget Authority / Obligations	\$6,575.0	\$6,575.0	\$5,920.0	(\$655.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Other Federal agencies are given responsibilities under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). 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 2011 Activities and Performance Plan:

In FY 2011, 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 2011 request:

**Other Federal Agency Funding
 (\$ in thousands)**

Agency	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
DOI	\$546.0	\$492.0	(\$54.0)
NOAA	\$1,063.0	\$957.0	(\$106.0)
USCG	\$4,966.0	\$4,471.0	(\$495.0)
TOTAL	\$6,575.0	\$5,920.0	(\$655.0)

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 agency³¹ 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.

³¹ 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. 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 to minimize those risks, 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 2011, EPA funding will continue to support the USCG's preparation efforts to respond to CERCLA incidents, but the funding will be reduced for certain activities, including:

- Reducing support at the National Response Center;
- Reducing maintenance and support at all USCG District Marine Safety Units and the hazardous material Strike Team; and
- Reducing training and exercise opportunities that the USCG and EPA and other Federal partners participate in to maintain response readiness.

Performance Targets:

Work under this program supports EPA's objective for restoring land. Currently, there are no separate performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$655.0) This reflects a decrease to contracts to better align resources with Agency priorities. This program reduction reduces support to such activities as the National Response Center and the USCG District Marine Safety Units; however, it is not expected to directly impede Superfund program performance.

Statutory Authority:

CERCLA Sections 104, 105, 106, 120; CWA; OPA.

**Environmental Protection Agency
2011 Annual Performance Plan and Congressional Justification**

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**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

**APPROPRIATION: Leaking Underground Storage Tanks
Resource Summary Table
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Leaking Underground Storage Tanks				
<i>Budget Authority</i>	\$113,264.0	\$113,101.0	\$113,219.0	\$118.0
<i>Recovery Act Budget Authority</i>	\$192,024.0			
Total Dollars	\$305,288.0	\$113,101.0	\$113,219.0	\$118.0
Total Workyears	65.0	75.3	74.2	-1.1

Bill Language: Leaking Underground Storage Tanks

For necessary expenses to carry out leaking underground storage tank cleanup activities authorized by subtitle I of the Solid Waste Disposal Act, as amended, [\$113,101,000] \$113,219,000, to remain available until expended, of which [\$78,671,000] \$78,789,000 shall be for carrying out leaking underground storage tank cleanup activities authorized by section 9003(h) of the Solid Waste Disposal Act, as amended; \$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.(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010.)

**Program Projects in LUST
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Enforcement				
Civil Enforcement	\$0.0	\$0.0	\$847.0	\$847.0
Compliance				
Compliance Assistance and Centers	\$802.4	\$797.0	\$0.0	(\$797.0)
IT / Data Management / Security				
IT / Data Management	\$164.3	\$162.0	\$0.0	(\$162.0)
Operations and Administration				

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Facilities Infrastructure and Operations				
Rent	\$696.0	\$696.0	\$696.0	\$0.0
Facilities Infrastructure and Operations (other activities)	\$199.5	\$208.0	\$220.0	\$12.0
Subtotal, Facilities Infrastructure and Operations	\$895.5	\$904.0	\$916.0	\$12.0
Acquisition Management	\$139.8	\$165.0	\$165.0	\$0.0
Central Planning, Budgeting, and Finance	\$1,109.6	\$1,115.0	\$1,050.0	(\$65.0)
Human Resources Management	\$3.0	\$0.0	\$0.0	\$0.0
Subtotal, Operations and Administration	\$2,147.9	\$2,184.0	\$2,131.0	(\$53.0)
Research: Land Protection				
Research: Land Protection and Restoration	\$424.1	\$345.0	\$457.0	\$112.0
Underground Storage Tanks (LUST / UST)				
LUST / UST				
EPAct & Related Authorities Implementation	\$12.6	\$0.0	\$0.0	\$0.0
LUST / UST (other activities)	\$10,874.5	\$11,613.0	\$12,162.0	\$549.0
Subtotal, LUST / UST	\$10,887.1	\$11,613.0	\$12,162.0	\$549.0
LUST Cooperative Agreements				
EPAct & Related Authorities Implementation	\$3,445.1	\$0.0	\$0.0	\$0.0
LUST Cooperative Agreements (other activities)	\$61,419.3	\$63,570.0	\$63,192.0	(\$378.0)
Subtotal, LUST Cooperative Agreements	\$64,864.4	\$63,570.0	\$63,192.0	(\$378.0)
LUST Prevention				
EPAct & Related Authorities Implementation	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0
Subtotal, LUST Prevention	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0
Subtotal, Underground Storage Tanks (LUST / UST)	\$109,725.3	\$109,613.0	\$109,784.0	\$171.0
Recovery Act Resources				
Recovery Act Resources	\$192,024.0			
TOTAL, EPA	\$305,288.0	\$113,101.0	\$113,219.0	\$118.0

Program Area: Compliance

Compliance Assistance and Centers

Program Area: Compliance

Goal: Land Preservation and Restoration

Objective(s): Preserve Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$24,996.0	\$25,622.0	\$0.0	(\$25,622.0)
<i>Leaking Underground Storage Tanks</i>	<i>\$802.4</i>	<i>\$797.0</i>	<i>\$0.0</i>	<i>(\$797.0)</i>
Oil Spill Response	\$293.5	\$269.0	\$0.0	(\$269.0)
Hazardous Substance Superfund	\$22.0	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$26,113.9	\$26,688.0	\$0.0	(\$26,688.0)
Total Workyears	179.8	173.7	0.0	-173.7

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 2011 Activities and Performance Plan:

In FY 2011, the Agency will merge the Compliance Assistance and Centers and Compliance Incentives program activities into the Civil Enforcement and Compliance Monitoring programs to more fully integrate assistance into its enforcement and compliance assurance efforts. Therefore, the FY 2011 Compliance and Assistance and Centers program's activities and performance plan are incorporated into the Civil Enforcement and Compliance Monitoring programs.

Performance Targets:

The performance measures previously supported by this program project are now addressed in the Civil Enforcement program project, where these resources have been realigned.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$797.0/ -4.8 FTE) This shift of resources out of the LUST appropriation, including 4.8 FTE and associated payroll of \$764.0, reflects the Agency's efforts to realign the

¹ For more information refer to: www.epa.gov/swrust1/cat/index.htm.

enforcement program by integrating the Compliance Assistance and Centers program into the Civil Enforcement program.

Statutory Authority:

PPA; CERFA; NEPA; AEA; UMTRLWA; RCRA.

Program Area: IT / Data Management / Security

IT / Data Management

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$90,809.5	\$97,410.0	\$98,060.0	\$650.0
Science & Technology	\$3,852.1	\$4,385.0	\$4,111.0	(\$274.0)
<i>Leaking Underground Storage Tanks</i>	<i>\$164.3</i>	<i>\$162.0</i>	<i>\$0.0</i>	<i>(\$162.0)</i>
Oil Spill Response	\$36.3	\$24.0	\$0.0	(\$24.0)
Hazardous Substance Superfund	\$17,266.1	\$17,087.0	\$16,720.0	(\$367.0)
Total Budget Authority / Obligations	\$112,128.3	\$119,068.0	\$118,891.0	(\$177.0)
Total Workyears	484.6	503.1	489.3	-13.8

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).

The IT/Data Management LUST resources provided EPA's "Readiness to Serve" IT infrastructure program. These funds are now being shifted to EPM. This program delivered secure information services to ensure that the Agency and its programs had a full range of information technology infrastructure components that made information accessible across the spectrum of mission needs at all locations. The program used performance-based, outsourced services to obtain the best solutions (value for cost) for the range of program needs. This included innovative multi-year leasing that sustained and renewed technical services in a least-

cost, stable manner as technology changed over time (e.g. desktop hardware, software and maintenance).

FY 2011 Activities and Performance Plan:

In FY 2011, the work previously supported by LUST appropriation will be continued under Environmental Program and Management appropriation. This realignment provides more efficient accounting of this program funding.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$162.0) This change eliminates the use of LUST appropriation and shifts resources to Environmental Program Management appropriation to provide more efficient accounting of this program funding. There will be no change in the work being performed.

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

Facilities Infrastructure and Operations
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
Science & Technology	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Building and Facilities	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
<i>Leaking Underground Storage Tanks</i>	<i>\$895.5</i>	<i>\$904.0</i>	<i>\$916.0</i>	<i>\$12.0</i>
Oil Spill Response	\$576.1	\$505.0	\$534.0	\$29.0
Hazardous Substance Superfund	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
Total Budget Authority / Obligations	\$481,429.3	\$496,978.0	\$510,344.0	\$13,366.0
Total Workyears	390.2	411.1	415.1	4.0

Program Project Description:

The Facilities Infrastructure and Operations Program provide activities and support services in many centralized administrative areas at EPA. LUST resources for this program support a full range of ongoing facilities management services including rental payments for laboratory and office facilities, health and safety, environmental compliance, occupational health, medical monitoring, fitness, wellness, safety, environmental management functions, facilities maintenance and operations, security, space planning, shipping and receiving, property management, printing and reproduction, mail management, and transportation services.

FY 2011 Activities and Performance Plan:

- For FY 2011, the Agency is requesting a total of \$0.7 million for rent and \$0.07 million for transit subsidy in the LUST appropriation.
- The Agency will continue to manage its lease agreements with General Services Administration and other private landlords by conducting rent reviews and verifying that monthly billing statements are correct.
- EPA will provide transit subsidy to eligible applicants as directed by Executive Order 13150² *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. Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$16.0) This reflects an increase in transit subsidy cost.
- (-\$4.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$31,332.7	\$32,404.0	\$33,934.0	\$1,530.0
<i>Leaking Underground Storage Tanks</i>	<i>\$139.8</i>	<i>\$165.0</i>	<i>\$165.0</i>	<i>\$0.0</i>
Hazardous Substance Superfund	\$23,521.1	\$24,684.0	\$24,337.0	(\$347.0)
Total Budget Authority / Obligations	\$54,993.6	\$57,253.0	\$58,436.0	\$1,183.0
Total Workyears	339.7	362.9	363.0	0.1

Program Project Description:

Leaking Underground Storage Tanks (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 2011 Activities and Performance Plan:

In FY 2011, the Agency will continue to refine electronic government capabilities and enhance the education of its contract workforce. In addition, LUST resources will support the full range of acquisition management activities for the underground tanks programs.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

EPA's Environmental Statutes; Annual Appropriations Acts; FAR; contract law.

Central Planning, Budgeting, and Finance
 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$89,875.3	\$82,834.0	\$86,039.0	\$3,205.0
<i>Leaking Underground Storage Tanks</i>	<i>\$1,109.6</i>	<i>\$1,115.0</i>	<i>\$1,050.0</i>	<i>(\$65.0)</i>
Hazardous Substance Superfund	\$24,154.9	\$27,490.0	\$26,934.0	(\$556.0)
Total Budget Authority / Obligations	\$115,139.8	\$111,439.0	\$114,023.0	\$2,584.0
Total Workyears	530.2	547.7	547.1	-0.6

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 Agencywide planning processes for the Working Capital Fund; providing 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 2011 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 Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$12.0/ -1.1 FTE) 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. It also shifts FTE and associated payroll to reflect EPA's workforce management strategy that will help the Agency better align resources, skills, and Agency priorities.
- (-\$53.0) This change reduces non-payroll LUST resources to better align resources with historical utilization and Agency priorities.

Statutory Authority:

Annual Appropriations Act; CCA; CERCLA; CSA; E-Government Act of 2002; EFOIA; EPA's Environmental Statutes, and the FGCAA; FAIR; Federal Acquisition Regulations, contract law and EPA's Assistance Regulations (40CFR Parts 30, 31, 35, 40,45,46, 47); FMFIA (1982); FOIA; GMRA(1994); IPIA; IGA of 1978 and Amendments of 1988; PRA; PR; CFOA (1990); GPRA (1993); The Prompt Payment Act (1982); Title 5 USC.

Program Area: Research: 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$11,696.8	\$14,111.0	\$13,800.0	(\$311.0)
<i>Leaking Underground Storage Tanks</i>	<i>\$424.1</i>	<i>\$345.0</i>	<i>\$457.0</i>	<i>\$112.0</i>
Oil Spill Response	\$382.8	\$639.0	\$689.0	\$50.0
Hazardous Substance Superfund	\$19,010.1	\$21,191.0	\$19,069.0	(\$2,122.0)
Total Budget Authority / Obligations	\$31,513.8	\$36,286.0	\$34,015.0	(\$2,271.0)
Total Workyears	141.4	154.7	150.7	-4.0

Program Project Description:

Leaking Underground Storage Tank (LUST) research focuses on the assessment and cleanup of leaks at fueling stations, especially identifying the environmental impacts of existing and new biofuels coming into the marketplace. EPA's Land Research program provides the scientific foundation for the Agency's actions to protect America's land and ground water resources impacted by the nation's more than 600 thousand underground fuel storage tanks. The purpose of the Land Protection LUST research program is the prevention and control of pollution at LUST sites, and is of high importance to state environmental programs.

The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering. Specific activities in the LUST Land Research program 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.

As the varieties of commercially used fuels increase, the Agency needs to:

- Determine how these new fuels affect the existing fueling station infrastructure,
- Determine ways to monitor potential leaks as a function of the infrastructure and fuel type, and
- Develop the risk management approaches to control and remediate these leaks to protect water supplies.

The Land Research program, in collaboration with the California Department of Health Services and the University of California, has demonstrated that ethanol in the fuel supply can result in

extended petroleum hydrocarbon plumes, increasing water supply vulnerability.³ Overlaying this issue is the increase in water demands seen nationally, which has become more pronounced because of droughts experienced in many parts of the country. In areas with greater population density, there are a greater number of fueling stations and higher water demands to support the population. With the water utilities in these areas pumping more wells at a higher rate, combined with the potential for ethanol to expand the hydrocarbon plumes, leaks from underground storage tanks may impair or reduce the availability of drinking water supplies.

These research efforts are guided by the Land Multi-Year Plan (MYP)⁴, 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.⁵ This 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 2011 Activities and Performance Plan:

In FY 2011, resources will continue to be utilized to address prevention and control. Underground storage tank research will focus more on biofuels, as increased ethanol and biodiesel use changes contaminant composition and susceptibility to remediation approaches. This goal is best achieved by proper characterization of both fuels and release sites, as well as the development of effective risk management approaches. Research activities will include:

- Fuels analysis, including understanding current and future shifts in supply.
- Understanding fate and transport of ethanol, biodiesel, and other biofuels coming into the marketplace using models that incorporate defining characteristics of the fuel and the releases.
- Work with the public and private sectors on analysis of infrastructure to determine vulnerabilities in the tank storage system to prevent water quality impairment.
- Technology transfer of 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.
- Development of treatment options anticipating fuel composition changes and the nature of sites where releases will occur.
- Determining the role of vapor releases of gasoline from underground storage tanks on fuel constituent contamination in ground water both in the field and in laboratory settings.

This research will complement biofuels research conducted in the global change and air programs.

³ Mackay, D. M., N. R. de Sieyes, M. D. Einarson, K. P. Feris, A. A. Pappas, I. A. Wood, L. Jacobson, L. G. Justice, M. N. Noske, K. M. Scow and J. T. Wilson. Impact of Ethanol on the Natural Attenuation of Benzene, Toluene and o-Xylene in a Normally Sulfate-Reducing Aquifer. *Environmental Science and Technology*, 40:19, 6123-6130, 2006.

⁴ 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>

⁵ For more information, see www.epa.gov/landscience.

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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$112.0) 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)

LUST / UST

Program Area: Underground Storage Tanks (LUST / UST)

Goal: Land Preservation and Restoration

Objective(s): Preserve Land; Restore Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$13,581.6	\$12,424.0	\$14,647.0	\$2,223.0
<i>Leaking Underground Storage Tanks</i>	<i>\$12,234.1</i>	<i>\$11,613.0</i>	<i>\$12,162.0</i>	<i>\$549.0</i>
<i>Budget Authority</i>	<i>\$10,887.1</i>	<i>\$11,613.0</i>	<i>\$12,162.0</i>	<i>\$549.0</i>
<i>Recovery Act Budget Authority</i>	<i>\$1,347.0</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$25,815.7	\$24,037.0	\$26,809.0	\$2,772.0
Total Workyears	124.9	132.0	136.0	4.0

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, 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.

Under this program, 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 Act⁶ (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.

In the FY 2009 American Recovery and Reinvestment Act (ARRA), the LUST cleanup program received \$200 million in budget authority, of which a total of \$1.3 million was obligated under LUST/UST. Additional details can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>.

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).

FY 2011 Activities and Performance Plan:

As of the end of FY 2009, almost 80 percent (or 388,331) of all reported leaks have been addressed, leaving a remainder of 100,165 old leaks that have not yet been cleaned up.⁷ In FY 2011, EPA will continue to work with the states and tribes to complete LUST cleanups in an effort to reduce the remaining backlog.

In FY 2011, EPA will strive for improved engagement of local communities with stakeholder input in enhancing state and Tribal public involvement of policies and processes. EPA will continue to help states and tribes improve LUST cleanup performance by performing analyses, such as analyzing states’ backlog characterization reports and states’ financial soundness, and implementing strategies to reduce the backlog of open releases. EPA will work with states to better characterize sites still requiring remediation and provide guidance and technical support regarding cleanup approaches and technologies. EPA also will continue its efforts to monitor the soundness of financial mechanisms serving as financial assurance for LUST sites, including insurance and state cleanup funds, a significant source of funding for addressing LUST cleanups. EPA will explore the opportunities for financial mechanisms to improve cleanup performance.

The EPAct requirement to develop a strategy⁸ 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 and protect vulnerable populations, 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of LUST cleanups completed that meet risk-based standards for human exposure and groundwater migration in Indian Country.	30	49	30	30	Cleanups

⁷ Refer to *Semi-Annual Report Of UST Performance Measures End of Fiscal Year 2009 – As Of September 30, 2009*, dated December 2009; http://www.epa.gov/OUST/cat/ca_09_34.pdf.

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.

To improve the LUST 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. In addition, the measures will increase the number of cleanups that meet risk-based standards for human exposure and groundwater migration in Indian country.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$638.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$213.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (+\$124.0) This increase provides additional resources to grants for technical assistance, training and administrative support for the LUST program. These resources will be used to address emerging program issues and cleanup activities such as vapor intrusion cleanup, state fund soundness, and implementing Green Remediation practices.

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; EPA Act 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Leaking Underground Storage Tanks</i>	\$255,541.4	\$63,570.0	\$63,192.0	(\$378.0)
<i>Budget Authority</i>	\$64,864.4	\$63,570.0	\$63,192.0	(\$378.0)
<i>Recovery Act Budget Authority</i>	\$190,677.0	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$255,541.4	\$63,570.0	\$63,192.0	(\$378.0)
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. To date, 388,331 reported leaks have been addressed, leaving a backlog of 100,165 old leaks that have not yet been cleaned up.⁹ For additional information, refer to the following site: <http://www.epa.gov/swrust1/overview.htm>.

States are the primary implementing agencies. 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 an 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.¹⁰

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. Forty states¹¹ have separate UST cleanup funds that pay for most LUST cleanups. Collectively, states raise and spend more than \$1 billion annually on LUST cleanups.

In the FY 2009 American Recovery and Reinvestment Act (ARRA), the LUST program received \$200 million in budget authority, of which a total of \$190 million was obligated under LUST Cooperative Agreements. Additional details can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>. In FY 2011, EPA and states will continue to implement the dual goals of the ARRA LUST funding: stimulate the economy and assess/remediate LUST sites.

⁹ Refer to *Semi-Annual Report Of UST Performance Measures End of Fiscal Year 2009 – As Of September 30, 2009*, dated December 2009; http://www.epa.gov/OUST/cat/ca_09_34.pdf.

¹⁰ Refer to <http://www.epa.gov/OUST/ltfacts.htm>

¹¹ 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.

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to work with the states 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 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 2011 request level, the Agency will provide not less than 80 percent of LUST appropriated funds to states to carry out specific purposes.¹² EPA will distribute the LUST funding to states under a previously established allocation process for the cleanup activities.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Number of LUST cleanups completed that meet risk-based standards for human exposure and groundwater migration.	12,250	12,944	12,250	12,250	Cleanups

*Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.

To improve the LUST program, EPA created a long-term performance measure that focuses on environmental outcomes to increase the number of cleanups that meet state risk-based standards for human exposure and groundwater migration.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$378.0) This change reflects a reduction of funds realigned in FY 2010. This change in FY 2011 will not impact performance.

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, American Recovery and Reinvestment Act of 2009.

¹² 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).

LUST Prevention

Program Area: Underground Storage Tanks (LUST / UST)

Goal: Land Preservation and Restoration

Objective(s): Preserve Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Leaking Underground Storage Tanks</i>	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0
Total Budget Authority / Obligations	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Preventing petroleum releases into the environment has been one of the primary goals of the Leaking Underground Storage Tank (LUST) program since its inception. 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 (EPAAct). The LUST Prevention program will provide assistance to states to meet their responsibilities under Title XV, Subtitle B of EPAAct 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.”¹³ At the end of FY 2009, there were approximately 612,000 federally-regulated active USTs at approximately 223,000 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 2011 Activities and Performance Plan:

The LUST prevention program fosters state and Tribal partnerships to minimize UST releases in local communities. In FY 2011, EPA will continue to make grants or cooperative agreements to states and tribes, and/or intertribal consortia for activities authorized by the EPAAct.¹⁴ Major activities will include inspections, enforcement of violations discovered during inspections, development of leak prevention regulations, and other program infrastructure. Specifically, these major activities include inspecting UST facilities to meet the three-year inspection requirement,

¹³ See http://www.epa.gov/OUST/fedlaws/Tribal%20Strategy_080706r.pdf.

¹⁴ 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).

assisting states in implementing the various release prevention provisions of EPCRA and EPA's grant guidelines, such as operator training and delivery prohibition and continuing to build Tribal implementation capacity. 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., developing 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 educating owners and operators in Indian country about UST requirements.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	65	66.4	65.5	66	Percent

Work under this program also supports performance results in Categorical Grant: Underground Storage Tanks Program Project and can be found in the Performance Four Year Array.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

Solid Waste Disposal Act (SWDA) of 1976, section 9011 and other applicable provisions of Subtitle I, as amended for States and Territories; Tribal Grants (P.L. 105-276); Energy Policy Act of 2005, Title XV, Subtitle B.

Program Area: Enforcement

Civil Enforcement

Program Area: Enforcement

Goal: Land Preservation and Restoration

Objective(s): Preserve Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$138,113.2	\$146,636.0	\$187,755.0	\$41,119.0
<i>Leaking Underground Storage Tanks</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$847.0</i>	<i>\$847.0</i>
Oil Spill Response	\$2,060.5	\$1,998.0	\$2,559.0	\$561.0
Hazardous Substance Superfund	\$167.2	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$140,340.9	\$148,634.0	\$191,161.0	\$42,527.0
Total Workyears	949.5	988.5	1,229.3	240.8

Program Project Description:

The Civil Enforcement program’s overarching goal is to protect human health and the environment through targeting enforcement actions according to the degree of health and environmental risk in order to promote compliance with Federal environmental statutes and regulations. The program collaborates with the Department of Justice and states, local agencies and Tribal governments to ensure consistent and fair enforcement of all environmental laws and regulations. The program seeks to aggressively pursue violations that threaten communities, level the economic playing field by ensuring that violators do not realize an economic benefit from noncompliance, and deter future violations. The civil enforcement program develops, litigates, and settles administrative and civil judicial cases against serious violators of environmental laws.

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 will also provide compliance assistance tools, technical assistance, and training to promote and enforce UST systems compliance and cleanups.¹⁵

FY 2011 Activities and Performance Plan:

In FY 2011, the Agency is shifting the Compliance Assistance and Centers program to the Civil Enforcement Program as part of the enforcement and compliance assurance program’s realignment effort. EPA will continue to integrate assistance into its enforcement and compliance assurance efforts. The Agency 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

¹⁵ For more information refer to: www.epa.gov/swrust1/cat/index.htm.

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.

Performance Targets:

Work under this program also supports the performance measures in the Civil Enforcement program project under EPM. These measures can also be found in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$847.0/ +4.8 FTE) This change in resources, including \$814.0 in associated payroll, reflects the Agency's efforts to realign the enforcement program by consolidating the Compliance Assistance and Centers program with the Civil Enforcement program.

Statutory Authority:

PPA; CERFA; NEPA; AEA; UMTRLWA; RCRA.

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**APPROPRIATION: Oil Spill Response
Resource Summary Table
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Oil Spill Response				
Budget Authority	\$17,794.8	\$18,379.0	\$18,468.0	\$89.0
Total Workyears	94.3	102.2	102.2	0.0

Bill Language: Oil Spill Response

For expenses necessary to carry out the Environmental Protection Agency's responsibilities under the Oil Pollution Act of 1990, [\$18,379,000]\$18,468,000, to be derived from the Oil Spill Liability trust fund, to remain available until expended.(Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010.)

**Program Projects in Oil Spills
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Compliance				
Compliance Assistance and Centers	\$293.5	\$269.0	\$0.0	(\$269.0)
Compliance Monitoring	\$0.0	\$0.0	\$139.0	\$139.0
Subtotal, Compliance	\$293.5	\$269.0	\$139.0	(\$130.0)
Enforcement				
Civil Enforcement	\$2,060.5	\$1,998.0	\$2,559.0	\$561.0
IT / Data Management / Security				
IT / Data Management	\$36.3	\$24.0	\$0.0	(\$24.0)
Oil				
Oil Spill: Prevention, Preparedness and Response	\$14,445.6	\$14,944.0	\$14,547.0	(\$397.0)
Operations and Administration				
Facilities Infrastructure and Operations				
Rent	\$538.0	\$438.0	\$438.0	\$0.0

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Facilities Infrastructure and Operations (other activities)	\$38.1	\$67.0	\$96.0	\$29.0
Subtotal, Facilities Infrastructure and Operations	\$576.1	\$505.0	\$534.0	\$29.0
Subtotal, Operations and Administration	\$576.1	\$505.0	\$534.0	\$29.0
Research: Land Protection				
Research: Land Protection and Restoration	\$382.8	\$639.0	\$689.0	\$50.0
Subtotal, Research: Land Protection and Restoration	\$382.8	\$639.0	\$689.0	\$50.0
TOTAL, EPA	\$17,794.8	\$18,379.0	\$18,468.0	\$89.0

Program Area: Compliance

Compliance Assistance and Centers
 Program Area: Compliance
 Goal: Land Preservation and Restoration
 Objective(s): Restore Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$24,996.0	\$25,622.0	\$0.0	(\$25,622.0)
Leaking Underground Storage Tanks	\$802.4	\$797.0	\$0.0	(\$797.0)
<i>Oil Spill Response</i>	<i>\$293.5</i>	<i>\$269.0</i>	<i>\$0.0</i>	<i>(\$269.0)</i>
Hazardous Substance Superfund	\$22.0	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$26,113.9	\$26,688.0	\$0.0	(\$26,688.0)
Total Workyears	179.8	173.7	0.0	-173.7

Program Project Description:

This portion of the Compliance Assistance program is designed to prevent oil spills using compliance and civil enforcement tools and strategies and to prepare for and respond to any oil spill affecting the inland waters of the United States. EPA's Oil Program has a long history of effective response to major oil spills, and the lessons learned have helped to improve our country's prevention and response capabilities.

FY 2011 Activities and Performance Plan:

In FY 2011, the Agency proposes to merge the Compliance Assistance and Centers and Compliance Incentives program activities into the Civil Enforcement and Compliance Monitoring programs to more fully integrate compliance assistance into enforcement and assurance efforts. Therefore, the FY 2011 Compliance and Assistance and Centers programs are incorporated into the Civil Enforcement and Compliance Monitoring programs.

Performance Targets:

The performance measures previously supported by this program project are now addressed in the Civil Enforcement and Compliance Monitoring program projects under EPM, where these resources have been realigned.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$269.0/ -1.8 FTE) This reduction in resources reflects the Agency's efforts to realign the enforcement program by eliminating the Compliance Assistance and Centers program, and moves the activities and resources to the Civil Enforcement and Compliance Monitoring programs, including associated payroll of \$222.0.

Statutory Authority:

OPA; CWA; CERCLA; PPA; NEPA; PHSA; DREAA; SDWA; Executive Order 12241; Executive Order 12656.

Compliance Monitoring

Program Area: Compliance

Goal: Land Preservation and Restoration

Objective(s): Restore Land

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$98,457.1	\$99,400.0	\$110,467.0	\$11,067.0
<i>Oil Spill Response</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$139.0</i>	<i>\$139.0</i>
Hazardous Substance Superfund	\$1,265.2	\$1,216.0	\$1,220.0	\$4.0
Total Budget Authority / Obligations	\$99,722.3	\$100,616.0	\$111,826.0	\$11,210.0
Total Workyears	613.6	612.3	632.5	20.2

Program Project Description:

EPA's Compliance Monitoring 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 Monitoring program is designed to prevent oil spills using compliance and civil enforcement tools and strategies and to prepare for and respond to any oil spill affecting the inland waters of the United States. EPA's Oil Program has a long history of effective response to major oil spills, and the lessons learned have helped to improve our country's prevention and response capabilities.

FY 2011 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 2011 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. This request reflects the realignment of the enforcement program through consolidation of the Compliance Assistance and Compliance Incentives programs with the Civil Enforcement and Compliance Monitoring programs.

Work under this program project supports the Agency's new High Priority Performance Goal, addressing water quality (specified in full in Appendix B).

Performance Targets:

Work under this program also supports the performance measures in the Compliance Monitoring program project. These measures can be found in the Performance Four Year Array in Tab 11.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$139.0/ +0.9 FTE) This reflects the realignment of the enforcement program through consolidation of the Compliance Assistance and Compliance Incentives programs with the Civil Enforcement and Compliance Monitoring programs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$138,113.2	\$146,636.0	\$187,755.0	\$41,119.0
Leaking Underground Storage Tanks	\$0.0	\$0.0	\$847.0	\$847.0
<i>Oil Spill Response</i>	<i>\$2,060.5</i>	<i>\$1,998.0</i>	<i>\$2,559.0</i>	<i>\$561.0</i>
Hazardous Substance Superfund	\$167.2	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$140,340.9	\$148,634.0	\$191,161.0	\$42,527.0
Total Workyears	949.5	988.5	1,229.3	240.8

Program Project Description:

This portion of the Civil Enforcement program is designed to prevent oil spills using civil enforcement and compliance assistance approaches as well as 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 2011 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, provide compliance assistance to regulated entities to assist them in understanding their legal requirements under the Clean Water Act, and assist in the recovery of cleanup costs expended by the government. In FY 2011, the program also will continue to provide support for field investigations and inspections of spills, as well as Spill Control Countermeasure compliance assistance.

Work under this program project supports the Agency's new High Priority Performance Goal, addressing water quality (specified in full in Appendix B).

Performance Targets:

Work under this program also supports the performance measures in the Civil Enforcement program project under EPM. These measures can also be found in the Performance Four Year Array in Tab 11.

¹ For more information refer to: www.epa.gov/oilspill/index.htm.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$386.0) This reflects an increase for payroll and cost of living for existing FTE.
- (+\$175.0/ +0.9 FTE) This change in resources, including associated payroll of \$135.0, reflects the Agency's efforts to realign the enforcement program by consolidating the Compliance Assistance program with the Civil Enforcement program.

Statutory Authority:

OPA; CWA; CERCLA; NEPA; Pollution Prosecution Act.

Program Area: IT / Data Management / Security

IT / Data Management

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$90,809.5	\$97,410.0	\$98,060.0	\$650.0
Science & Technology	\$3,852.1	\$4,385.0	\$4,111.0	(\$274.0)
Leaking Underground Storage Tanks	\$164.3	\$162.0	\$0.0	(\$162.0)
<i>Oil Spill Response</i>	<i>\$36.3</i>	<i>\$24.0</i>	<i>\$0.0</i>	<i>(\$24.0)</i>
Hazardous Substance Superfund	\$17,266.1	\$17,087.0	\$16,720.0	(\$367.0)
Total Budget Authority / Obligations	\$112,128.3	\$119,068.0	\$118,891.0	(\$177.0)
Total Workyears	484.6	503.1	489.3	-13.8

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 partially funded under the Oil Spill Response (Oil) appropriation is Internet Operations and Maintenance (IOME).

FY 2011 Activities and Performance Plan:

In FY 2011, the work previously supported by this appropriation will be continued under Environmental Program and Management. This is a technical adjustment to simplify accounting.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$24.0) This change eliminates the use of Oil appropriation and shifts resources to Environmental Program Management appropriation to provide more efficient accounting of this program funding. There will be no change in the work being performed.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Oil Spill Response</i>	<i>\$14,445.6</i>	<i>\$14,944.0</i>	<i>\$14,547.0</i>	<i>(\$397.0)</i>
Total Budget Authority / Obligations	\$14,445.6	\$14,944.0	\$14,547.0	(\$397.0)
Total Workyears	84.7	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 more than six hundred thousand 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) regulation 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 thirty thousand oil and hazardous substance releases occur in the U.S. every year, with a large number of these spills occurring in the inland zone for which EPA has jurisdiction. On average, one spill of greater than 100 thousand gallons occurs every month from EPA-regulated oil storage facilities and the inland oil transportation network. For more information, refer to <http://www.epa.gov/oilspill/>.

FY 2011 Activities and Performance Plan:

FY 2011 priorities will continue to focus on improvements to the Oil Spill program’s regulatory requirements. As appropriate, EPA will begin to implement regulatory changes and update guidance, which was issued previously, to ensure it reflects current final rule requirements and input from stakeholders.

In FY 2011, 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 response 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) and 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of all SPCC inspected facilities found to be non-compliant which are brought into compliance.			15	30	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of all FRP inspected facilities found to be non-compliant which are brought into compliance.			15	30	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	No Target Established	Data Avail 2/2010	No Target Established	81,000	Gallons

EPA's Oil Spill program performance is determined by measuring the compliance rate of facilities with the FRP and SPCC requirements. The program also is developing stronger

strategic planning procedures to ensure continuous program improvement, ensuring data quality, and developing a forum to share best spill prevention practices across Regional offices. The efficiency measure reflects long-term performance with targets set every three years.

In FY 2011, EPA will ensure that 30 percent of FRP facilities that are found to be non-compliant during FY 2010 and FY 2011 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 was also instituted for FY 2010. Similar to the FRP measure mentioned above, EPA will ensure that 30 percent of SPCC facilities found to be non-compliant during FY 2010 and FY 2011 will be brought into compliance by the end of the fiscal year.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$772.0) This reflects an increase for payroll and cost of living for existing FTE.
- (-\$56.0) This decrease in travel costs reflects an effort to reduce the Agency's travel footprint by promoting green travel and conferencing.
- (-\$1,113.0) This change reflects a reduction of funds received in FY 2010 to implement requirements under the new SPCC regulation.

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

Facilities Infrastructure and Operations
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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
Science & Technology	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Building and Facilities	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
Leaking Underground Storage Tanks	\$895.5	\$904.0	\$916.0	\$12.0
Oil Spill Response	\$576.1	\$505.0	\$534.0	\$29.0
Hazardous Substance Superfund	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
Total Budget Authority / Obligations	\$481,429.3	\$496,978.0	\$510,344.0	\$13,366.0
Total Workyears	390.2	411.1	415.1	4.0

Program Project Description:

The Facilities Infrastructure and Operations Program provides a 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 2011 Activities and Performance Plan:

- For FY 2011, the Agency is requesting a total of \$0.44 million for rent and \$0.096 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 continue to provide transit subsidy to eligible applicants as directed by Executive Order 13150 *Federal Workforce Transportation*.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$29.0) This change reflects an increase in transit subsidy costs.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Science & Technology	\$11,696.8	\$14,111.0	\$13,800.0	(\$311.0)
Leaking Underground Storage Tanks	\$424.1	\$345.0	\$457.0	\$112.0
<i>Oil Spill Response</i>	<i>\$382.8</i>	<i>\$639.0</i>	<i>\$689.0</i>	<i>\$50.0</i>
Hazardous Substance Superfund	\$19,010.1	\$21,191.0	\$19,069.0	(\$2,122.0)
Total Budget Authority / Obligations	\$31,513.8	\$36,286.0	\$34,015.0	(\$2,271.0)
Total Workyears	141.4	154.7	150.7	-4.0

Program Project Description:

The range of research programs and initiatives will both continue the work of better understanding the scientific basis of our environmental and human health problems as well as advance the design of sustainable solutions through approaches such as green chemistry and green engineering. In the Oil Spill Research program, work focuses on three aspects:

- Protocol development for testing commercial product effectiveness;
- Understanding fate and transport of oil in the environment (such as the work done on bioremediation on shorelines and wetlands and dispersant research in a wave tank); and
- Spill response technology development.

EPA's Land Research program provides the scientific foundation for the Agency's actions to protect and sustain America's land. EPA develops and uses its protocols for testing various spill response product classes to pre-qualify products as outlined 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.

Spill response is a priority for the Agency, and EPA has been instrumental in providing guidance for various response technologies, such as the published bioremediation guidance documents². A key factor in providing guidance on spill response technologies is developing a firm understanding of the science behind spill behavior in the environment. One example of why this understanding is required is to determine the cause of lingering oil in Prince William Sound twenty years after the Exxon Valdez spill. Fundamental science is essential to the development of effective regulations, and the Agency's oil spill research program has been invaluable in providing this guidance, as well as support for implementation, through activities such as annual On-Scene Coordinator training on alternative response technologies.

² For more information, see <http://www.epa.gov/emergencies/publications.htm>.

These research efforts are guided by the Land Research program's Multi-Year Plan (MYP)³, developed with input from across the Agency. The MYP 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 Web 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 2011 Activities and Performance Plan:

In FY 2011, 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 and biofuel spills in freshwater and marine environments, as well as development of a protocol for testing oil solidifiers. This represents an additional spill cleanup technology with protocols developed by the Land Research program. Prior technologies include bioremediation agents, dispersants, and surface washing agents. The program also will develop testing guidelines that address environment, type of oil (petroleum oil, vegetable oil, animal fat, or biofuel), and agents for remediation. The program will continue to model the composition and properties of spilled oil, natural dispersion, emulsification, weathering, and effectiveness of control strategies. Research products are presented at meetings and posted or linked on EPA's oil spill Web site for use by oil spill managers.⁵

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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$50.0) This reflects an increase for payroll and cost of living for existing FTE.

Statutory Authority:

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

³ 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>.

⁴ For more information, see www.epa.gov/landscience.

⁵ For more information, see <http://www.epa.gov/oilspill/>.

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**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

**APPROPRIATION: State and Tribal Assistance Grants
Resource Summary Table
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
State and Tribal Assistance Grants				
<i>Budget Authority</i>	\$2,996,640.1	\$4,978,223.0	\$4,781,873.0	(\$196,350.0)
<i>Recovery Act Budget Authority</i>	\$6,320,935.3			
Total Dollars	\$9,317,575.4	\$4,978,223.0	\$4,781,873.0	(\$196,350.0)
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, [\$4,970,223,000]\$4,781,873,000, to remain available until expended, of which [\$2,100,000,000]\$2,000,000,000 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 [\$1,387,000,000]\$1,287,000,000 shall be for making 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]2011, to the extent there are sufficient eligible project applications, not less than 20 percent of the funds made available under this title to each State for Clean Water State Revolving Fund capitalization grants and not less than 20 percent of the funds made available under this title to each State for Drinking Water State Revolving Fund capitalization grants shall be used by the State for projects to address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities; [\$17,000,000]\$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; [\$13,000,000]\$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; \$156,777,000 shall be for making special project grants and technical corrections to prior-year 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 joint explanatory

statement of the managers accompanying this 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; \$100,000,000] \$138,254,000 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; [\$20,000,000 shall be for targeted airshed grants in accordance with the terms and conditions of the joint explanatory statement of the managers accompanying this Act;] and [\$1,116,446,000] \$1,276,619,000 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] \$10,200,000 shall be for Environmental Information Exchange Network grants, including associated program support costs, [\$18,500,000] \$23,500,000 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- and state-level 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] \$2,550,000 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 [2010] 2011 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 [2010] 2011, 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 [2010] 2011, 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 2 percent of the funds appropriated for State Revolving Funds under such Acts may be reserved by the Administrator for grants under section 518(c) and section 1452(i) of such Acts: Provided further, That for fiscal year [2010, in addition to] 2011, notwithstanding the amounts specified in section 205(c) of the Federal Water Pollution Control Act, up to [1.2486] 1.5 percent of the aggregate funds appropriated for the Clean Water State Revolving Fund program under the Act less any sums reserved under section 518(c) of 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]2011, 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 not [less] more than 30 percent of the funds made available under this title to each State for Clean Water State Revolving Fund capitalization grants [and not less than 30 percent of the funds made available under this title to each State for Drinking Water State Revolving Fund capitalization grants] shall be used by the State to provide additional subsidy to eligible recipients in the form of forgiveness of principal, negative interest loans, or grants (or any combination of these), and shall be so used by the State only where such funds are provided as initial financing for an eligible recipient or to buy, refinance, or restructure the debt obligations of eligible recipients only where such debt was incurred on or after enactment of this Act, except that for the Clean Water State Revolving Fund capitalization grant appropriation this section shall only apply to the portion that exceeds \$1,000,000,000: 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: Provided further, That, of the funds otherwise available under this heading, \$30,000,000 is provided for grants to Federally recognized Indian tribes for implementation of environmental programs and projects as defined by the Administrator, including associated program support costs and interagency agreements: Provided further, That for fiscal year 2011 and hereafter, of the funds provided for the Clean Water Act and Safe Drinking Water Act State Revolving Fund Tribal Set-Asides, the Administrator may transfer funds between those accounts in the same manner as provided to States under section 302(s) of Public Law 104-182, as amended by Public Law 109-54. (Department of the Interior, Environment, and Related Agencies Appropriations Act, 2010.)

**Program Projects in STAG
(Dollars in Thousands)**

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
State and Tribal Assistance Grants (STAG)				
Infrastructure Assistance: Clean Water SRF	\$706,139.0	\$2,100,000.0	\$2,000,000.0	(\$100,000.0)
Infrastructure Assistance: Drinking Water SRF	\$865,448.7	\$1,387,000.0	\$1,287,000.0	(\$100,000.0)
Congressionally Mandated Projects	\$124,409.3	\$164,777.0	\$0.0	(\$164,777.0)
Infrastructure Assistance: Alaska Native Villages	\$18,438.4	\$13,000.0	\$10,000.0	(\$3,000.0)
Brownfields Projects	\$101,918.0	\$100,000.0	\$138,254.0	\$38,254.0
Clean School Bus Initiative	\$45.3	\$0.0	\$0.0	\$0.0

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Diesel Emissions Reduction Grant Program				
EPACT & Related Authorities Implementation	\$0.0	\$60,000.0	\$60,000.0	\$0.0
CA Emission Reduction Project Grants	\$15,000.0	\$0.0	\$0.0	\$0.0
Diesel Emissions Reduction Grant Program (other activities)	\$29,367.3	\$0.0	\$0.0	\$0.0
Subtotal, Diesel Emissions Reduction Grant Program	\$44,367.3	\$60,000.0	\$60,000.0	\$0.0
Targeted Airshed Grants	\$0.0	\$20,000.0	\$0.0	(\$20,000.0)
Infrastructure Assistance: Mexico Border	\$12,911.8	\$17,000.0	\$10,000.0	(\$7,000.0)
Infrastructure Assistance: Puerto Rico	\$3,849.0	\$0.0	\$0.0	\$0.0
Subtotal, State and Tribal Assistance Grants (STAG)	\$1,877,526.8	\$3,861,777.0	\$3,505,254.0	(\$356,523.0)
Categorical Grants				
Categorical Grants: Multi-Media Tribal Implementation	\$0.0	\$0.0	\$30,000.0	\$30,000.0
Categorical Grant: Beaches Protection	\$9,905.2	\$9,900.0	\$9,900.0	\$0.0
Categorical Grant: Brownfields	\$50,586.9	\$49,495.0	\$49,495.0	\$0.0
Categorical Grant: Environmental Information	\$12,628.5	\$10,000.0	\$10,200.0	\$200.0
Categorical Grant: Hazardous Waste Financial Assistance	\$102,332.3	\$103,346.0	\$105,412.0	\$2,066.0
Categorical Grant: Homeland Security	\$5,916.9	\$0.0	\$0.0	\$0.0
Categorical Grant: Lead	\$14,295.1	\$14,564.0	\$14,855.0	\$291.0
Categorical Grant: Local Govt Climate Change	\$0.0	\$10,000.0	\$0.0	(\$10,000.0)
Categorical Grant: Nonpoint Source (Sec. 319)	\$214,498.2	\$200,857.0	\$200,857.0	\$0.0
Categorical Grant: Pesticides Enforcement	\$19,208.7	\$18,711.0	\$19,085.0	\$374.0
Categorical Grant: Pesticides Program Implementation	\$12,772.0	\$13,520.0	\$13,690.0	\$170.0
Categorical Grant: Pollution Control (Sec. 106)				
Monitoring Grants	\$12,975.8	\$18,500.0	\$23,500.0	\$5,000.0
Categorical Grant: Pollution Control (Sec. 106) (other activities)	\$203,860.5	\$210,764.0	\$250,764.0	\$40,000.0
Subtotal, Categorical Grant: Pollution Control (Sec. 106)	\$216,836.3	\$229,264.0	\$274,264.0	\$45,000.0
Categorical Grant: Pollution Prevention	\$4,932.3	\$4,940.0	\$5,039.0	\$99.0
Categorical Grant: Public Water System Supervision (PWSS)	\$99,440.1	\$105,700.0	\$105,700.0	\$0.0
Categorical Grant: Radon	\$8,370.4	\$8,074.0	\$8,074.0	\$0.0
Categorical Grant: Sector Program	\$2,717.7	\$0.0	\$0.0	\$0.0
Categorical Grant: State and Local Air Quality Management	\$223,541.5	\$226,580.0	\$309,080.0	\$82,500.0
Categorical Grant: Targeted Watersheds	\$8,946.4	\$0.0	\$0.0	\$0.0

Program Project	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Categorical Grant: Toxics Substances Compliance	\$5,276.9	\$5,099.0	\$5,201.0	\$102.0
Categorical Grant: Tribal Air Quality Management	\$13,962.5	\$13,300.0	\$13,566.0	\$266.0
Categorical Grant: Tribal General Assistance Program	\$61,681.1	\$62,875.0	\$71,375.0	\$8,500.0
Categorical Grant: Underground Injection Control (UIC)	\$11,332.4	\$10,891.0	\$11,109.0	\$218.0
Categorical Grant: Underground Storage Tanks	\$4,549.5	\$2,500.0	\$2,550.0	\$50.0
Categorical Grant: Wastewater Operator Training	\$23.3	\$0.0	\$0.0	\$0.0
Categorical Grant: Water Quality Cooperative Agreements	\$14.0	\$0.0	\$0.0	\$0.0
Categorical Grant: Wetlands Program Development	\$15,345.1	\$16,830.0	\$17,167.0	\$337.0
Subtotal, Categorical Grant: Wetlands Program Development	\$15,345.1	\$16,830.0	\$17,167.0	\$337.0
Subtotal, Categorical Grants	\$1,119,113.3	\$1,116,446.0	\$1,276,619.0	\$160,173.0
Recovery Act Resources				
Recovery Act Resources	\$6,320,935.3			
TOTAL, EPA	\$9,317,575.4	\$4,978,223.0	\$4,781,873.0	(\$196,350.0)

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$187,453.6</i>	<i>\$100,000.0</i>	<i>\$138,254.0</i>	<i>\$38,254.0</i>
<i>Budget Authority</i>	<i>\$101,918.0</i>	<i>\$100,000.0</i>	<i>\$138,254.0</i>	<i>\$38,254.0</i>
<i>Recovery Act Budget Authority</i>	<i>\$85,535.6</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
Hazardous Substance Superfund	\$106.7	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$187,560.3	\$100,000.0	\$138,254.0	\$38,254.0
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. Under CERCLA 104(k)(12)(B), the Brownfields program must allocate 25 percent of the funds appropriated to carry out CERCLA 104(k) to address sites contaminated by petroleum.

Under this program, EPA will provide: 1) assessment cooperative agreements for recipients to inventory, characterize, assess, and conduct cleanup and redevelopment planning related to Brownfields sites; 2) targeted Brownfields assessments performed under EPA contracts and interagency agreements with Federal partners; 3) cleanup cooperative agreements for recipients to clean up sites they own; 4) capitalization cooperative agreements for Revolving Loan Funds (RLFs) to provide low interest loans for cleanups; 5) job training cooperative agreements; and 6) financial assistance to localities, states, tribes, and non-profit organizations for research, training, and technical assistance for Brownfields-related activities. In addition, EPA will offer technical assistance, research, and training services to individuals and organizations from EPA contractors and Federal partners under interagency agreements to facilitate the inventory, assessment, and remediation of Brownfields sites, community involvement, and site preparation.

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

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.

The Brownfields Projects program also received funding in the FY 2009 American Recovery and Reinvestment Act (ARRA). Additional details can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>.

FY 2011 Activities and Performance Plan:

The Brownfields program fosters Federal, state, local, and public-private partnerships to return properties to productive economic use in communities. As part of the Agency's Healthy Communities initiative, this FY 2011 request includes an additional \$38.3 million to provide: (1) targeted assessment funding focused on disadvantaged and economically distressed communities, (2) technical assistance to those communities, and (3) supplemental funding for existing high performing RLF recipients. The additional funding for RLF recipients would be structured to give priority to those that have "shovel ready" projects in or around distressed and disadvantaged areas. Additionally, funds will be used to focus on community involvement and area-wide planning associated with the assessment and cleanup of Brownfields sites, including sites with petroleum contaminants.

This request reflects an emphasis on environmental health and protection that also achieves economic development and job creation through the redevelopment of Brownfields properties, particularly in underserved and disadvantaged communities. This will be achieved through a new approach of area-wide planning that would identify viable end uses of Brownfields properties and associated infrastructure investments and environmental improvements in the surrounding area to foster the redevelopment of the Brownfields properties and revitalize the community. The area-wide planning will be conducted with the participation of other Federal agencies, states, tribes and local governments to identify resources and approvals necessary to implement actions identified in the area-wide plan.

Through area-wide planning, communities may take a more holistic view of redevelopment, identifying how multiple (as opposed to targeted individual) Brownfields properties can be redeveloped to meet their needs for jobs, housing, recreation, and health facilities that would make a more viable and sustainable community, as well as identifying opportunities to leverage additional public and private investment. In addition, redeveloping these once productive properties, rather than redeveloping greenfield properties, limits urban sprawl and, consequently, reduces the environmental impact associated with sprawl, including reduces greenhouse gas emissions.

In FY 2011, total funding of \$138.3 million, which includes an increase of \$38.3 million, will result in the assessment of one thousand Brownfields properties, the cleanup of sixty Brownfields properties, and increasing the number of acres ready for reuse by one thousand. Brownfields grantees will leverage 5,000 cleanup and redevelopment jobs and \$900 million in cleanup and redevelopment funding. Potential increased in targets beginning in 2012 are described below. Activities include:

- Funding and in-kind technical assistance for an estimated 118 assessment cooperative agreements (estimated \$29.3 million) that recipients may use to inventory, assess,

cleanup, and plan to redevelop Brownfields sites, as authorized under CERCLA 104(k)(2). In FY 2011, 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. EPA will provide funding for Targeted Brownfields Assessments to be performed through contracts and interagency agreements, as authorized by CERCLA 104(k)(2) and the terms of EPA's appropriation act. This includes \$7.5 million of the \$38.3 million requested to perform Targeted Brownfields Assessments for 35 communities.

- The Agency will award approximately seven RLF cooperative agreements (estimated \$7.0 million) of up to \$1 million each per eligible entity and provide supplemental funding (estimated \$26.7 million) to existing RLF recipients. The RLF program enables eligible entities to make loans and subgrants for the cleanup of 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). This includes \$18.7 million of the \$38.3 million requested to supplementally fund approximately 30 existing high performing RLF recipients, giving greater priority to those that have "shovel ready" projects in or around "cities in transition."
- Funding will support at least 110 direct cleanup cooperative agreements to enable eligible entities to cleanup properties (estimated \$22.0 million) that the recipient of the funding owns. EPA plans to increase funding to support more cleanup cooperative agreements in FY 2011 and to facilitate an increase in the cleanup and redevelopment of Brownfields sites. The Agency will award direct cleanup cooperative agreements of up to \$200,000 per site to eligible entities 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 \$34.6 million) in approximately 65 Brownfields communities, as authorized under CERCLA 104(k)(2) and CERCLA 104(k)(3). This includes \$9.6 million of the \$38.3 million increase requested for FY 2011 to address approximately 17 Brownfields communities with petroleum contaminants.
- 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) as well as other "green jobs" opportunities.
- Training, research, and technical assistance grants and cooperative agreements (estimated \$16.1 million) and direct services from contractors and under interagency agreements, as authorized under CERCLA 104(k)(6) and EPA's appropriation act. This includes \$2.5 million of the \$38.3 million requested in FY 2011. The \$2.5 million will focus on community involvement and planning associated with the assessment and cleanup of Brownfields sites for approximately 25 communities.

Brownfields projects will be featured as one of EPA’s High Priority Performance Goals. By 2012, EPA will have initiated 20 Brownfields community-level projects as part of an enhanced effort to benefit underserved and economically disadvantaged communities. This will allow those communities to assess and address multiple Brownfields sites within their boundaries, thereby advancing area-wide planning and cleanups and enabling redevelopment of Brownfields properties on a broader scale than on individual sites. EPA will provide technical assistance, coordinate its enforcement, water and air quality programs, and work with other Federal agencies, states, tribes and local governments to implement associated targeted environmental improvements identified in each community's area-wide plan. This priority goal reflects emphasis on both environmental health and protection and economic development and job creation through the redevelopment of Brownfields properties, particularly in underserved and disadvantaged communities. This goal will also be addressed by the new area-wide planning approach described above.

In an effort to improve the accountability, transparency, and effectiveness of EPA’s cleanup programs, EPA initiated a multi-year effort in 2010 to explore better uses of assessment and cleanup authorities to address a greater number of sites, accelerate cleanups, and put those sites back into productive use while protecting human health and the environment. By bringing to bear the relevant tools available in each of the cleanup programs (Superfund Remedial, Superfund Emergency Response and Removal, Superfund Federal Facilities Response, and Brownfields Projects), EPA will better leverage the resources available to address needs at individual sites.

One example of leveraging that EPA may explore is the use of Superfund Emergency Response and Removal resources to assist in Brownfields cleanup and redevelopment, when appropriate.

In addition to furthering the Agency’s primary goal of protecting human health and the environment, this approach will provide economic revitalization and job creation. This approach, and the additional resources requested, will, beginning in FY 2012, result in an increase in the numbers of Brownfields sites cleaned, acres made ready for reuse, and jobs leveraged.

The Brownfields project resources contribute to the overall Brownfields program goals and measures.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Brownfield properties assessed.	1,000	1,295	1,000	1,000	Properties

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Jobs leveraged from Brownfields activities.	5,000	6,490	5,000	5,000	Jobs

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
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Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields sites.	0.9	1.06	0.9	0.9	Billion Dollars

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Number of properties cleaned up using Brownfields funding.	60	93	60	60	Properties

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Acres of Brownfields properties made ready for reuse.	1,000	2,660	1,000	1,000	Acres

**Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.*

The results of the additional \$38 million of funding requested are not reflected in the performance targets below. The Government Performance Results Act (GPRA) performance targets for the Brownfields program are mainly based on outputs and outcomes of assessment, cleanup and RLF cooperative agreements. These outputs and outcomes depend on the maturity of each cooperative agreement which usually have a performance period range of three to five years. FY 2011 funding will be awarded to grantees near the end of the fiscal year, and work activity and performance results will begin in FY 2012 and beyond. For assessment and cleanup cooperative agreements, the performance period is three years, and five years for RLF cooperative agreements.

By FY 2012, EPA anticipates that the requested FY 2011 funds will yield an increase of 10 more properties being cleaned up, 300 acres being made ready for reuse, and an increase in the number of jobs leveraged. Once the cooperative agreements are awarded, the Agency will further refine targets as more data becomes available.

Moreover, these GPRA targets do not reflect the anticipated results from the ARRA funding received in FY 2009. Targets for ARRA funds were established and are being reported separately from the results achieved through the regular appropriation.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$38,254.0) This increase in resources will provide funding for disadvantaged and underserved communities. Under the Healthy Communities initiative, EPA plans to perform Targeted Brownfields Assessments for 35 communities, and focus on

Statutory Authority:

CERCLA as amended by SBLRBRA (P.L. 107-118) and the terms of EPA's appropriation acts.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$338,363.4	\$60,000.0	\$60,000.0	\$0.0
<i>Budget Authority</i>	\$44,367.3	\$60,000.0	\$60,000.0	\$0.0
CA Emission Reduction Project Grants	\$15,000.0	\$0.0	\$0.0	\$0.0
<i>Recovery Act Budget Authority</i>	\$293,996.1	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$338,363.4	\$60,000.0	\$60,000.0	\$0.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

These grant funds support the Diesel Emissions Reduction Act (DERA) program 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 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to issue and manage various categories of Diesel Emission Reduction grants and loans outlined below:

- 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 use competitive grants to help qualifying entities (states, local governments, ports, etc.) create innovative finance programs (e.g., 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).
- 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.

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.

DERA Program Results and Continued Demand:

In FY 2008 NCDC reduced the emissions of approximately 14,000 diesel vehicles. Based on EPA's experience to-date, every one million dollars of DERA program grants/loans will leverage at least \$2 million in additional funding assistance. These projects will eliminate tens of thousands of tons of pollution from the air we breathe. These reductions will result in up to \$1.4 billion in health benefits. According to a 2007 assessment, for every dollar that the nation invests in clean diesel projects, the program produces up to 13 dollars of health benefits.

The NCDC's multifaceted approach also promotes new and innovative technologies and approaches to reducing diesel emissions. EPA will continue to offer grants through the Emerging Technologies program to foster the deployment of verifiable diesel emission reduction technology, and will quantify and evaluate emissions reduction strategies and their cost-effectiveness. The program analyzes emission reductions of NO_x, PM, HC, CO, and CO₂-equivalents to assess the effectiveness of the money spent and conveys this information to Congress in a report to highlight the program's accomplishments.

Performance Targets:

Work under this program supports multiple performance objectives. EPA assesses program performance by tracking the number of projects completed and the resulting emission reductions. A list of performance measures for the Diesel Emissions Reductions grants, funded by the American Recovery and Reinvestment Act, is available at www.epa.gov/recovery/plans under the Clean Diesel Plan.

Work under this program also supports performance results in the Federal Support for Air Quality Management Program Project in Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$18,438.4	\$13,000.0	\$10,000.0	(\$3,000.0)
Total Budget Authority / Obligations	\$18,438.4	\$13,000.0	\$10,000.0	(\$3,000.0)
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 vulnerable rural and Native Alaska communities. In many of these at-risk 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. The State of Alaska is best positioned to deliver services as it coordinates with the Federal agencies and with the communities themselves. 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 2011 Activities and Performance Plan:

The ANV program is administered by the State of Alaska and provides infrastructure funding to ANVs and rural Alaska communities that lack access to basic sanitation. The FY 2011 request 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 2011, the Agency will continue to work with the State of Alaska to address sanitation conditions and determine how to maximize the value of 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 the State of Alaska to establish program goals and objectives which are now incorporated directly into the state priority system for selecting candidate projects.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Percent of project federal funds expended on time within the anticipated project construction schedule set forth in the Management Control Policy.	94	90.5	94.5	95	Percent Projects

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	96	Data Avail 5/2010	98	96	Percent Homes

Work under this program supports EPA’s Protect Water Quality objective.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$3,000.0) This reduces a Congressionally directed increase in funding in FY 2010 that was not carried forward in FY 2011. The FY 2011 investment leverages funding for wastewater service and drinking water that meets public health standards. The President’s request continues the FY 2010 increase of Tribal set-asides for both the Clean Water and Drinking Water SRF from 1.5 percent to 2.0 percent. The continuation of this change and the continued historic request level for the SRFs boosts the nation’s SRF investment in Tribal water infrastructure.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$4,678,075.6	\$2,100,000.0	\$2,000,000.0	(\$100,000.0)
<i>Budget Authority</i>	\$706,139.0	\$2,100,000.0	\$2,000,000.0	(\$100,000.0)
<i>Recovery Act Budget Authority</i>	\$3,971,936.6	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$4,678,075.6	\$2,100,000.0	\$2,000,000.0	(\$100,000.0)
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 dollar contributed, more than two dollars are provided to municipalities. As of early FY 2010, the Federal government had invested over \$33 billion in the state CWSRFs. The revolving nature of the funds and substantial additions from states has multiplied that investment to make over \$77 billion available for clean water projects since the program's inception.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 2011 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 2011 budget requests \$2.0 billion for the CWSRF. Combined with the FY 2009 appropriation (\$689 million), American Recovery and Reinvestment Act (ARRA) funding (\$4 billion), and the enacted FY

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 (As of June 30, 2009).

2010 appropriation (\$2.1 billion), nearly \$8.8 billion will be invested through Federal capitalization grants awarded to the CWSRF over the course of three years.

The Federal contribution to water and waste water infrastructure has been substantially incorporated into the SRFs. These Funds, combined, now produce approximately \$5 billion in repayments each year. As the Funds have grown, the need for Federal capitalization will decline over the next decade. Some ongoing contribution will be maintained to ensure that the neediest communities are adequately served. For FY 2011, EPA proposes a new approach to helping small drinking water systems, as well as reforms to improve the long-term financial, managerial, and environmental sustainability of the SRFs. As part of that strategy, we are working to ensure that federal dollars provided through the SRFs act as a catalyst for efficient system-wide planning, improvements in technical, financial and managerial capacity, and the design, construction and on-going management of sustainable water infrastructure.

This Federal investment, along with other traditional sources of financing, will enable substantial progress for the nation's clean water needs and sustainable infrastructure priorities, and 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.

For FY 2011, EPA proposes a new approach to helping small drinking water systems, as well as reforms to improve the long-term financial, managerial, and environmental sustainability of the SRFs. As part of that strategy, we are working to ensure that Federal dollars provided through the State Revolving Funds act as a catalyst for efficient system-wide planning, improvements in technical, financial and managerial capacity, and the design, construction and on-going management of sustainable water infrastructure.

In FY 2011, and consistent with the FY 2010 President's Budget, the Agency is requesting a Tribal set-aside of up to 2 percent, and a territories set-aside of up to 1.5 percent of the funds appropriated from the CWSRF. These resources for the tribes and territories will provide much needed assistance to these communities and help meet long-term performance goals and address significant public health concerns. 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.

In FY 2011, the President's Budget requests not more than 30 percent of the CWSRF funds made available to each state be used to provide additional subsidy to eligible recipients in the form of forgiveness of principal, negative interest loans, or grants (or any combination of these). The additional subsidization would be limited to new projects or those that were initially financed on or after October 1, 2010. The additional subsidization may assist communities who could not otherwise afford needed clean water projects.

In FY 2011, and consistent with the FY 2010 Enacted Budget, the Agency, to the extent there are sufficient eligible project applications, 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 resulting projects will enhance community and utility sustainability.

Assessments have called for improved performance 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 an upgraded CWSRF benefits reporting system designed to track public health and environmental goals progress under both the base program and projects funded under ARRA. The benefits reporting system allows the program to more effectively link CWSRF financing to the protection and restoration of our nation's waters.

In FY 2011 EPA is requesting transfer authority between the Clean Water Indian Set-Aside Grant and Drinking Water Infrastructure Grants Tribal Set-Aside programs to allow tribes the flexibility to direct drinking water and wastewater funds to the highest priority projects. This would provide the same authority to tribes that is currently available to states.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Fund utilization rate for the CWSRF.	94.5	98	92	94	Percent Rate

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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).	2,270	2,505	2,809	2,910	Segments

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Percent of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards	86	Data Avail 5/2010	86	86	Percent POTWs

**Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.*

Since 2001, fund utilization has remained relatively stable and strong at over 90 percent. This national ratio is an aggregate of fund activity in the 51 individual CWSRF programs (50 states and Puerto Rico). Small year-to-year fluctuations in the value of the national ratio are 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 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$100,000.0) This change reflects a decrease for clean water infrastructure projects. However, the FY 2011 request level represents a substantial increase over requested and enacted levels prior to FY 2010. Combined with the FY 2009 appropriation (\$689 million), American Recovery and Reinvestment Act (ARRA) funding (\$4 billion), and the enacted FY 2010 appropriation (\$2.1 billion), nearly \$8.8 billion will be invested through Federal capitalization grants awarded to the CWSRF over the course of three years.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$2,834,915.7	\$1,387,000.0	\$1,287,000.0	(\$100,000.0)
<i>Budget Authority</i>	\$865,448.7	\$1,387,000.0	\$1,287,000.0	(\$100,000.0)
<i>Recovery Act Budget Authority</i>	\$1,969,467.0	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$2,834,915.7	\$1,387,000.0	\$1,287,000.0	(\$100,000.0)
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, the Agency has included legislative language to address green infrastructure. To the extent there are sufficient eligible project applications, at least 20 percent of the portion of a capitalization grant made available for DWSRF projects shall be for projects, or portions of 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;
- determine the proper balance between infrastructure 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 most recent Needs Survey and Assessment.⁴ There is also a 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 grants 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 SDWA, as amended, to create certain set-asides. \$2 million pays the costs of small system monitoring for unregulated contaminants. EPA will continue to reserve up to 2 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 also will continue to set aside up to 1.5 percent for territories (up from 0.33 percent as outlined in Section 1452 (j) of SDWA, as amended).⁵

In FY 2011, EPA is requesting a total of \$1.287 billion to fund approximately 500 additional infrastructure improvement projects to public drinking water systems. Combined with the FY 2009 appropriation (\$829 million), American Recovery and Reinvestment Act (ARRA) funding (\$2 billion), and the enacted FY 2010 appropriation (\$1.387 billion), approximately \$5.5 billion will be invested through Federal capitalization grants awarded to the DWSRF over the course of three years. There is a significant backlog of construction and maintenance projects that have substantial need for financing through the DWSRF. The requested funding for this program will support urgently needed infrastructure investments to rebuild and enhance America's drinking water infrastructure. Additional details on DWSRF funding by the 2009 American Recovery and Reinvestment Act (ARRA) can be found at <http://www.epa.gov/recovery/> and <http://www.recovery.gov/>.

FY 2011 Activities and Performance Plan:

The DWSRF program provides access to financing and offers a limited subsidy to help utilities moderate the magnitude of water rate increases necessary 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

⁴ The 2007 Needs Survey was released in 2009.

⁵ For more information please see

<https://www.cfda.gov/index?s=program&mode=form&tab=step1&id=d33d92f2df290e0c2365599cb09f0669>

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.

The Federal contribution to water and wastewater infrastructure has been substantially incorporated into the SRFs. These funds, combined, now produce approximately \$5 billion in repayments each year. As the Funds have grown, the need for Federal capitalization will decline over the next decade. Some ongoing contribution will be maintained to ensure that the neediest communities are adequately served. For 2011, EPA proposes a new approach to helping small drinking water systems, as well as reforms to improve the long-term financial, managerial, and environmental sustainability of the SRFs. As part of that strategy, Federal dollars provided through the SRFs will act as a catalyst for efficient system-wide planning, improvements in technical, financial and managerial capacity, and the design, construction and on-going management of sustainable water infrastructure.

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.

In FY 2011, EPA is requesting transfer authority between the Clean Water Indian Set-Aside Grant and Drinking Water Infrastructure Grants Tribal Set-Aside programs to allow tribes the flexibility to direct drinking water and wastewater funds to their highest priority projects.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Number of additional projects initiating operations.	445	480	450	500	Projects

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	90	89.1	90	90	Percent Systems

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	*Percent of population served by CWSs that will receive drinking water that meets all	90	92.1	90	91	Percent Population

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	applicable health-based drinking water standards through approaches including effective treatment & source water protection.					

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	*Fund utilization rate for the DWSRF.	89	92	86	89	Rate

**Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.*

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

(-\$100,000.0) This change reflects a decrease for drinking water infrastructure projects. Combined with the FY 2009 appropriation (\$829 million), American Recovery and Reinvestment Act (ARRA) funding (\$2 billion), and the enacted FY 2010 appropriation (\$1.387 billion), approximately \$5.5 billion will be invested through Federal capitalization grants awarded to the DWSRF over the course of three years.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$12,911.8</i>	<i>\$17,000.0</i>	<i>\$10,000.0</i>	<i>(\$7,000.0)</i>
Total Budget Authority / Obligations	\$12,911.8	\$17,000.0	\$10,000.0	(\$7,000.0)
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 sewage pollutes urban waters that flow north into the U.S. from Tijuana, Mexicali, and Nogales, into the Rio Grande or the Pacific Ocean. EPA works closely with program partners to evaluate public health and environmental needs and to provide grant funding for the planning, design, and construction of high priority water and wastewater treatment facilities along the border.

The U.S.-Mexico Border Water Infrastructure program will continue to work with the ten border states (four U.S. and six Mexican) and local communities to improve the region’s water quality and public health. The U.S. and Mexican governments will collaborate on water infrastructure projects to reduce health risks to residents including sensitive populations of children and elders who may currently lack access to safe drinking water and sanitation. Additionally, by providing homes with access to basic sanitation, EPA and its partners will reduce the discharge of untreated wastewater into surface and ground water.

FY 2011 Activities and Performance Plan:

Since 1994, Congress has appropriated approximately \$990 million in State and Tribal Assistance Grants (STAG) for water infrastructure projects in the Border Region. Of this amount, the U.S.-Mexico Border Water Infrastructure program has awarded approximately \$644 million to the Border Environment Infrastructure Fund (BEIF) at the North American Development Bank (NADB) for construction of high-priority drinking water and wastewater infrastructure projects. As of November 2009, the program has completed 51 of the 84 projects funded to date, providing first-time or improved drinking water or sewer service to 4 million people.

To ensure responsible fiscal management of BEIF funds, the Agency implemented project management enhancements in 2005. These enhancements focus on minimizing unliquidated BEIF balances at the NADB, while also improving project completion rates to ensure the timely delivery of drinking water and wastewater infrastructure to communities along the border.

Project management enhancements included time limits for project development and construction phases and requirements to initiate BEIF disbursements within two years of EPA’s approval of project financing packages. Further, EPA finalized a fiscal policy in FY 2007 which provides clear direction for expediting completion of older projects and disbursement of funds. These reforms have led to considerable improvements in the program’s unliquidated balances and project completion rates. The program has reduced the unliquidated BEIF balance by nearly 60 percent, from approximately \$300 million in 2007 to \$126.4 million in November 2009.⁶

In FY 2011, the U.S.-Mexico Border Water Infrastructure program will continue to fund high priority water and wastewater infrastructure projects that have been evaluated and ranked using a risk-based prioritization system which enables the program to direct BEIF funding to projects that demonstrate high human health benefits, cost-effectiveness, institutional capacity and sustainability. Also in FY 2011, EPA will have fully transitioned to a new grants award process that separates the award of planning and design funds from the award of construction funds. The goal of the new awards process is to expedite the use of program funding. In response to Congressional direction in the FY 2009 Appropriation process, EPA awarded FY 2009 funds consistent with the new grants-award process by funding 27 projects for planning and design.

With the \$10 million requested for FY 2011, EPA will award approximately \$8 million to the NADB to fund 7 of the 27 construction ready projects. Approximately \$2 million will be awarded to the BECC for planning and design of new projects, with the purpose of continuing to build and thus maintain a portfolio of projects that are ready for construction. Final decisions on use of FY 2011 funding will be based on balancing the construction readiness of fully designed projects with the planning and design needs of prioritized projects.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of additional homes provided safe drinking water in the U.S.-Mexico border area that lacked access to safe drinking water in 2003. (cumulative)	1,500	1,584	28,434	33,434	Homes

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Number of additional homes provided adequate wastewater sanitation in the U.S.-Mexico border area that lacked access to wastewater sanitation in 2003 (cumulative).	105,500	43,594	246,175	345,675	Homes

⁶ EPA is in the process of obligating an additional \$6.5 million to the NADBank for water infrastructure projects selected through the FY 2009/2010 prioritized project selection process.

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Loading of biochemical oxygen demand (BOD) removed (million pounds/year) from the U.S.-Mexico border area since 2003.				24	Million Pounds/Year

The increase in targets for water and wastewater connections in the U.S. Mexico Border area between FY09 and FY10 is entirely attributable to the fact that the program now reports cumulative (rather than annual) targets.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$7,000.0) This reduces a Congressionally-directed increase in funding in FY 2010 that was not carried forward in FY 2011. The requested level of funding will allow the Agency to fund a portion of fully planned and designed projects for construction while continuing efforts to providing access to safe drinking water and sanitary systems for underserved communities in the region. EPA is closely monitoring fund disbursements and project completion rates to ensure sufficient funding for current and future projects.

Statutory Authority:

Treaty entitled “Agreement between the United States of America and the United Mexican States on Cooperation for the Protection and Improvement of the Environment in the Border Area, August 14, 1983”; CWA.

Targeted Airshed Grants

Program Area: State and Tribal Assistance Grants (STAG)

Goal: Clean Air and Global Climate Change

Objective(s): Healthier Outdoor Air

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$0.0</i>	<i>\$20,000.0</i>	<i>\$0.0</i>	<i>(\$20,000.0)</i>
Total Budget Authority / Obligations	\$0.0	\$20,000.0	\$0.0	(\$20,000.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

This program supports grants to the San Joaquin Air Pollution Control District and the South Coast Air Quality Management District to continue emission reduction activities in the transportation, agriculture and ports sectors. These grants are matched by the districts on a one-to-one basis.

In addition, the program supports competitive grants to reduce air pollution in nonattainment areas that are ranked as the top five most polluted areas relative to annual ozone or PM_{2.5} National Ambient Air Quality Standards (NAAQS). EPA is to determine those areas based on the most recent design values calculated from validated air quality data.

The grants under this program are awarded by EPA to the two named Air Quality Districts and EPA will run a competition for the remaining fund using the criteria specified by the Congress. The FY 2010 funds can be used for emission reduction projects in the transportation, agriculture and ports sectors. The Agency anticipates that many of the projects will be for diesel emission reduction activities but others could be proposed. The San Joaquin and South Coast Air Quality Management Districts received funding in FY 2009 for diesel emission reduction activities under the Diesel Emission Reduction Act Grants program. There were no competition funds in FY 2009. The SCAQMD funds were used for vehicle replacement at ports; the San Joaquin projects focused on diesel agricultural pumps and of-road vehicles.

The FY 2010 funds are available for emission reduction activities deemed necessary for compliance with NAAQS and included in State Implementation Plans submitted to EPA.

FY 2011 Activities and Performance Plan:

There is no request for this program in FY 2011, because the existing nationwide Diesel Emissions Reduction Act program is a more effective mechanism for addressing diesel emissions from legacy engines. Under the DERA competitive grant criteria, nonattainment areas are likely to receive significant funding for pollution reduction.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted (Dollars in Thousands):

- (-\$20,000.0) The FY 2011 President's Budget does not continue funding for these grants.

Statutory Authority:

P-L. 111-88.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$9,905.2	\$9,900.0	\$9,900.0	\$0.0
Total Budget Authority / Obligations	\$9,905.2	\$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/> and <https://www.cfda.gov/> for more information.

FY 2011 Activities and Performance Plan:

Eligible states, territories, tribes and localities will receive BEACH Act grants to: (1) administer the grant program; (2) implement monitoring and notification programs consistent with EPA guidance; and (3) submit monitoring and advisory data to EPA for production of an annual report in a timely manner.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	93	95	95	95	Percent Days/Season

FY 2011 Change from FY 2010 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$50,586.9	\$49,495.0	\$49,495.0	\$0.0
Total Budget Authority / Obligations	\$50,586.9	\$49,495.0	\$49,495.0	\$0.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Agency’s Brownfields program coordinates a Federal, Tribal, state, and local government approach to assist in addressing environmental site assessment and cleanup of brownfields. 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.

Through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 128(a), categorical grants are provided to states and tribes for their Brownfields response programs. State and Tribal response programs address contaminated brownfields sites that do not require Federal action, but need cleanup before the sites are considered for reuse. States and tribes may use grant funding provided under this program in the following ways: 1) developing a public record; 2) creating an inventory of brownfields sites; 3) developing oversight and enforcement authorities or other mechanisms and resources; 4) developing mechanisms and resources to provide meaningful opportunities for public participation; 5) developing mechanisms for approval of a cleanup plan and verification and certification that cleanup is complete; 6) capitalizing a Revolving Loan Fund for brownfields-related work; 7) purchasing environmental insurance; and 8) conducting site-specific related activities, such as assessments and cleanups at brownfields sites.⁷

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to establish and enhance eligible state and Tribal response programs of states, U.S. territories, and tribes under CERCLA 128(a). EPA also will continue to issue grants to states and tribes for their response programs to cleanup brownfields sites before reuse. Building response program capacity of states and tribes to address the assessment and cleanup of sites with actual or perceived contamination will increase the number of acres ready for reuse, an important first step in revitalizing communities across the country.

⁷ Refer to http://www.epa.gov/brownfields/state_tribal/index.html.

Performance Targets:

Work under this program project also supports performance results in STAG: Brownfields Program Projects and can be found in the Performance Four Year Array.

FY 2011 Change from FY 2010 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$12,628.5</i>	<i>\$10,000.0</i>	<i>\$10,200.0</i>	<i>\$200.0</i>
Total Budget Authority / Obligations	\$12,628.5	\$10,000.0	\$10,200.0	\$200.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The National Environmental Information Exchange Network (Network, EN) is a standards-based, secure information partnership to facilitate electronic reporting, sharing, integration, analysis, and use of environmental data from many different sources. EN grants provide funding to states, territories, Federally-recognized native tribes, and tribal consortia to support their participation in the Exchange Network. These grants help EN partners acquire and develop the hardware and software needed to connect to the EN, and to use the EN to develop or acquire the data they need with greater efficiency and to integrate environmental data across programs in ways previously not possible. By supporting the exchange and integration of data to meet the partners' program and business needs, the EN facilitates sound environmental and health decision-making while enhancing public access to environmental data.

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 EN. As of the end of FY 2009, 46 states, 7 tribes, and one territory used the Exchange Network to submit data for major regulatory programs and major national data systems. Major national data systems implemented in FY 2009 include the Underground Injection Control System, which supports the Source Water Protection Program, and the NET-Discharge Monitoring Reporting System. In addition, major enhancements were made to 5 systems, including, the Emissions Inventory System and the Resource Conservation and Recovery Act. EN partners have submitted other non-regulatory data to EPA and have shared data with each other through the EN. EPA and state, tribal, and territorial partners are 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. Twenty-three states are now using the EN to submit water quality data on 113,000 monitoring stations. Partnership projects completed include Open Node 2.0, which enables sharing of open source software, and initial stages of the Puget Sound Restoration Project.

FY 2011 Activities and Performance Plan:

More work is needed to fully realize the potential environmental and health benefits that the Exchange Network's data management capabilities can yield, including protecting vulnerable populations, enhancing scientific analysis, and strengthening the collaborative network of Federal, state and local partners. Therefore, in FY 2011, the EN Grants Program will emphasize activities to achieve the following program goals:

- 1) Growing the EN by developing the necessary infrastructure for tribes, territories and Federal agencies.
- 2) Supporting the development and exchange of regulatory and non-regulatory data flows. Because all 50 states have operational connections to the EN (nodes), the major emphasis of the grant program has shifted toward supporting partners as they expand the number of regulatory data flows and to developing and exchanging non-regulatory data flows, such as WQX.
- 3) Expanding data sharing among partners. EPA plans to solicit applications for innovative data reporting methodologies surrounding climate change challenges, 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 Mississippi, the Gulf of Mexico, and the Chesapeake Bay.
- 4) Supporting multi-partner projects to plan, mentor, and train EN partners, and 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" a reality.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$200.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.

Statutory Authority

Exchange Network Grant Program has been provided by the annual appropriations for EPA: FY 2002 (Public Law 107-73), FY 2003 (Public Law 108-7), FY 2004 (Public Law 108-199) FY 2005 (Public Law 108-447) and FY 2006 (Public Law 109-54), FY 2007 (Public Law 110-5), FY 2008 (Public Law 110-161), and FY 2009 (Public Law 111-8).

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$102,332.3</i>	<i>\$103,346.0</i>	<i>\$105,412.0</i>	<i>\$2,066.0</i>
Total Budget Authority / Obligations	\$102,332.3	\$103,346.0	\$105,412.0	\$2,066.0
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 2011 Activities and Performance Plan:

The RCRA Hazardous Waste Financial Assistance program fosters state and Tribal partnerships to minimize or clean-up hazardous waste facility releases in local communities. In FY 2011, 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. 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 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 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 program project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$2,066.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation. This additional funding will be provided to 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: Lead

Program Area: Categorical Grants

Goal: Healthy Communities and Ecosystems

Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$14,295.1</i>	<i>\$14,564.0</i>	<i>\$14,855.0</i>	<i>\$291.0</i>
Total Budget Authority / Obligations	\$14,295.1	\$14,564.0	\$14,855.0	\$291.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

Data from the Centers for Disease Control document significant progress in the continued effort to eliminate childhood lead poisoning as a public health concern. However, new data shows adverse health effects to children at lower levels than previously recognized.⁸ EPA's Lead Risk Reduction Program, supported by State and Tribal Assistance Grants (STAG) resources under this program as well as Environmental Program and Management (EPM) resources under a companion program contribute to the goal of minimizing the threat to human health, particularly to young children, from environmental lead exposure in the following ways:

- Establishes standards governing lead hazard identification and abatement practices and maintains a national pool of 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 for renovation, repair and painting projects in homes and child-occupied facilities with lead-based paint; 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 providing support to authorized state and tribal programs that administer training and certification programs for lead professionals and renovation contractors. The program also engages in

⁸ U.S.EPA. Air Quality Criteria for Lead (September 29, 2006)

<http://cfpub.epa.gov/ncea/CFM/recordisplay.cfm?deid=158823>

Rogan WJ, Ware JH. Exposure to lead in children – how low is low enough? N Engl J Med.2003;348(16):1515-1516

<http://www.precaution.org/lib/rogan.nejm.20030417.pdf>

Lanphear BP, Hornung R, Khoury J, et al. Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. Environ Health Perspect. 2005; 113(7):894-899

<http://www.pubmedcentral.nih.gov/articlerender.fcgi?doi=10.1289/ehp.7688>

outreach to educate populations deemed most at risk of exposure to lead from lead-based paint, dust, and soil. See <http://www.epa.gov/lead> for more information.

FY 2011 Activities and Performance Plan:

In FY 2011, 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 abatement and inspections, as well as renovation, repair and painting in homes with lead-based paint. EPA also will implement these programs in all areas of the country without an authorized program through direct implementation by the Agency. Activities conducted as part of this program include the certification of individuals and firms, the accreditation of training programs and the enforcement of relevant work practice standards.

EPA recognizes that additional attention and assistance must be given to vulnerable populations including 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 2011 EPA will award targeted grants to reduce childhood lead poisoning. These grants will be awarded 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.

Performance Targets:

Activities for this appropriation support GPRA measures listed for the Toxic Substances: Lead Risk Reduction Program.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$291.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.

Statutory Authority:

Toxic Substances Control Act.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$0.0</i>	<i>\$10,000.0</i>	<i>\$0.0</i>	<i>(\$10,000.0)</i>
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 2010 Enacted Budget included \$10,000,000 for EPA's Air and Radiation program to implement a 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 that demonstrate documentable reductions in greenhouse gases (GHGs) 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 2011 Activities and Performance Plan:

There is no request for this program in FY 2011.

Performance Targets:

There are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (-\$10,000.0) This is a decrease that discontinues funding for these grants in the FY 2011 President's Budget.

Statutory Authority:

P.L. 111-8 (H.R. 1105), 123 STAT. 524; P-L. 111-88.

Categorical Grants: Multi-Media Tribal Implementation

Program Area: Categorical Grants

Goal: Compliance and Environmental Stewardship

Objective(s): Improve Human Health and the Environment in Indian Country

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$30,000.0</i>	<i>\$30,000.0</i>
Total Budget Authority / Obligations	\$0.0	\$0.0	\$30,000.0	\$30,000.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

As tribes' environmental programs become increasingly sophisticated, additional resources are needed for Tribal implementation of Tribal and Federal programs. As stated in the 1984 EPA Indian policy of self-government, "In keeping with the principal of Indian self-government, the Agency will view Tribal Governments as the appropriate non-Federal parties for making decisions and carrying out program responsibilities affecting Indian reservations, their environments, and the health and welfare of the reservation populace." As Tribal capacity increases, Tribal governments are seeking additional resources to carry out new program delegations and responsibilities.

EPA is proposing a new multi-media implementation grant for tribes. Under Federal environmental statutes, EPA has responsibility for protecting human health and the environment in Indian country and has worked with tribes to establish the internal infrastructure and capacity for environmental priorities and decision making. Currently, there is no consolidated, flexible program available to support tribal implementation of environmental programs. Tribes overall suffer disproportionately and lag significantly behind state and Federal programs in achieving environmental and health protection, including the lack of access to safe drinking water, sanitation, solid waste management systems, and safeguards that result from other basic Federal environmental programs. At the same time, many Tribal governments have made tremendous progress in the last 20 years, and many tribes throughout the nation manage increasingly complex environmental programs. This new grant program will facilitate self-government and fulfill EPA's mission to protect human health and the environment in Indian country.

The new multi-media grants will be tailored to address an individual tribe's most serious environmental needs through the implementation of Federal environmental programs. These grants will build upon the environmental capacity developed under the Indian General Assistance Program (GAP) and will include negotiated environmental plans, measures and results as agreed upon by tribes and EPA. GAP grants are essential to improving human and environmental health in Indian country, but given GAP's current constraints on implementation, tribes can find it difficult to transition from establishing the foundation of an environmental program to the actual implementation of media-specific programs. This new grant authority will transition a tribe into

program implementation and will ensure that EPA and Tribal environmental priorities are addressed to the fullest extent possible.

The Agency seeks legislative authority and funding to establish the new multi-media grant program for Tribal implementation. This program advances the Administrator's priority that EPA programs are consistently delivered nationwide. It also allows the Agency and tribes to have flexibility to direct resources to environmental statutes (i.e., CWA, CAA, RCRA, etc.) and specific programs (i.e., climate change) which are needed to service their community. Tribes would negotiate specific activities with EPA through program workplans, identify the measures and outputs for accountability, and ensure the effectiveness for this Federal funding.

FY 2011 Activities and Performance Plan:

As tribes' environmental programs become increasingly sophisticated, additional resources are needed for implementation of Tribal priority actions to protect the environment. In FY 2011, EPA will launch a new multi-media implementation grant program which will assist Indian Tribal governments in implementing environmental programs, going beyond establishing an environmental presence. Examples of possible uses include but are not limited to:

- Develop and implement programs consistent with EPA statutory authorities such as CAA 105, CWA 106, RCRA and other tribal priorities. This may include tribal activities such as monitoring, permitting, and other implementation responsibilities;
- The multi-media implementation funding will be directed toward federally-recognized tribes with mutually-agreed upon EPA/tribal-prioritized programs.

Performance Targets:

Work under this program supports EPA's efforts to Improve Human Health and the Environment in Indian country. There are currently no performance measures connected to this specific program project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$30,000.0) The new grant program will allow the Agency to provide multi-media grants to tribes for implementation of Federal environmental programs.

Statutory Authority:

Annual Appropriation Acts; GAP; PPA; FIFRA; CAA; TSCA; NEPA; CWA; SDWA; RCRA; CERCLA; NAFTA; OAPCA; MPRSA; CRCA; Indoor Radon Abatement Act.

Note: EPA is currently seeking appropriations language to support this program: "Provided further, That, of the funds otherwise available under the heading State and Tribal Assistance Grants, \$30 million is provided for grants to federally recognized Indian tribes for implementation of environmental programs and projects as defined by the Administrator, including associated program support costs and interagency agreements;"

Categorical Grant: Nonpoint Source (Sec. 319)

Program Area: Categorical Grants

Goal: Clean and Safe Water

Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$214,498.2	\$200,857.0	\$200,857.0	\$0.0
Total Budget Authority / Obligations	\$214,498.2	\$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> and <https://www.cfda.gov> for more information.

FY 2011 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 address NPS pollution problems. In FY 2011, 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. Sediment loading reductions have exceeded yearly targets since 2003, while phosphorus and nitrogen load reductions have been partially met. In 2004, 2005, and 2008, phosphorus loading reductions did not meet targets and in 2005, nitrogen loading reductions were not met. EPA believes that these 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Estimated annual reduction in millions of pounds of phosphorus from nonpoint sources to waterbodies. (Section 319 funded projects only)	4.5	Data Avail 2010	4.5	4.5	Pounds (million)

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Estimated additional reduction in million pounds of nitrogen from nonpoint sources to waterbodies. (Section 319 funded projects only)	8.5	Data Avail 2010	8.5	8.5	Pounds (million)

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Estimated additional reduction in thousands of tons of sediment from nonpoint sources to waterbodies. (Section 319 funded projects only)	700,000	Data Avail 2010	700,000	700,000	Tons (thousand)

FY 2011 Change from FY 2010 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$19,208.7</i>	<i>\$18,711.0</i>	<i>\$19,085.0</i>	<i>\$374.0</i>
Total Budget Authority / Obligations	\$19,208.7	\$18,711.0	\$19,085.0	\$374.0
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.⁹ 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 2011 Activities and Performance Plan:

In FY 2011, 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. Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$374.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.

Statutory Authority: FIFRA.

⁹ For additional information, refer to: www.epa.gov/compliance/state/grants/fifra.html.

Categorical Grant: Pesticides Program Implementation

Program Area: Categorical Grants

Goal: Clean and Safe Water

Objective(s): Protect Human Health

Goal: Healthy Communities and Ecosystems

Objective(s): Chemical and Pesticide Risks

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$12,772.0</i>	<i>\$13,520.0</i>	<i>\$13,690.0</i>	<i>\$170.0</i>
Total Budget Authority / Obligations	\$12,772.0	\$13,520.0	\$13,690.0	\$170.0
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.¹⁰ The Agency provides grants to assist states, tribes and partners with worker safety activities, protection of endangered species¹¹ 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. EPA provides 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. Stakeholders at the local level, including states and tribes provide essential support in implementing pesticides programs. The Agency engages stakeholders in the regulatory process considering their input regarding effectiveness and soundness of regulatory decisions. The states and tribes also 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 more effective regulatory partners.

¹⁰ 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 <http://www.epa.gov/opp00001/regulating/laws.htm>

¹¹ 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/ESA35/ESA35DaleQA.html>

FY 2011 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. Grants fund 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 focus. See <http://www.epa.gov/oppfead1/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. These activities support 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 also are expected to evaluate local pesticides uses that have potential to contaminate water resources, and take steps to prevent or reduce contamination where pesticide concentrations approach or exceed levels of concern.

EPA's Cooperative Agreements typically include the following three-tier approach:

1. Evaluate: pesticides which may have the potential to threaten water quality locally;
2. Manage: If the evaluation identifies that the pesticide may be found at levels locally which pose water quality concerns, take actions to manage those pesticides and mitigate exposure; and,
3. Demonstrate Progress: For pesticides that are actively managed, examine available data and trends to demonstrate improvement in water quality.

Pesticide Environmental Stewardship Program (PESP):

The PESP 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 partnering and supporting organizations. They range 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 pest control methods. 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/peps/>.

Tribal

The Agency will support Tribal activities 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, see <http://www.epa.gov/oppfead1/tribes/>.

EPA also supports environmental justice communities through the pesticides programs. In FY 2011, the Agency will improve pesticide control practices through enhanced education and outreach in these communities.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$270.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.
- (-\$100.0) This change partially reduces additional support for grants that address emerging pesticide issues provided in FY 2010.

Statutory Authority:

Pesticide Registration Improvement Renewal Act (PRIRA), Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Federal Food, Drug and Cosmetic Act (FFDCA); Food Quality Protection Act (FQPA) of 1996; Endangered Species Act (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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$216,836.3</i>	<i>\$229,264.0</i>	<i>\$274,264.0</i>	<i>\$45,000.0</i>
Total Budget Authority / Obligations	\$216,836.3	\$229,264.0	\$274,264.0	\$45,000.0
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 providing permits, monitoring and assessment, standards development, Total Maximum Daily Load (TMDL) development, surveillance and enforcement, pollution control studies, water quality planning, advice and assistance to local agencies, training, and public information. The grants also may be used to provide “in-kind” support through an EPA contract if requested by a state or tribe.

In FY 2011, 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 TMDLs, 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.

FY 2011 Activities and Performance Plan:

The Section 106 grant program supports prevention and control measures that improve water quality management programs. In FY 2011, EPA will designate the requested additional \$45 million to strengthen the base state, interstate and Tribal programs, address emerging water quality issues such as nutrients and new regulatory requirements, and support expanded enforcement efforts. This increase will support these core state water quality activities during a time of constrained state budgets.

Monitoring and assessment

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. Increased funding will ensure that scientifically defensible monitoring data is available to address issues and problems at each of these scales.

In FY 2011, EPA will continue working with states and tribes to fully implement their water quality monitoring programs. Monitoring Initiative funds for states and tribes will continue to support statistically-valid reports on national water conditions and to implement monitoring strategies. In FY 2011, \$23.5 million will be designated for states and tribes under the Initiative: \$13.5 million for monitoring as part of statistically-valid reports on national water condition, and \$10 million for states to implement their monitoring strategies.

In addition, EPA will work with states to develop and apply innovative and efficient monitoring tools and techniques to optimize availability of high quality data to support CWA program needs, and expand the use of monitoring data and geo-spatial tools for water resource protection to set priorities and evaluate effectiveness of water protection. This will allow EPA, states, and tribes to continue to report on the condition of the nation's waters, and make significant progress toward assessing trends in water condition in a scientifically-defensible manner.

As part of the National Survey, EPA, states, and tribes will collaborate to conduct field sampling for the wetlands baseline survey to be completed and published in a FY 2013 report, and will be analyzing data from the fifth statistically-valid survey of coastal waters to report on trends in FY 2012. EPA, states, and tribes will also prepare the second report on the condition of wadeable streams, which will track changes since the baseline survey issued in 2006. This report will include a baseline assessment of the condition of rivers nationally. A portion of the FY 2011 CWA Section 106 Monitoring Initiative funds will be used for sampling and analysis for the second statistically-valid survey of lakes nationwide, with a report scheduled in 2014.

Review and Update Water Quality Standards

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 2011. 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 2011 is that 64.3 percent of states will have updated their standards to reflect the latest scientific information in the past three years. Finally, EPA will continue to work with tribes that want to establish water quality standards.

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 broad-scale mercury and nutrient TMDLs, they are still encouraged by EPA to develop TMDLs as expeditiously as practicable. When possible, numeric TMDLs are encouraged to achieve compliance over time. Also, EPA will continue to work with states to facilitate accurate, comprehensive, and georeferenced water quality data made available to the public via the Assessment, TMDL Tracking, and Implementation System (ATTAINS). States and EPA have made significant

Develop Total Maximum Daily Loads

progress in the development and approval of TMDLs. Cumulatively, more than 36,000 state developed TMDLs were completed through FY 2009.

Providing permits

The states will continue to implement the “*Permitting for Environmental Results Strategy*” (PER), which focuses resources on the most critical environmental problems through program assessments, permit quality reviews, tracking priority permits and other actions to ensure the integrity of the program. EPA also 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.

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 2009, states began issuing permits that comply with these regulatory requirements. States also are required to revise their regulations to adopt the provisions of the new rules by 2009 and revise their statutes by 2010. Additional funding will support authorized states as they begin implementing the regulation in FY 2011, which involves outreach, education, and permit development.

Expanding surveillance and enforcement

Despite significant progress reducing water pollution from the largest sources, the country still faces serious regulatory and compliance challenges in attaining the water quality goals of the CWA. In FY 2011, EPA will be working closely with states to full implement the Clean Water Act Enforcement Action Plan to reduce pollution sources and achieve more consistent compliance performance.

In FY 2011, EPA will continue to work closely with states and tribes with a focus on collaboration and transparency, both in how EPA allocates funds, and how states and tribes use Section 106 grants to address surface water pollution problems. EPA also will focus on the impacts of Section 106 funded activities in addressing water quality and pollution problems on Tribal lands. Working with Tribal governments, EPA will continue to monitor the implementation of the *Clean Water Act Section 106 Tribal Guidance*, which sets out a framework for tribes to establish, implement and expand their surface water protection programs.

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 2014 target for this measure. 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of States and Territories that, within the preceding 3-year period, submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or sources not considered in previous standards.	68	62.5	66	64.3	Percent States and Territories

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	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 obtain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.]	33,540	36,487	39,101	41,611	TMDLs

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of major dischargers in Significant Noncompliance (SNC) at any time during the fiscal year.	22.5	Data Avail 2010	22.5	22.5†	Percent Dischargers

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of high priority state NPDES permits that are issued in the fiscal year.	95	147	95	95	Percent Permits

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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).	2,270	2,505	2,809	2,910	Segments

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Cost per water segment restored.	708,276	570,250	771,000	681,445	Dollars

**Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.*

† EPA is directing additional attention to Clean Water Act enforcement in FY2011 to target pollutant sources posing the biggest threats to water quality while intensifying vigorous civil and criminal enforcement against traditional end-of-pipe pollution. We are also in the process of redesigning our enforcement approach that will look beyond majors to other important sources. As we consider a broader range of sources, the definition of SNC may change which may change our measures and targets accordingly.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$45,000.0) This reflects an increase to strengthen the base state, interstate and Tribal programs, address emerging water quality issues such as nutrients and new regulatory requirements, and support expanded enforcement efforts. It includes an increase to assist states and tribes in meeting inflation costs associated with state and Tribal implementation.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$4,932.3	\$4,940.0	\$5,039.0	\$99.0
Total Budget Authority / Obligations	\$4,932.3	\$4,940.0	\$5,039.0	\$99.0
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, states, industry, communities, and individuals, both domestically and globally and is augmented by a counterpart Environmental Program and Management (EPM) program. 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, see <http://www.epa.gov/p2/>.

FY 2011 Activities and Performance Plan:

In FY 2011, the P2 Grant program will continue supporting states and state entities (i.e., colleges and universities) and Federally-recognized tribes and Intertribal Consortia in assisting businesses in identifying better environmental strategies and solutions for reducing or eliminating pollution at the source, benefiting 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 targeted 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 implement 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 high quality, peer-reviewed information to state technical assistance centers.

For more information, see <http://www.epa.gov/p2/pubs/grants/ppis/ppis.htm> and www.p2rx.org.

Performance Targets:

Activities for this appropriation support Government Performance and Results Act measures listed for the Toxic Substances: Pollution Prevention Program.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$99.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.

Statutory Authority:

Pollution Prevention Act (PPA) of 1990 and 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$99,440.1</i>	<i>\$105,700.0</i>	<i>\$105,700.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$99,440.1	\$105,700.0	\$105,700.0	\$0.0
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.¹²

¹² For more information see:

<http://www.epa.gov/safewater/pws/pwss.html>

<https://www.cfda.gov/index?s=program&mode=form&tab=step1&id=cca066b833c552bdf3c9ff011e576c7f>

FY 2011 Activities and Performance Plan:

In FY 2011, EPA will continue to support state and Tribal efforts to meet existing drinking water standards through the PWSS grant program. 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 newer health-based standards and are prepared for recent 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	90	89.1	90	90	Percent Systems

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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 including effective treatment & source water protection.	90	92.1	90	91	Percent Population

**Note: Performance Measures marked with an asterisk in this program project fact sheet were impacted by the receipt of ARRA funds. The impact to individual performance targets is detailed in the Performance Four Year Array in Tab 11.*

There is no 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.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

SDWA.

Categorical Grant: Radon

Program Area: Categorical Grants

Goal: Clean Air and Global Climate Change

Objective(s): Healthier Outdoor Air; Healthier Indoor Air

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$8,370.4	\$8,074.0	\$8,074.0	\$0.0
Total Budget Authority / Obligations	\$8,370.4	\$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 public action to reduce health risks from indoor radon (second only to smoking as a cause of lung cancer). EPA assists states and tribes through technical support and the State Indoor Radon Grant Program (SIRG), which provides categorical grants to develop, implement, and enhance programs that assess and mitigate radon risks. States and tribes are the primary implementers of radon testing and risk reduction programs. This voluntary program promotes partnerships among national organizations, the private sector, and state, local, and Tribal governmental programs to achieve radon risk reduction.

FY 2011 Activities and Performance Plan:

In FY 2011, 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 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. Grant dollars are supplemented with technical support to transfer “best practices” from high-achieving states to promote effective program implementation across the nation.

Performance Targets:

In FY 2011, EPA’s performance targets are: 1) that 12.5 percent of single-family homes, above EPA’s action level, will have operating radon mitigation systems and 2) that 34.5 percent of single family homes are built with mitigation ready systems in high radon potential areas. EPA estimates that by meeting these targets, the program will prevent over 900 future premature cancer deaths annually.

Performance measures associated with this program project are included in Radon Programs under Environmental Programs and Management.

FY 2011 Change from FY 2010 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: 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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$223,541.5</i>	<i>\$226,580.0</i>	<i>\$309,080.0</i>	<i>\$82,500.0</i>
Total Budget Authority / Obligations	\$223,541.5	\$226,580.0	\$309,080.0	\$82,500.0
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 State and Tribal Assistance Grants (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 permitting programs, air quality monitoring networks, and a number of other air program areas. 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 2011 Activities and Performance Plan:

EPA issued air quality standards for a new pollutant, fine particulate matter, in the late 1990s. Since that time, EPA has funded state and local fine particulate monitoring networks (\$42.5 million) using the requirements of Section 103 of the Clean Air Act, as authorized in annual appropriations bills. Section 103 provides full funding for pilot programs, demonstrations, research, and other one-time activities. EPA will begin a phased, four-year program to incorporate funding for fine particulate monitoring into the funding authorized by Section 105 of the Clean Air Act for continuing state and local clean air programs. Section 105 requires state and local agencies to provide matching funds of at least 40 percent of the amount required for the entire continuing state or local clean air program.

In FY 2011, the Agency anticipates that states with approved or delegated permitting programs will likely need additional resources to develop and apply the technical capacity to address greenhouse gases in permitting large sources. Additional funding in FY 2011 will assist in avoiding delays in evaluating and approving permits and will assist in advancing the

Administration's climate and clean energy goals. Most states have well-established permitting programs.

State Implementation Plans (SIPs) provide a blueprint for the programs and activities that states carry out to achieve and maintain NAAQS, impacting all areas of a state's program. Although there is no definite schedule for updating SIPs, there are a number of events that trigger SIP updates. For example, when EPA promulgates a new NAAQS, states must update their SIPs within three years. EPA's commitment to review each NAAQS according to the Clean Air Act deadlines has led to several updated standards in the last two years. In FY 2011, EPA will work with states to correct any deficiencies in their 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.

The states, which are in a period of constrained budgets, are experiencing a vastly increased workload in preparing SIPs due to: a) revised and more protective NAAQS (resulting in additional nonattainment areas that states must address) and b) difficulties in planning effective control strategies to reduce exposure to harmful pollutants. SIP preparation also is becoming more complicated due to the regional nature of air pollution, which often may require Regional air quality management strategies based on additional and more complex modeling, refined emissions inventories, and increased stakeholder involvement. In addition, most large sources already have been controlled and states must identify a broader range of new emission reduction measures. States also are expecting to prepare new and more complicated planning strategies to address greenhouse gases.

In October 2006, EPA revised the fine 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 in 2006. Although the final rule did not revise the air monitoring 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 agency's network.

The October 2006 final PM_{2.5} NAAQS rule also established a new requirement for a multi-pollutant monitoring site network (NCore), which must be operational by January 1, 2011. This network will serve multiple objectives, such as supporting long-term trends of air pollution, validating models, and providing input to health and atmospheric science studies. EPA has been working closely with the states to implement this network and expects approximately 80 stations across the nation. These stations will measure particles, including filter-based and continuous mass for PM_{2.5}, perform chemical speciation for PM_{2.5}, and for the first time, measure PM_{10-2.5} mass. Stations also will measure gases, such as CO, SO₂, NO_x, and O₃, and record basic meteorology. 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 October 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 under the revised

NAAQS, EPA has been working with states to improve the lead monitoring network by requiring monitors to be placed in areas with sources such as industrial facilities that emit one ton or more of lead per year. This portion of the lead network, which comprises approximately 90 monitoring stations, started operations on January 1, 2010. EPA also has proposed additional monitoring of lead at the approximately 80 NCore multi-pollutant monitoring stations and near sources that emit over one-half ton of lead, which could include an additional 180 locations, although the exact number will depend on the outcome of the rulemaking process and site by site waiver reviews. If finalized, these two additional monitoring programs are expected to begin operations in July 2011.

EPA has issued a proposal to reconsider the 2008 ozone NAAQS that would provide for an even more protective ozone standard – one that is consistent with the Clean Air Scientific Advisory Committee’s advice to the Agency. Depending on the result of the Agency’s reconsideration, there could be additional ozone nonattainment areas, including many areas that have never been classified as nonattainment and do not have any established ozone monitoring stations. In July 2009, EPA proposed new requirements for monitoring of ozone in smaller urban and non-urban areas as well as extending the length of the required ozone monitoring season. Under a reconsidered ozone standard, the Agency does not anticipate that the new monitoring requirements will change, but does anticipate additional areas will be subject to the requirements. The additional monitoring requirements may result in a substantial number of additional ozone monitoring stations in FY 2011 and FY 2012.

EPA proposed revisions to the nitrogen dioxide (NO₂) NAAQS in June 2009 and issued a final rule in January 2010. Revisions to the NAAQS have substantial implications for monitoring, including the deployment of new monitoring stations in locations not currently being monitored. EPA is working closely with states on changes to the NO₂ monitoring design. EPA also proposed a revised Sulfur Dioxide (SO₂) primary NAAQS (published December 8, 2009). The proposal includes 345 monitors, including 115 monitors at new stations. A final SO₂ rule is expected by June 2, 2010.

This program also supports state and local characterization of air toxics problems and implementation of measures to reduce health risks from air toxics. The characterization work includes collection and analysis of emissions data and monitoring of ambient air toxics. In FY 2011, funds for air toxic ambient monitoring also 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. Finally, this program will support state efforts in implementing Maximum Available Control Technology (MACT) standards for major sources and regulations to control emissions from area sources.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Cumulative percent reduction in the number of days with Air Quality Index	29	Data Avail 2010	33	37	Percent

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	(AQI) values over 100 since 2003, weighted by population and AQI value.					

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$45,000.0) This reflects an increase to support expanded core state workload for implementing revised and more stringent NAAQS and reducing public exposure to air toxics.
- (+\$25,000.0) This reflects an increase to assist state and local agencies in developing capacity to permit large sources of greenhouse gas emissions. The Agency will provide information, guidance, training and outreach to agencies and sources.
- (+\$15,000.0) This reflects an increase for additional state air monitors required by revised NAAQS.
- (-\$2,500.0) This reflects a decrease for the air toxics schools monitoring initiative to reflect completion of air toxics monitoring and assessment activities.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$5,276.9	\$5,099.0	\$5,201.0	\$102.0
Total Budget Authority / Obligations	\$5,276.9	\$5,099.0	\$5,201.0	\$102.0
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 2011 Activities and Performance Plan:

In FY 2011, 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. EPA also 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:

Currently, there are no performance measures for this specific Program Project.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$102.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$13,962.5</i>	<i>\$13,300.0</i>	<i>\$13,566.0</i>	<i>\$266.0</i>
Total Budget Authority / Obligations	\$13,962.5	\$13,300.0	\$13,566.0	\$266.0
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 National Ambient Air Quality Standards (NAAQS). 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 ambient or indoor air pollution on Tribal lands.

FY 2011 Activities and Performance Plan:

Tribes will assess environmental and public health conditions on Tribal lands by developing emission inventories and, where appropriate, siting and operating 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, and will work to reduce the number of days in violation of the Air Quality Index. This program supports the Agency’s priority of building strong Tribal partnerships.

Performance Targets:

There are no performance measures under this Program Project. However, work associated with this Program Project supports the purpose and objectives of Federal Support for Air Quality Management under Environmental Programs and Management.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$266.0) This reflects an increase to assist tribes in meeting inflation costs associated with state and Tribal program implementation.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$61,681.1</i>	<i>\$62,875.0</i>	<i>\$71,375.0</i>	<i>\$8,500.0</i>
Total Budget Authority / Obligations	\$61,681.1	\$62,875.0	\$71,375.0	\$8,500.0
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 include the following:

- 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 2011 Activities and Performance Plan:

In FY 2011, 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. EPA is requesting additional resources for GAP to help expand the number of tribes able to receive this baseline funding as well as provide a higher level of support to GAP funding levels will help 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 successfully implemented the inaugural run of a 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 2011, EPA will continue working to enhance and integrate 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/ProgramEvaluationLibrary/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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of Tribes with an environmental program (cumulative).	60	64	65	67	Percent Tribes

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of Tribes conducting EPA approved environmental monitoring and assessment activities in Indian country (cumulative.)	23	40	42	45	Percent Tribes

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of Tribes implementing federal regulatory environmental programs in Indian country (cumulative).	7	12.6	14	18	Percent Tribes

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Efficiency	Number of environmental programs implemented in Indian Country per million dollars.	14.2	Data Avail 6/2010	14.2	14.2	Programs

The efficiency measure for the GAP program, “*Number of environmental programs implemented in Indian country per million dollars*” 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 2011, EPA will operate at an efficiency of approximately 14.2 programs per million dollars.
- In FY 2011, all federally-recognized tribes and intertribal consortia, a universe of 574 eligible entities, will have access to an environmental presence.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$8,500.0) This will allow the Agency to increase the base funding available for GAP grants, providing tribes with a stronger foundation to build Tribal capacity and implement other related efforts, continuing EPA’s partnership and collaboration with the tribes. GAP funds are a key means by which tribes leverage other EPA and federal funding to contribute towards a higher overall level of environmental and public health protection per dollar invested. Many tribes have expressed the need to start implementing high-priority environmental programs. By increasing GAP grant funding, the Agency is encouraging a stronger environmental program base, and therefore allowing more tribes to take advantage of the new multi-media implementation program starting in FY 2011.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$11,332.4</i>	<i>\$10,891.0</i>	<i>\$11,109.0</i>	<i>\$218.0</i>
Total Budget Authority / Obligations	\$11,332.4	\$10,891.0	\$11,109.0	\$218.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Underground Injection Control (UIC) grant 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 the majority of hazardous wastewater that is land disposed; and underground injection is now being considered for long-term storage of carbon dioxide (CO₂).

When wells are properly sited, constructed, and operated, underground injection is an effective method of managing fluids. The Safe Drinking Water Act (SDWA) 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 and tribes that have primary enforcement authority (primacy) to implement and manage 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. EPA also administers the UIC programs for all but two tribes.¹³

(See <http://www.epa.gov/safewater/uic.html> for more information.)

¹³

(<https://www.cfd.gov/index?s=program&mode=form&tab=step1&id=c1307f57fe8bec34f1a65660eff495a8&cck=1&au=&ck=> for more information.)

FY 2011 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 thousand shallow injection wells (Class V) to protect our ground water resources.

Geological Sequestration (GS) is the process of injecting CO₂ captured from an emission source (e.g., a power plant or industrial facility) into deep, subsurface rock formations for long-term storage. It is part of a process known as “carbon capture and storage,” or CCS. EPA’s UIC program regulates underground injection of CO₂ and other fluids under the authority of the Safe Drinking Water Act (SDWA). In July 2008, EPA proposed a rule which would establish a new class of underground injection well—Class VI— with new Federal requirements to allow the injection of CO₂ for the purpose of GS. The proposal builds on, and tailors, existing UIC regulatory components including siting, construction, operation, monitoring and testing, and closure for injection wells that address the pathways, such as unplugged wells through which USDWs may be endangered. In addition to protecting USDWs, the proposed rule would provide a regulatory framework to implement a consistent approach to permitting GS projects across the U.S and supports the development of a potentially key climate change mitigation technology.

In FY 2011, states and EPA (where EPA directly implements) will continue to carry out regulatory functions for all types of wells. States and EPA also will continue to process UIC permit applications for experimental carbon sequestration projects. The information gathered from these pilots will help the Agency and states to provide permits to large-scale commercial carbon sequestration applications 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. 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 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.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Percent of identified Class V motor vehicle waste disposal wells and other high priority Class V wells closed or permitted.				76	Percent Wells

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	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.			92	92	Percent Wells

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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	89	Percent Wells

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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			93	93	Percent Wells

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
	underground sources of drinking water.					

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$218.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$4,549.5	\$2,500.0	\$2,550.0	\$50.0
Total Budget Authority / Obligations	\$4,549.5	\$2,500.0	\$2,550.0	\$50.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Energy Policy Act of 2005 (EPAct) expanded the eligible use of LUST funds to include certain release prevention/detection activities, but it did not authorize LUST funds for all prevention/detection activities. Thus, some states still need STAG money to fund some basic programmatic functions for Underground Storage Tank (UST) release prevention and detection programs. EPA recognizes that the size and diversity of the regulated community puts state authorities in a good position to regulate 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/swrust1/overview.htm>.

EPA will continue to make grants to states under Section 2007 of the SWDA to support core program activities as well as some EPAct leak prevention activities. Major activities for these 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.¹⁴ EPA also will assist the states in implementing the EPAct provisions such as conducting on-site inspections on the three-year cycle, and prohibiting delivery to noncompliant tanks.

At the end of FY 2009, there were approximately 612,000 active USTs at approximately 223,000 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, regulates these programs, develops guidelines, and provides technical assistance to develop state capacity to encourage owners and operators to properly operate and maintain their underground storage tanks.

¹⁴ Refer to <http://www.epa.gov/OUST/fedlaws/title42ch82-IX12-08.pdf>.

FY 2011 Activities and Performance Plan:

In FY 2011, the program's focus will continue to be on the need to bring all UST systems into compliance with release detection and release prevention requirements, and implement the provisions of EAct. States will continue to use the UST categorical grant funding to implement their leak prevention and detection programs.¹⁵ 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 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Outcome	Minimize the number of confirmed releases at UST facilities to 9,000 or fewer each year.	<9,000	7,168	<9,000	<9,000	UST Releases

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$50.0) This reflects an increase to assist states in meeting inflation costs associated with state program implementation.

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); EAct 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.

¹⁵ For more information on grant guidelines under EAct see: http://www.epa.gov/OUST/fedlaws/epact_05.htm.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$15,345.1</i>	<i>\$16,830.0</i>	<i>\$17,167.0</i>	<i>\$337.0</i>
Total Budget Authority / Obligations	\$15,345.1	\$16,830.0	\$17,167.0	\$337.0
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Wetland Program Development Grants (WPDG) enable EPA to provide technical and financial support to assist states, tribes, and local governments toward the national goal of an overall increase in the 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 including 401 certification, 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> or <https://www.cfda.gov> for more information.

FY 2011 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 program development. Resources in FY 2011 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 including 401 certification, and wetland water quality standards. Through these program elements, states and tribes can begin to 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 reports the quantity and type of wetlands in the conterminous United States. The report shows that while some wetland types are increasing in acreage, many categories of wetlands continue to decline, particularly coastal freshwater wetlands. The U.S. Fish and Wildlife Service expects to release another report in calendar year 2011.

Performance Targets:

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 Target	Units
Output	Number of acres restored and improved, under the 5-Star, NEP, 319, and great waterbody programs (cumulative).	88,000	103,507	110,000	118,000	Acres

Measure Type	Measure	FY 2009 Target	FY 2009 Actual	FY 2010 Target	FY 2011 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.	No Net Loss	No Net Loss	No Net Loss	No Net Loss	Acres

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- (+\$337.0) This reflects an increase to assist states and tribes in meeting inflation costs associated with state and Tribal program implementation.

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.

**Environmental Protection Agency
2011 Annual Performance Plan and Congressional Justification**

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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 - 1 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Reduce Criteria Pollutants and Regional Haze	(PM M9) Cumulative percent reduction in population-weighted ambient concentration of ozone in monitored counties from 2003 baseline.	8	9	10	Data Avail 2010	11	12	Percent
	<i>Additional Information:</i> 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.							
	(PM M91) Cumulative percent reduction in population-weighted ambient concentration of fine particulate matter (PM-2.5) in all monitored counties from 2003 baseline.	4	13	5	Data Avail 2010	6	6	Percent
	<i>Additional Information:</i> 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 cubic meter" (million people ug/m3.). The 2003 baseline is 2,581 people micrograms per cubic meter.							
	(PM M92) Cumulative percent reduction in the number of days with Air Quality Index (AQI) values over 100 since 2003, weighted by population and AQI value.	25	52	29	Data Avail 2010	33	37	Percent
	<i>Additional Information:</i> The baseline in 2003 is zero.							
	(PM M94) Percent of major NSR permits issued within one year of receiving a complete permit application.	78	79	78	Data Avail 2010	78	78	Percent
<i>Additional Information:</i> The baseline in 2004 is 61 percent.								

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	(PM M95) Percent of significant Title V operating permit revisions issued within 18 months of receiving a complete permit application.	97	85	100	Data Avail 2010	100	100	Percent
	<i>Additional Information:</i> The baseline in 2004 is 100 percent.							
	(PM M96) Percent of new Title V operating permits issued within 18 months of receiving a complete permit application.	91	72	95	Data Avail 2010	99	99	Percent
	<i>Additional Information:</i> The baseline in 2004 is 75 percent.							
	(PM MM9) Cumulative percent reduction in the average number of days during the ozone season that the ozone standard is exceeded in non-attainment areas, weighted by population.	19	37	23	Data Avail 2010	26	29	Percent
	<i>Additional Information:</i> The baseline in 2003 is zero.							
	(PM N35) Limit the increase of CO emissions (in tons) from mobile sources compared to a 2000 baseline.	1.35 M	1.35 M	1.52 M	Data Avail 2010	1.69 M	1.86 M	Tons
	<i>Additional Information:</i> The 2000 Mobile6 inventory is used as the baseline for mobile source emissions. The 2000 baseline for CO from mobile sources was 79.2M.							
	(PM O33) Millions of Tons of Volatile Organic Compounds (VOCs) Reduced since 2000 from Mobile Sources	1.37 M	1.37 M	1.54 M	Data Avail 2010	1.71 M	1.88 M	Tons
	<i>Additional Information:</i> The 2000 Mobile6 inventory is used as the baseline for mobile source emissions. The 2000 baseline for VOC emissions from mobile sources is 7.7M tons.							
	(PM O34) Millions of Tons of Nitrogen Oxides (NOx) Reduced since 2000 Reduced from Mobile Sources	2.71 M	2.71 M	3.05 M	Data Avail 2010	3.39 M	3.73 M	Tons
	<i>Additional Information:</i> The 2000 Mobile6 inventory is used as the baseline for mobile source emissions. The 2000 baseline for NOx emissions from mobile sources is 11.8M tons.							
	(PM P33) Tons of PM-10 Reduced since 2000 from Mobile Sources	99,458	99,458	111,890	Data Avail 2010	124,322	136,755	Tons
	<i>Additional Information:</i> The 2000 Mobile6 inventory is used as the baseline for mobile source emissions. The 2000 baseline for PM-10 emissions from mobile sources is 613,000 tons.							
	(PM P34) Tons of PM-2.5 Reduced since 2000 from	97,947	97,497	110,190	Data Avail	122,434	134,677	Tons

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	Mobile Sources				2010			
	<i>Additional Information:</i> The 2000 Mobile6 inventory is used as the baseline for mobile source emissions. The 2000 baseline for PM-10 emissions from mobile sources is 510,552 tons.							
(2) Reduce Air Toxics	(PM 001) Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline.	35	Data Avail 2011	36	Data Avail 2011	36	35	Percent
	<i>Additional Information:</i> The toxicity-weighted emission inventory will also utilize the National Emissions Inventory (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, developed in 1993, is 7.24 million tons. This value represents the total tons of toxics (i.e., unweighted). When the cancer and noncancer weighted emissions are calculated, the weighted emissions are normalized so that the baseline for those is also 7.24 million tons/year in the baseline year. Air toxics emissions data are revised every three years. Intervening years (the two years after the inventory year) are interpolated utilizing inventory projection models. An example would be, when the 2008 inventory is completed in 2011, interpolations for 2009 and 2010 will then become available. As new inventories are completed and improved inventory data is added, the baseline (or total tons of air toxics) may also be adjusted.							
	(PM 002) Cumulative percentage reduction in tons of toxicity-weighted (for non-cancer risk) emissions of air toxics from 1993 baseline.	59	Data Avail 2011	59	Data Avail 2011	59	59	Percent
	<i>Additional Information:</i> The toxicity-weighted emission inventory will also utilize the National Emissions Inventory (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, developed in 1993, is 7.24 million tons. This value represents the total tons of toxics (i.e., unweighted). When the cancer and noncancer weighted emissions are calculated, the weighted emissions are normalized so that the baseline for those is also 7.24 million tons/year in the baseline year. Air toxics emissions data are revised every three years. Intervening years (the two years after the inventory year) are interpolated utilizing inventory projection models. An example would be, when the 2008 inventory is completed in 2011, interpolations for 2009 and 2010 will then become available. As new inventories are completed and improved inventory data is added, the baseline (or total tons of air toxics) may also be adjusted.							
(3) Reduce the Adverse Effects of Acid Deposition	(PM A01) Tons of sulfur dioxide emissions from electric power generation sources	8,000,000	9,800,000	8,000,000	Data Avail 2010	8,450,000	8,450,000	Tons Reduced
	<i>Additional Information:</i> 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.							

Objective - 2 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
(1) Reduce Exposure to Radon	(PM R50) Cumulative number of existing homes with an operating mitigation system (HOMS) compared to the estimated number of homes at or above EPA's 4pCi/L action level.	11.1	11.0	11.5	12.0	12.0	12.5	Percent
	<i>Additional Information:</i> The 2003 baseline is 6.9 percent.							
	(PM R51) Total number of all new single-family homes (SFH) built in high radon potential areas (zone 1) compared to new homes in zone 1 built with mitigation-ready systems (radon-reducing features).	30.0	31.0	31.5	Data Avail 2010	33.0	34.5	Percent
<i>Additional Information:</i> The 2003 baseline is 21 percent.								
(2) Reduce Exposure to Asthma Triggers	(PM R16) Percent of public that is aware of the asthma program's media campaign.	>20	Data Not Avail	>20	No Data Avail	>30	>30	Percent
	<i>Additional Information:</i> Public awareness is measured prior to the launch of a new wave of the campaign. No new advertising was launched in 2007 or 2008.							
	(PM R17) Additional health care professionals trained annually by EPA and its partner on the environmental management of asthma triggers.	2,000	4,558	2,000	4,614	2,000	2,000	Professionals
<i>Additional Information:</i> In the 20003 baseline year, 2,360 health care professionals were trained.								
(3) Reduce Exposure to Indoor Air Contaminants in Schools	(PM R22) Estimated annual number of schools establishing indoor air quality programs based on EPA's Tools for Schools guidance.	1,100	1,614	1,000	2,062	1,000	1,000	Schools
	<i>Additional Information:</i> The baseline in 2003 is 3,200.							

Objective - 3 - 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.

Sub-Objective	Performance Measures	Performance Data				Unit
		FY 2008	FY 2009	FY 2010	FY 2011	

		Target	Actual	Target	Actual			
(2) Reduce Emissions of Ozone-Depleting Substances	(PM S01) Remaining US Consumption of Class II ODS, measured in tons of Ozone Depleting Potential (ODP).	<9,900	5,667	<9,900	Data Avail 2010	<3,811	<3,811	ODP tons
	<i>Additional Information:</i> 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. The 1989 HCFC baseline for the U.S. was 15,240 ODP.							

Objective - 4 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Monitor the Environment for Radiation	(PM R34) Percentage of most populous US cities with a RadNet ambient radiation air monitoring system, which will provide data to assist in protective action determinations.	85	92	90	Data Avail 2010	95	100	Percent
	<i>Additional Information:</i> The baseline is 55 percent for most populous cities.							
	(PM R36) Average time before availability of quality assured ambient radiation air monitoring data during an emergency.	1.0	0.80	0.8	Data Avail 2010	0.7	0.7	Days
	<i>Additional Information:</i> The baseline is 2.5 days for average time before availability of quality assured air monitoring data during an emergency.							
	(PM R37) Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP.	46	50	53	Data Avail 2010	53	53	Days
<i>Additional Information:</i> The baseline in 2004 is zero.								
(2) Prepare for and Respond to Radiological Emergencies	(PM R35) Level of readiness of radiation program personnel and assets to support federal radiological emergency response and recovery operations.	85	87	90	Data Avail 2010	90	90	Days
	<i>Additional Information:</i> The baseline for the emergency response program readiness was 50 percent.							
	(PM R39) Level of readiness of national environmental radiological laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for	35	37	50	Data Avail 2010	60	70	Percent

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	emergency response and recovery decisions.							
<i>Additional Information:</i> The baseline in 2005 is zero.								

Objective - 5 - Reduce Greenhouse Gas Emissions: 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Reduce Greenhouse Gas Emissions	(PM G02) Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the buildings sector.	32.4	38.4	35.5	Data Avail 2010	39.0	42.2	MMTCE
	<i>Additional Information:</i> 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/ResourceCenterPublicationsUSClimateActionReport.html), which provides a discussion of differences in assumptions between the 1997 baseline and the 2002 update.							
	(PM G06) Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the transportation sector.	1.5	1.60	2.6	Data Avail 2010	4.3	7.2	MMTCE
	<i>Additional Information:</i> 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/ResourceCenterPublicationsUSClimateActionReport.html), which provides a discussion of differences in assumptions between the 1997 baseline and the 2002 update.							
	(PM G16) Million metric tons of carbon equivalent (mmtce) of greenhouse gas reductions in the industry sector.	67.7	79.0	72.9	Data Avail 2010	82.9	92.8	MMCTE

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
<p><i>Additional Information:</i> 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/ResourceCenterPublicationsUSClimateActionReport.html), which provides a discussion of differences in assumptions between the 1997 baseline and the 2002 update.</p>								

Objective - 6 - Enhance Science and Research: Through 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.

Sub-Objective	Performance Measures	Performance Data						Unit	
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target		
		Target	Actual	Target	Actual				
(1) Clean Air Research	(PM H05) Percentage of Clean Air publications rated as highly cited publications.	No Target Established	Biennial	33.9	34.1	No Target Established	34.9	Percent	
	<p><i>Additional Information:</i> This metric provides a systematic way of quantifying research performance and impact by counting the number of times an article is cited within other publications. The "highly cited" data are based on the percentage of all program publications that are cited in the top 10 percent of their field, as determined by "Thomson's Essential Science Indicator" (ESI). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors. Note that prior to FY 2007 the data points for this measure were derived using a bibliometric analysis methodology that evaluated publications produced on a yearly basis, rather than produced in a ten-year window. In FY 2006, ORD and OMB agreed to 1) use a ten-year window as a consistent methodology across ORD and 2) assess the measure biannually.</p>								
	(PM H35) Percent planned actions accomplished toward the long-term goal of reducing uncertainty in the science that supports standard setting and air quality management decisions. (Research)	100	100	100	100	100	100	100	Percent
	<p><i>Additional Information:</i> Beginning in FY 2008, this measure will track the program's success in completing its planned outputs on time. Prior to FY 2008, the measure tracked success in completing both planned outputs and planned actions in response to independent review recommendations.</p>								

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 - 1 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
(1) Water Safe to Drink	(PM E) 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	83	87	81.2	87	87	Percent Population
	<i>Additional Information:</i> In 2005, 86 percent of the population served by community water systems received drinking water that met applicable drinking water standards.							
	(PM aa) Percent of population served by CWSs that will receive drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment & source water protection.	90	92	90	92.1	90*	91*	Percent Population
	<i>Additional Information:</i> In 2005, 89 percent of the population served by community water systems received drinking water that met applicable drinking water standards. *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM apc) Fund utilization rate for the DWSRF.	86	90	89	92	86*	89*	Rate
	<i>Additional Information:</i> In 2005, the fund utilization rate for the Drinking Water State Revolving Fund was 85 percent. *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM apd) Number of additional projects initiating operations.	440	445	445	480	450	500	Projects
						*ARRA:100	*ARRA:200	
	<i>Additional Information:</i> In 2005, 2,611 Drinking Water State Revolving Fund projects initiated operations. (cumulative) *The program which this measure supports received funds from ARRA. The additional incremental results expected from ARRA funds are noted in its FY 2010 and FY 2011 Target.							
	(PM aph) Percent of community water systems that have undergone a sanitary survey within the past three years (five years for outstanding performance.)	95	87	95	88	95	95	Percent CWSs
<i>Additional Information:</i> In 2007, 92 percent of community water systems had undergone a sanitary survey. Prior to FY 2007, this measure tracked states rather than community water systems, in compliance with this regulation.								
(PM apj) Percent of identified Class V motor vehicle						76	Percent Wells	

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	waste disposal wells and other high priority Class V wells closed or permitted.							
	<i>Additional Information:</i> "Sensitive ground water protection areas" are defined by the UIC primacy program director, but at a minimum must include groundwater-based community water system source water areas. In 2005, 72 percent Class V wells were closed or permitted.							
	(PM apm) Percent of community water systems that meet all applicable health-based standards through approaches that include effective treatment and source water protection.	89.5	89	90	89.1	90	90	Percent Systems
	<i>Additional Information:</i> In 2005, 89 percent of community water systems meet all applicable health based drinking water standards.							
	(PM apn) Percent of data for violations of health-based standards at public water systems that are accurate and complete in SDWIS/FED for all MCL and TT rules.						90	Percent data
	<i>Additional Information:</i> In 2003, 65 percent of data for violations of health based standards at public water systems that are accurate and complete in SDWIS/FED for all MCL and TT rules.							
	(PM apo) 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.					92	92	Percent Wells
	<i>Additional Information:</i> In 2009, 100 percent of Class I wells that lost mechanical integrity were returned to compliance within 180 days.							
	(PM app) 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	89	Percent Wells
	<i>Additional Information:</i> In 2009, 90 percent of Class II wells that lost mechanical integrity were returned to compliance within 180 days.							
	(PM apq) 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					93	93	Percent Wells

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	sources of drinking water.							
	<i>Additional Information:</i> In 2009, 100 percent of Class III wells that lost mechanical integrity were returned to compliance within 180 days.							
	(PM dw2) Percent of person months during which community water systems provide drinking water that meets all applicable health-based standards.	95	97	95	97.2	95	95	Percent Months
	<i>Additional Information:</i> In 2005, community water systems provided drinking water that met all applicable health based drinking water standards during 95 percent of "person months."							
	(PM dw4) Percent of community water systems for which minimized risk to public health through source water protection is achieved.	30	32	No Target Established		No Target Established	50	Percent CWSs
	<i>Additional Information:</i> In 2005, 20 percent of community water systems had minimized risk to public health through source water protection.							
	(PM dw5) Percent of homes on tribal lands lacking access to safe drinking water.	No Target Established		No Target Established		No Target Established	8	Households
	<i>Additional Information:</i> In 2005, 11 percent of homes on tribal lands lacked access to safe drinking water.							
(2) Fish and Shellfish Safe to Eat	(PM fs1) Percent of women of childbearing age having mercury levels in blood above the level of concern.	5.5	Data Avail 2013	5.2	Data Avail 2013	5.1	4.9	Percent Women
	<i>Additional Information:</i> Baseline is 5.7 percent published by CDC in 2005 (based on data collected in 2002-3) Universe is population of women of childbearing age.							
(3) Water Safe for Swimming	(PM ss1) 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	Data Avail 2012	2	2	Outbreaks
	<i>Additional Information:</i> Very few outbreaks have been reported over the ten years of data reviewed in consideration of a baseline for this measure. In 2005, two waterborne diseases were reported. Universe is not applicable to this baseline.							
	(PM ss2) 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	93	95	95	95	Percent Days/Season
	<i>Additional Information:</i> In 2005, beaches were open 96 percent of the 743,036 days of the beach season (i.e., beach season days are equal to 4,025 beaches multiplied by variable number of days of beach season at each beach).							

Objective - 2 - Protect Water Quality: Protect the quality of rivers, lakes, and streams on a watershed basis and protect coastal and ocean waters.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
(1) Improve Water Quality on a Watershed Basis	(PM L) Number of waterbody segments identified by States in 2002 as not attaining standards, where water quality standards are now fully attained (cumulative).	1,550	2,165	2,270	2,505	2,809*	2,910*	Segments
	<i>Additional Information:</i> 2002 baseline: 39,798 water bodies identified by states and tribes as not meeting water quality standards. Water bodies where mercury is among multiple pollutants causing impairment may be counted toward this target when all pollutants but mercury attain standards, but must be identified as still needing restoration for mercury; 1,703 impaired water bodies are impaired by multiple pollutants including mercury, and 6,501 are impaired by mercury alone. *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM bpa) CWSRF Long-Term Revolving Level (\$billions/yr)	No Target Established		No Target Established		No Target Established	3.4	Dollars (billion)/Year
	<i>Additional Information:</i> In 2001, \$3.9 billion of Clean Water SRF dollars were at the long term revolving level.							
	(PM bpb) Fund utilization rate for the CWSRF.	93.5	98	94.5	98	92*	94*	Percent Rate
	<i>Additional Information:</i> In 2002 and 91 percent is used as the baseline for this measure. It was calculated using data collected annually from all 51 state CWSRF programs (50 states and Puerto Rico). *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM bpc) Percent of all major publicly-owned treatment works (POTWs) that comply with their permitted wastewater discharge standards	86	86	86	Data Avail 5/2010	86*	86*	Percent POTWs
	<i>Additional Information:</i> The most recent baseline is 2005, at 86 percent. It is calculated by the Office of Enforcement and Compliance Assurance (OECA) using data collected in the Permit Compliance System (PCS) on major publicly-owned treatment works. *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM bpf) Estimated annual reduction in millions of pounds of phosphorus from nonpoint sources to waterbodies. (Section 319 funded projects only)	4.5	3.50	4.5	Data Avail 2010	4.5	4.5	Pounds (million)
	<i>Additional Information:</i> In 2005, there was a reduction of 558,000 lbs of phosphorus from nonpoint sources.							
(PM bpg) Estimated additional reduction in million pounds of nitrogen from nonpoint sources to waterbodies. (Section 319 funded projects only)	8.5	11.30	8.5	Data Avail 2010	8.5	8.5	Pounds (million)	
<i>Additional Information:</i> In 2005, there was a reduction of 3.7 million lbs of nitrogen from nonpoint sources.								

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	(PM bph) Estimated additional reduction in thousands of tons of sediment from nonpoint sources to waterbodies. (Section 319 funded projects only)	700,000	2,100,000	700,000	Data Avail 2010	700,000	700,000	Tons (thousand)
	<i>Additional Information:</i> In 2005, there was a reduction of 1.68 million tons of sediment from nonpoint sources.							
	(PM bpk) 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 obtain water quality standards. The terms "approved" and "established" refer to the completion and approval of the TMDL itself.]	28,527	30,658	33,540	36,487	39,101	41,611	TMDLs
	<i>Additional Information:</i> Cumulatively, more than 30,000 state TMDLs were completed through FY 2008. 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.							
	(PM bpl) Percent of high priority state NPDES permits that are issued in the fiscal year.	95	120	95	147	95	95	Percent Permits
	<i>Additional Information:</i> Priority Permits are permits in need of reissuance that have been identified by states as environmentally or programmatically significant. The annual universe of Priority Permits includes the number of these permits that will be issued in the current fiscal year. In 2005, 104 percent of the designated priority permits were issued in the fiscal year.							
	(PM bpn) Percent of major dischargers in Significant Noncompliance (SNC) at any time during the fiscal year.	22.5	23.90	22.5	Data Avail 2010	22.5	22.5†	Percent Dischargers
	<i>Additional Information:</i> The universe consists of all major NPDES permitted facilities. The data is pulled from PCS and ICIS databases. The SNC rates are calculated on a three year rolling average and reflect the percentage of majors that have been in SNC for one or more quarters within the particular fiscal year. In 2005, 19.7 percent of major facilities were in Significant Noncompliance.							
	† EPA is directing additional attention to Clean Water Act enforcement in FY2011 to target pollutant sources posing the biggest threats to water quality while intensifying vigorous civil and criminal enforcement against traditional end-of-pipe pollution. We are also in the process of redesigning our enforcement approach that will look beyond majors to other important sources. As we consider a broader range of sources, the definition of SNC may change which may change our measures and targets accordingly.							
	(PM bpp) Percent of submissions of new or revised water quality standards from States and Territories that are approved by EPA.	87	92.5	85	93.2	85	85	Percent Submissions

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	<i>Additional Information:</i> In 2004, the baseline was 87.6 percent submissions approved.							
	(PM bps) Number of TMDLs that are established or approved by EPA [Total TMDL] on a schedule consistent with national policy (cummulative). [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.]	33,801	35,979	38,978	41,866	44,560	47,100	TMDLs
	<i>Additional Information:</i> Cumulatively, EPA and states completed more than 35,000 total TMDLs through FY 2008. 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.							
	(PM bpt) Percent of waters assessed using statistically valid surveys.	65	65	65	65	82	100	Percent Waters
	<i>Additional Information:</i> In 2000, 31 percent of waters were assessed using statistically valid surveys.							
	(PM bpv) Percent of high priority EPA and state NPDES permits (including tribal) that are issued in the fiscal year.	95	119	95	144	95	95	Percent Permits
	<i>Additional Information:</i> Priority Permits are permits in need of reissuance that have been identified by states or EPA regions as environmentally or programmatically significant. The annual universe of Priority Permits includes the number of these permits that will be issued in the current fiscal year. In 2008, 119 percent of the designated priority permits were issued in the fiscal year.							
	(PM bpw) Percent of States and Territories that, within the preceding 3-year period, submitted new or revised water quality criteria acceptable to EPA that reflect new scientific information from EPA or sources not considered in previous standards.	68	62.5	68	62.5	66	64.3	Percent States and Territories
	<i>Additional Information:</i> In 2004, the baseline was 70 percent of states and territories submitting acceptable water quality criteria reflecting new scientific information.							
	(PM wq2) Remove the specific causes of waterbody impairment identified by states in 2002 (cumulative).	4,607	6,723	6,891	7,530	8,512	8,670	Causes
	<i>Additional Information:</i> In 2002, an estimate of 69,677 specific causes of water body impairments were identified by states.							
	(PM wq3) Improve water quality conditions in impaired watersheds nationwide using the watershed approach (cumulative).	40	60	102	104	141	170	Watersheds
	<i>Additional Information:</i> In 2002, there were 10 watersheds improved of an estimated 4,800 impaired watershed of focus having 1 or more water bodies impaired. The							

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	watershed boundaries for this measure are those established at the "12 digit" scale by the U.S. Geological Survey. Watersheds at this scale average 22 square miles in size. "Improved" means that that one or more of the impairment causes identified in 2002 are removed for at least 40 percent of the impaired water bodies or impaired miles/acres, or there is significant watershed-wide improvement, as demonstrated by valid scientific information, in one or more water quality parameters associated with the impairments.							
	(PM wq6) Percent of homes on tribal lands lacking access to basic sanitation.	No Target Established		No Target Established		No Target Established	6	Percent Homes
	<i>Additional Information:</i> In 2005, 6.64 percent of homes on tribal lands lacked access to basic sanitation.							
(2) Improve Coastal and Ocean Water	(PM Gpa) Percent of Alaska population served by public water systems in compliance with Safe Drinking Water Act regulatory requirements.	No Target Established		No Target Established		No Target Established	100	Households
	<i>Additional Information:</i> In 2005, 96 percent of the Alaska population served by public water systems were in compliance with Safe Drinking Water Act regulatory requirements.							
	(PM Opb) Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	94	91	96	Data Avail 5/2010	98	96	Percent Homes
	<i>Additional Information:</i> In 2003, 77 percent of serviceable rural Alaska homes had access to drinking water supply and wastewater disposal.							
	(PM co5) Percent of active dredged material ocean dumping sites that will have achieved environmentally acceptable conditions (as reflected in each site's management plan).	95	99	98	99	98	95	Percent Sites
	<i>Additional Information:</i> The baseline was calculated in 2005 at 60 sites.							

Objective - 3 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Drinking	(PM I34) Percentage of planned risk management	100	100	100	93	100	100	Percent

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
Water Research	research products delivered to support EPA's Office of Water, Regions, water utilities, and other key stakeholders to manage public health risk.							
	<i>Additional Information:</i> The outputs tracked by this measure demonstrate progress towards completing DWRP's long term goal 1, which supports the Office of Water (OW) in rule implementation, simultaneous compliance, and evaluating the effectiveness of risk management decisions. ORD's work under this goal also supports OW, regions, states, utilities, and key stakeholders in protecting sources of drinking water, managing water availability, improving water infrastructure sustainability, increasing water and energy use efficiency, and responding to short and long-term water resource impacts of environmental stressors such as climate change, population growth and land use changes.							
	(PM I35) 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 under the SDWA.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> The outputs tracked by this measure demonstrate progress towards completing DWRP's long term goal 1, which primarily supports the Office of Water in decisions relating to: Unregulated Contaminant Monitoring Rule (UCMR), regulating/not regulating contaminants on the Contaminant Candidate List (CCL), the six year review, and the Underground Injection Control (UIC) program. ORD's work under this goal also supports regions and key stakeholders in meeting simultaneous compliance requirements while also aiding risk assessors in developing risk assessments that inform regulatory decisions.							
(2) Water Quality Research	(PM H66) Percentage of planned outputs (in support of WQRP long-term goal #1) delivered	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM H68) Percentage of planned outputs (in support of WQRP long-term goal #2) delivered	100	100	100	86	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM H70) Percentage of planned outputs (in support of WQRP long-term goal #3) delivered	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its							

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM H92) Percentage of WQRP publications in high impact journals.	14.7	13.8	No Target Established	Biennial	15.7	No Target Established	Percent
	<i>Additional Information:</i> This measure provides a systematic way of quantifying research quality and impact by counting those articles that are published in prestigious journals. The "high impact" data are based on the percentage of all program articles that are published in prestigious journals, as determined by "Thomson's Journal Citation Reports" (JCR). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "high impact" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels such as the BOSC in their program reviews.							
	(PM H96) Percentage of WQRP publications rated as highly cited publications.	15.7	15.2	No Target Established	Biennial	16.7	No Target Established	Percent
	<i>Additional Information:</i> This metric provides a systematic way of quantifying research performance and impact by counting the number of times an article is cited within other publications. The "highly cited" data are based on the percentage of all program publications that are cited in the top 10 percent of their field, as determined by "Thomson's Essential Science Indicator" (ESI). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "highly cited" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels such as the BOSC in their program reviews. To best establish ambitious and appropriate targets in the future, ORD will collect benchmarking information by conducting an analysis of bibliometric measures							

GOAL 3: LAND PRESERVATION AND RESTORATION

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

Objective - 1 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Waste Generation and Recycling	(PM MW2) Increase in percentage of coal combustion ash that is used instead of disposed.	1.8	1.8	1.8	Data Avail 10/2010	1.4	1.4	Percentage Increase
	<i>Additional Information:</i> In 2008, approximately 136 million tons of coal combustion ash was generated, and 44.5 percent was used rather than landfilled. There is a one-year data lag in reporting results.							
	(PM MW5) Number of closed, cleaned up, or upgraded open dumps in Indian Country or on other tribal lands.	30	166	27	129	22	22	Open Dumps
	<i>Additional Information:</i> The baseline for this measure was set at zero, in response to new criteria for reporting identified in 2006.							
	(PM MW8) Number of tribes covered by an integrated solid waste management plan.	26	35	16	31	23	22	Tribes
	<i>Additional Information:</i> The baseline for this measure was set at zero, in response to new criteria for reporting identified in 2006.							
	(PM MW9) Billions of pounds of municipal solid waste reduced, reused, or recycled.			19.5	Data Avail 10/2010	20.5	21	Billion Pounds
<i>Additional Information:</i> This municipal solid waste measure was first implemented in FY 2009. There is a one-year data lag in reporting results.								
(2) Hazardous Waste and Petroleum Products	(PM HW0) Number of hazardous waste facilities with new or updated controls.			100	115	100	100	Facilities
	<i>Additional Information:</i> There are an estimated 894 facilities that will require initial approved or updated controls out of the universe of 2,450 facilities.							
	(PM ST1) Minimize the number of confirmed releases at UST facilities to 9,000 or fewer each year.	<10,000	7,364	<9,000	7,168	<9,000	<9,000	UST Releases
	<i>Additional Information:</i> Between FY 1999 and FY 2009, confirmed UST releases averaged 10,630 and the annual number of confirmed releases in FY 2009 was 7,168.							
(PM ST6) Increase the percentage of UST facilities that are in significant operational compliance (SOC) with both release detection and release prevention requirements by 0.5 percent over the previous year's	68	66	65	66.4	65.5	66	Percent	

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	target.							
<i>Additional Information:</i> 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 percent increase each year to maintain aggressive goals.								

Objective - 2 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit	
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target		
		Target	Actual	Target	Actual				
(1) Chemical Release Preparedness and Response	(PM 132) Superfund-lead removal actions completed annually.	195	215	195	214	170	170	Removals	
	<i>Additional Information:</i> Between 2002 and 2009 EPA completed an average of 203 Superfund-lead removal response actions. The Target reductions for FY 2010 and FY 2011 are due to an increased emphasis on PRP-lead removal actions.								
	(PM 135) PRP removal completions (including voluntary, AOC, and UAO actions) overseen by EPA.					170	170	Removals	
	<i>Additional Information:</i> 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.								
	(PM 337) Percent of all FRP inspected facilities found to be non-compliant which are brought into compliance.					15	30	Percent	
	<i>Additional Information:</i> New measure. Baseline to be established during FY 2010.								
	(PM 338) Percent of all SPCC inspected facilities found to be non-compliant which are brought into compliance.					15	30	Percent	
	<i>Additional Information:</i> New measure. Baseline to be established during FY 2010.								
	(PM C1) Score on annual Core NAR.					55	60	Percent	
<i>Additional Information:</i> New measure. Baseline to be established during FY 2010.									
(2) Contaminated	(PM 112) Number of LUST cleanups completed that meet risk-based standards for human exposure and	13,000	12,768	12,250	12,944	12,250*	12,250*	Cleanups	

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
Land	groundwater migration.							
	<i>Additional Information:</i> Through FY 2009, EPA completed a cumulative total of 388,331 leaking underground storage tank cleanups. *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM 113) Number of LUST cleanups completed that meet risk-based standards for human exposure and groundwater migration in Indian Country.	30	40	30	49	30	30	Cleanups
	<i>Additional Information:</i> Through FY 2009, EPA completed a cumulative total of 848 leaking underground storage tank cleanups in Indian country. This is a subset of the national total of 388,331 leaking underground storage tanks cleanups completed.							
	(PM 121) Superfund final site assessment decisions completed.	400	415	400	400	330	325	Assessments
	<i>Additional Information:</i> Through FY 2009, there were a cumulative total of 40,558 Superfund final assessment decisions made at potentially hazardous sites.							
	(PM 141) Annual number of Superfund sites with remedy construction completed.	30	30	20	20	22*	25*	Completions
	<i>Additional Information:</i> Through FY 2009, Superfund had completed construction at 1,080 final and deleted NPL sites. *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM 151) Number of Superfund sites with human exposures under control.	10	24	10	11	10*	10*	Sites
	<i>Additional Information:</i> Through FY 2009, Superfund had controlled human exposures at 1,320 final and deleted NPL sites. *The program which this measure supports received funds from ARRA. The FY 2010 and FY 2011 Targets represent the expected total from base funding plus ARRA.							
	(PM 152) Superfund sites with contaminated groundwater migration under control.	15	20	15	16	15	15	Sites
	<i>Additional Information:</i> Through FY 2009, Superfund had controlled groundwater migration at 1,012 final and deleted NPL sites.							
	(PM 162) Number of Federal Facility Superfund sites where all remedies have completed construction.	60	61	64	65	68	70	Sites
	<i>Additional Information:</i> Through FY 2009, EPA had completed construction at 65 Federal facility Superfund sites.							
	(PM 163) Number of Federal Facility Superfund sites where the final remedial decision for contaminants at the site has been determined.	81	73	77	77	92	104	Sites
	<i>Additional Information:</i> Through FY 2009, final redmedies had been determined at 77 Federal Facility Superfund sites.							
	(PM 170) Number of remedial action project			No Target	97	No Target	103	Completions

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	completions at Superfund NPL Sites.			Established		Established		
	<i>Additional Information:</i> Although this is a new performance measure for FY 2011, results were achieved for FY 2009. Since program inception through the end of FY 2009, Superfund had completed 2,603 remedial action projects at final and deleted NPL sites. The program which this measure supports received funds from ARRA. The FY 2011 target represents the expected total from base funding plus ARRA.							
	(PM CA1) Cumulative percentage of RCRA facilities with human exposures to toxins under control.					69	72	Percent
	<i>Additional Information:</i> At the end of FY 2009, potential human exposures to toxins were controlled at 65 percent of facilities. There is a universe of 3,746 low, medium, and high National Corrective Action Prioritization System-ranked facilities.							
	(PM CA2) Cumulative percentage of RCRA facilities with migration of contaminated groundwater under control.					61	64	Percent
	<i>Additional Information:</i> At the end of FY 2009, migration of contaminated groundwater was controlled at 58 percent of facilities. There is a universe of 3,746 low, medium, and high National Corrective Action Prioritization System-ranked facilities.							
	(PM CA5) Cumulative percentage of RCRA facilities with final remedies constructed.					35	38	Percent
	<i>Additional Information:</i> At the end of FY 2009, cleanup remedies had been constructed at 32 percent of the universe of 3,746 low, medium and high National Corrective Action Prioritization System-ranked facilities.							
	(PM S10) Number of Superfund sites ready for anticipated use site-wide.	30	85	65	66	65	65	Sites
	<i>Additional Information:</i> Through FY 2009, EPA's Superfund program had ensured that 409 final and deleted NPL sites met the criteria to be determined ready for anticipated use site-wide.							
(3) Potentially Responsible Party Participation at Superfund Sites	(PM 078) Refer to DOJ, settle, or write off 100 percent 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	100	100	100	100	100	Percent
	<i>Additional Information:</i> In FY 2009, the Agency will have addressed 100 percent of Cost Recovery at all NPL & non-NPL sites with total past costs equal to or greater than \$200,000.							
	(PM 285) Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA.	95	95	95	100	95	95	Percent
	<i>Additional Information:</i> In FY 1998 approximately 70 percent of new remedial work at NPL sites (excluding Federal facilities) was initiated by private parties. In FY 2003,							

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	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.							

Objective - 3 - Enhance Science and Research: Provide and apply sound science for protecting and restoring land by conducting leading-edge research, which, through collaboration, leads to preferred environmental outcomes.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
(1) Land Protection Research	(PM H87) Percentage of Land publications in high impact journals.	25.7	26.2	No Target Established	Biennial	26.7	No Target Established	Percent
	<i>Additional Information:</i> High impact journals are an indication of quality and influence. This measure evaluates the percentage of Land publications that are accepted within these prestigious journals and their subsequent impact on the field. The criteria and the 'impact factor' data rankings for this metric are provided by Thomson's Journal Citation Reports (JCR). Each analysis will evaluate the Land publications from the last ten year period, and will be timed to match the cycle for the expert peer review panel (BOSC).							
	(PM H88) Percentage of Land publications rated as highly cited publications.	26.8	18	No Target Established	Biennial	27.8	No Target Established	Percent
	<i>Additional Information:</i> This metric provides a systematic way of quantifying research performance and impact by counting the number of times an article was cited within other publications. The criteria and the "highly cited" (top 10 percent of field) data rankings for this metric are provided by Thomson's Essential Science Indicator (ESI). Each analysis will evaluate the Land publications from the last ten year period, and will be timed to match the cycle for the expert peer review panel (BOSC).							
	(PM H89) 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
	<i>Additional Information:</i> Annual research outputs are included in the program's Multi-Year Plan (MYP). Outputs in support of this long-term goal include reports on technologies, methods, and models to manage material streams and reduce uncertainty in assessments. Additional details are described in the MYP.							
	(PM H90) 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
<i>Additional Information:</i> Annual research outputs are included in the program's Multi-Year Plan (MYP). Outputs in support of this long-term goal include reports, technologies, methods, and models related to the characterization and remediation of contaminated sites. Additional details are described in the MYP.								

GOAL 4: HEALTHY COMMUNITIES AND ECOSYSTEMS

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

Objective - 1 - Chemical and Pesticide Risks: By 2014, prevent and reduce pesticide and industrial chemical risks to humans, communities, and ecosystems.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
(1) Reduce Chemical Risks	(PM 008) Percent of children (aged 1-5 years) with elevated blood lead levels (>5 ug/dl).					3.5	No Target Established	Percent
	<i>Additional Information:</i> Data released by CDC from the National Health and Nutritional Evaluation Survey (NHANES) in March of 2009 estimated 7.4 percent of children aged 1 - 5 with lead poisoning (blood lead levels of 5 ug/dl or greater) from 1999-2004.							
	(PM 009) Cumulative number of certified Renovation Repair and Painting firms					100,000	180,000	Firms
	<i>Additional Information:</i> The baseline is zero in 2009. This year was chosen because 2010 is the first year that firms will submit applications to EPA to become certified. Over time, firms will either become certified directly through EPA (tracked through Federal Lead-based Paint Program (FLPP) or through an authorized State program (tracked through grant reports/ACS).							
	(PM 10D) 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.	29	Data Avail 10/2010	No Target Established	Biennial	28	No Target Established	Percent
	<i>Additional Information:</i> 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 32 percent in 1999-2002.							
	(PM 196) Percent of children (aged 1-5 years) with elevated blood lead levels (>10ug/dl)	0.5	Data Avail 10/2010	No Target Established	Biennial	0	No Target Established	Percent
	<i>Additional Information:</i> 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).							
	(PM 239) Annual number of chemicals with final values for Acute Exposure Guideline Levels (AEGL).	37	37	6	4	14	20	Chemicals
	<i>Additional Information:</i> Baseline from program initiation in 1996 through 2008 is 37 chemicals.							
(PM 247) Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment.	100	100	100	Data Avail 10/2010	100	100	Percent	
<i>Additional Information:</i> Baseline for percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the								

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	environment was developed from a 2 year analysis from 2004-2005 comparing 8(e) reports to New Chemical submissions and is 100 percent.							
	(PM 282) Annual reduction in the production adjusted risk based score of releases and transfers of IUR chemicals from manufacturing facilities	2.5	Data Avail 10/2010	2.4	Data Avail 10/2011	2.2	2.0	% RSEI Rel Risk
	<i>Additional Information:</i> Baseline for the analysis of IUR chemicals using the Risk Screening Environmental Indicators Model in 1998 was zero percent. 1998 was selected as the baseline year because this was the first year that most of these chemicals were targeted through the HPV challenge program. Targets for this measure were established in 2004, however, a 35 percent reduction has been observed from 1998-2006.							
	(PM Ar5) Number of countries completing phase out of leaded gasoline. (incremental)	7	7	4	2	3	1	Countries
	<i>Additional Information:</i> As of 2006, the baseline is 159 countries, out of a universe of 1941, that have phased out lead gasoline.							
	(PM Ar8) Number of countries introducing low sulfur in fuels. (incremental)	2	5	3	2	9	2	Countries
	<i>Additional Information:</i> As of 2006, out of a universe of 194, no country had phased out lead gasoline.							
	(PM HC1) Annual number of hazard characterizations completed for HPV chemicals					230	300	Hazardous Units
	<i>Additional Information:</i> The cumulative baseline through FY 2009 is 1,095. This is made up on US and internationally sponsored Hazard Characterization through 2009. International HCs started being produced in the early 1990's and US sponsored HCs started to be produced in 2007.							
(2) Reduce Chemical Risks at Facilities and in Communities	(PM CH2) Conduct 400 risk management plan audits and inspections.	400	628	400	654	400	400	Audits
	<i>Additional Information:</i> Between FY 2000 and FY 2009, 5,641 Risk Management Plan audits were completed.							
(3) Protect Human Health from Pesticide Risk	(PM 012) Percent reduction of children's exposure to rodenticides.						10	Percent
	<i>Additional Information:</i> The total number of confirmed and likely rodenticide exposure to children ages 1-6 during the baseline period is 99,652 exposures reported for an average of 14,236 per year (1999-2005) according to the data from the Poison Control Center's National Poison Data System.							
	(PM 091) Percent of decisions completed on time (on or before PRIA or negotiated due date).					99	99	Percent
	<i>Additional Information:</i> In 2008, 99.9 percent of decisions were completed on time.							
	(PM 143) Percentage of agricultural acres treated with	18.5	21	20	Data Avail	21	21.5	Percent

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	reduced-risk pesticides.				10/2010			
	<i>Additional Information:</i> Baseline for acres-treated is 3.6 percent 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. Each year's total acre-treatments, as reported by Doane Marketing Research, Inc serve as the basis for computing the percentage of acre-treatments using reduced risk pesticides. Acre-treatments count the total number of pesticides treatments each acre receives each year. List of reduced-risk pesticides can be found on the web at: http://www.epa.gov/opprd001/workplan/reducedrisk.html .							
	(PM 265) Improve or maintain a rate of incidents per 100,000 potential risk events in population occupationally exposed to pesticides.	No Target Established	Biennial	<= 3.5/100,000	Data Avail 10/2010	No Target Established	<= 3.5/100,000	Incidents
	<i>Additional Information:</i> According to the data from Poison Control Center's National Poison Data System (2001-2003), there were 1,388 incidents out of 39,850,000 potential risk events for those occupationally exposed to pesticides. Occupational incidents include incidents from exposure to conventional and disinfectant pesticides and outcomes associated with minor, moderate, or major effects or death.							
	(PM 266) Percent reduction in concentrations of pesticides detected in general population.	30	Data Avail 10/2010	No Target Established	Biennial	50	No Target Established	Percent
	<i>Additional Information:</i> 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.							
	(PM 267) Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate.	No Target Established	Biennial	30	Data Avail 10/2010	No Target Established	50	Percent
	<i>Additional Information:</i> 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).							
(4) Protect the Environment from Pesticide Risk	(PM 011) Number of Product Reregistration Decisions	1,075	1,194	2,000	1,770	1,500	1,500	Decisions
	<i>Additional Information:</i> Actual in FY 2005 is 501 product re-registrations.							
	(PM 164) Number of pesticide registration review dockets opened.					70	71	Dockets
	<i>Additional Information:</i> Baseline for registration review work dockets is 71 opened in 2008.							
	(PM 230) Number of pesticide registration review final work plans completed.					70	70	Work Plans
	<i>Additional Information:</i> Baseline for final work plans for registered pesticides reviewed is 47 in 2008.							
(PM 268) Percent of urban watersheds that do not exceed EPA aquatic life benchmarks for three key	25, 25, 30	40, 0, 30	No Target Established	Biennial	5, 0, 20	No Target Established	Percent	

Sub-Objective	Performance Measures	Performance Data						Unit	
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target		
		Target	Actual	Target	Actual				
	pesticides of concern (diazinon, chlorpyrifos and malathion)								
	<i>Additional Information:</i> 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.								
	(PM 269) Percent of agricultural watersheds that do not exceed EPA aquatic life benchmarks for two key pesticides of concern (azinphos-methyl and chlorpyrifos).					0, 10	No Target Established	Percent	
	<i>Additional Information:</i> Based on FY 1992 - 2001 data, 18 percent of agricultural watersheds exceeded aquatic life benchmarks for azinphos-methyl and 18 percent of agricultural watersheds exceeded aquatic life benchmarks for chlorpyrifos.								
(5) Realize the Benefits from Pesticide Use	(PM 240) Maintain timeliness of Section 18 Emergency Exemption Decisions	45	34	45	40	45	45	Days	
	<i>Additional Information:</i> Baseline for S18 decisions is 45 days in 2005.								
	(PM 271) 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	\$900 M	\$900 M	\$900 M	Dollars
	<i>Additional Information:</i> 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.								
	(PM 272) Billions of dollars in crop loss avoided by ensuring that effective pesticides are available to address pest infestations.	\$1.5 B	\$1.5 B	\$1.5 B	\$1.5 B	\$1.5 B	\$1.5 B	\$1.5 B	Loss Avoided
	<i>Additional Information:</i> 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.								

Objective - 2 - Communities: Sustain, clean up, and restore communities and the ecological systems that support them.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(3) Assess and	(PM B29) Brownfield properties assessed.	1,000	1,453	1,000	1,295	1,000*	1,000*	Properties

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
Clean Up Brownfields	<i>Additional Information:</i> In FY 2009, EPA's Brownfields program assessed 1,295 properties. *The program which this measure supports received funds from ARRA; the FY 2010 and FY 2011 targets do not include results anticipated from ARRA. Results from ARRA funding are being tracked separately.							
	(PM B32) Number of properties cleaned up using Brownfields funding.	60	78	60	93	60*	60*	Properties
	<i>Additional Information:</i> In FY 2009, EPA's Brownfields program cleaned up 93 properties. *The program which this measure supports received funds from ARRA; the FY 2010 and FY 2011 targets do not include results anticipated from ARRA. Results from ARRA funding are being tracked separately.							
	(PM B33) Acres of Brownfields properties made ready for reuse.	225	4,404	1,000	2,660	1,000*	1,000*	Acres
	<i>Additional Information:</i> In FY 2009, EPA's Brownfields program made 2,660 acres of land ready for reuse. *The program which this measure supports received funds from ARRA; the FY 2010 and FY 2011 targets do not include results anticipated from ARRA. Results from ARRA funding are being tracked separately.							
	(PM B34) Jobs leveraged from Brownfields activities.	5,000	5,484	5,000	6,490	5,000*	5,000*	Jobs
	<i>Additional Information:</i> In FY 2009, EPA's Brownfields program leveraged 6,490 jobs. *The program which this measure supports received funds from ARRA; the FY 2010 and FY 2011 targets do not include results anticipated from ARRA. Results from ARRA funding are being tracked separately.							
	(PM B37) Billions of dollars of cleanup and redevelopment funds leveraged at Brownfields sites.	0.9	1.546	0.9	1.06	0.9*	0.9*	Billion Dollars
<i>Additional Information:</i> In FY 2009, EPA's Brownfields program leveraged \$1.06B in cleanup and redevelopment funding. *The program which this measure supports received funds from ARRA; the FY 2010 and FY 2011 targets do not include results anticipated from ARRA. Results from ARRA funding are being tracked separately.								
(4) Sustain and Restore the United States - Mexico Border Environmental Health	(PM 4pg) Loading of biochemical oxygen demand (BOD) removed (million pounds/year) from the U.S.-Mexico border area since 2003.						24	Million Pounds/Year
	<i>Additional Information:</i>							
	(PM xb2) Number of additional homes provided safe drinking water in the U.S.-Mexico border area that lacked access to safe drinking water in 2003. (cumulative)	2,500	5,162	1,500	1,584	28,434	33,434	Homes
	<i>Additional Information:</i> Units and Baseline: "Additional homes" represents the number of existing households that are provided access (i.e., connected) to safe drinking water as a result of Border Environment Infrastructure Fund (BEIF)-supported projects. The Program measures from a baseline of zero additional homes since this measure was developed in 2003. Universe: The known universe is the number of existing households in the U.S.-Mexico border area lacking access to safe drinking water in 2003 (98,515 homes). The known universe was calculated from U.S. Census and the Mexican National Water Commission (CONAGUA) sources.							
(PM xb3) Number of additional homes provided adequate wastewater sanitation in the U.S.-Mexico border area that lacked access to wastewater sanitation	15,000	31,686	105,500	43,594	246,175	345,675	Homes	

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	in 2003 (cumulative).							
	<i>Additional Information:</i> Units and Baseline: "Additional homes" represents the number of existing households that are provided access (i.e., connected) to adequate wastewater sanitation as a result of Border Environment Infrastructure Fund (BEIF)-supported projects. The Program measures from a baseline of zero additional homes since this measure was developed in 2003. Universe: The known universe is the number of existing households in the U.S.-Mexico border area lacking access to adequate wastewater sanitation services in 2003 (690,723). The known universe of unconnected homes was calculated from U.S. Census and the Mexican National Water Commission (CONAGUA) sources.							
(5) Sustain and Restore Pacific Island Territories	(PM pi1) Percent of population in each of the U.S. Pacific Island Territories (served by community water systems) that meet all applicable health-based drinking water standards, measured on a four quarter rolling average basis.	72	79	73	80	73	75	Percent Population
	<i>Additional Information:</i> In 2005, 95 percent of the population in American Samoa, 10 percent in the Commonwealth of the Northern Mariana Islands (CNMI) and 80 percent of Guam served by CWS received drinking water that meets all applicable health-based standards. This measure is on a four quarter rolling average basis.							
	(PM pi2) Percent of time that sewage treatment plants in the U.S. Pacific Island Territories comply with permit limits for biochemical oxygen demand (BOD) and total suspended solids (TSS).	67	67	62	65	62	63	Percent Time
	<i>Additional Information:</i> The sewage treatment plants in the Pacific Island Territories compiled 59 percent of the time with BOD & TSS permit limits.							
	(PM pi3) Percent of days of the beach season that beaches in each of the U.S. Pacific Island Territories monitored under the Beach Safety Program will be open and safe for swimming.	70	80	80	81	80	82	Percent Days
<i>Additional Information:</i> In 2005, beaches were open and safe 64 percent of the beach season in American Samoa, 97 percent in the CNMI & 76 percent in Guam.								

Objective - 3 - Restore and Protect Critical Ecosystems: Protect, sustain, and restore the health of critical natural habitats and ecosystems.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Increase Wetlands	(PM 4E) 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	No Net Loss	Data Not Available	No Net Loss	No Net Loss	No Net Loss	No Net Loss	Acres

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	404 regulatory program.							
	<i>Additional Information:</i> EPA receives data for this measure from the Army Corps of Engineers (ACE). ACE recently finalized their database and was able to collect actual data for the first time in FY 2009.							
	(PM 4G) Number of acres restored and improved, under the 5-Star, NEP, 319, and great waterbody programs (cumulative).	75,000	82,875	88,000	103,507	110,000	118,000	Acres
	<i>Additional Information:</i> From 1986-1997, the US had an annual net wetland loss of an estimated 58,500 acres, as measured by the US Fish and Wildlife Service. From 1998-2004, the US achieved a net cumulative increase of 32,000 acres per year of wetlands, as measured by the US Fish and Wildlife Service.							
(2) Increase Habitat Protected or Restored in Estuaries of National Significance	(PM 202) Acres protected or restored in National Estuary Program study areas.	50,000	83,490	100,000	125,437	100,000	100,000	Acres
	<i>Additional Information:</i> 2005 Baseline: 449,242 acres of habitat protected or restored; cumulative from 2002.							
(3) Improve the Health of the Great Lakes	(PM 433) Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic systems.	21	23.70	No Target Established		No Target Established	23.4	Scale
	<i>Additional Information:</i> The ecosystem health index for the Great Lakes in 2002 was 20.							
	(PM 606) Cubic yards of contaminated sediment remediated (cumulative from 1997) in the Great Lakes.	5.0	5.50	5.9	6.0	6.3	7.2	Cubic Yards (million)
	<i>Additional Information:</i> 2.1 million cubic yards of contaminated sediments were remediated from 1997 through 2001 of the 40 million requiring remediation.							
	(PM 620) Cumulative percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples.	5	6	5	6	10	14	Percent Decline
	<i>Additional Information:</i> 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.							
	(PM 625) Number of Beneficial Use Impairments removed within Areas of Concern.	16	11	21	12	20	26	BUIs Removed
	<i>Additional Information:</i> Universe of 261. Baseline of 11.							
	(PM 626) Number of Areas of Concern in the Great					1	3	AOCs

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	Lakes where all management actions necessary for delisting have been implemented (cumulative).							
	<i>Additional Information:</i> Baseline: 1 AOC. Universe: 31 AOCs.							
	(PM 627) Number of nonnative species newly detected in the Great Lakes ecosystem.					1.1	1.0	Number species
	<i>Additional Information:</i> Baseline: 1.3 species per year. Universe: 181 species.							
	(PM 628) Acres managed for populations of invasive species controlled to a target level (cumulative).					1,000	1,500	Number of Acres
	<i>Additional Information:</i> Baseline: Zero Acres							
	(PM 629) Number of multi-agency rapid response plans established, mock exercises to practice responses carried out under those plans, and/or actual response actions (cumulative).					4	7	Number Responses/Plans
	<i>Additional Information:</i> Baseline: Zero Acres							
	(PM 630) Five-year average annual loadings of soluble reactive phosphorus (metric tons per year) from tributaries draining targeted watersheds.					0	0.5	Average Loadings
	<i>Additional Information:</i> Baseline: 2003-2007. Fox River: 212; Saginaw River: 133; Maumee River: 623.							
	(PM 631) Percentage of beaches meeting bacteria standards 95 percent or more of beach days.					86	87	Percent Beaches
	<i>Additional Information:</i> Baseline: 86 percent (2006). Universe: 100 percent.							
	(PM 632) Acres in Great Lakes watershed with USDA conservation practices implemented to reduce erosion, nutrients, and/or pesticide loading.					2	8 increase	Percent Acres
	<i>Additional Information:</i> Baseline: 165,000 Acres.							
	(PM 633) Percent of populations of native aquatic non-threatened and endangered species self-sustaining in the wild (cumulative).					48/147	35%; 52/147 populations	Number of species
	<i>Additional Information:</i> Baseline (2009): 27 percent;39/147.							
	(PM 634) Number of acres of wetlands and wetland-					5,000	7,500	Acres

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	associated uplands protected, restored and enhanced (cumulative).							
	<i>Additional Information:</i> Baseline: Zero. Universe: 550,000 Acres.							
	(PM 635) Number of acres of coastal, upland, and island habitats protected, restored and enhanced (cumulative).					15,000	20,000	Acres
	<i>Additional Information:</i> Baseline: Zero. Universe: 1 Million Acres.							
	(PM 636) Number of species delisted due to recovery.					0	1	Species
	<i>Additional Information:</i> Baseline: Zero.							
(4) Improve the Health of the Chesapeake Bay Ecosystem	(PM 230) Percent of point source nitrogen reduction goal of 49.9 million pounds achieved.	74	69	74	70	74	76	Percent Goal Achieved
	<i>Additional Information:</i> The 2002 baseline is 58 percent goal achievement (28.76M lbs reduced since 1985); the 2007 baseline is 69 percent goal achievement (34.51 M lbs reduced since 1986.)							
	(PM 231) Percent of point source phosphorus reduction goal of 6.16 million pounds achieved.	85	87	87	96	89	96	Percent Goal Achieved
	<i>Additional Information:</i> The 2002 baseline is 83 percent goal achievement (5.12 M lbs reduced since 1985); the 2007 baseline is 87 percent goal achievement (5.36 M lbs reduced since 1986.)							
	(PM 232) Percent of forest buffer planting goal of 10,000 miles achieved.	60	57	62	62	65	68	Percent Goal Achieved
	<i>Additional Information:</i> The 2002 baseline is 12 percent goal achievement (1,189 miles planted since 1996); the 2007 baseline is 53 percent goal achievement (5,337 miles planted since 1997).							
	(PM cb1) Percent of submerged Aquatic Vegetation goal of 185,000 acres achieved, based on annual monitoring from previous goal.	No Target Established		No Target Established		No Target Established	45	Percent Acres
	<i>Additional Information:</i> In 1985, 21 percent of the Submerged Aquatic Vegetation goal of 185,000 acres was achieved (38,226 acres).							
	(PM cb2) Percent of Dissolved Oxygen goal of 100 percent standards attainment achieved, based on annual monitoring from the previous calendar year and the preceding 2 years.	No Target Established		No Target Established		No Target Established	40	Percent Dissolved Oxygen
	<i>Additional Information:</i> In 1988, 15 percent of the Dissolved Oxygen goal of 100 percent standards attainment was achieved.							
(PM cb3) Percent of goal achieved for implementing	50	47	50	49	52	56	Percent Goal	

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	nitrogen reduction practices to reduce nitrogen 162.5M lbs from 1985 levels to achieve a 175M lb/yr cap load, based on long-term avg. hydrology simulations.							Achieved
	<i>Additional Information:</i> The 2002 baseline is 33 percent goal achievement (52.82 million lbs reduced since 1985); the 2007 baseline is 46 percent goal achievement (74.63 million lbs reduced since 1986.)							
	(PM cb4) Percent of goal achieved for implementing phosphorus reduction practices to reduce phosphorus 14.36M lbs from 1985 levels to achieve a 12.8M lb/yr cap load, based on LT avg. hydrology simulations.	66	62	64	65	66	70	Percent Goal Achieved
	<i>Additional Information:</i> The 2002 baseline is 56 percent goal achievement (8.02 million lbs reduced since 1985); the 2007 baseline is 62 percent goal achievement (8.83 million lbs reduced since 1986.)							
	(PM cb5) Percent of goal achieved for implementing sediment reduction practices to reduce sediment 1.69M tons from 1985 levels to achieve a 4.15M ton/yr cap load, based on long-term avg. hydrology simulations.	64	64	67	64	71	71	Percent Goal Achieved
	<i>Additional Information:</i> The 2002 baseline is 47 percent goal achievement (0.79 million tons reduced since 1985); the 2007 baseline is 61 percent goal achievement (1.03 million tons reduced since 1986.)							
(5) Improve the Health of the Gulf of Mexico	(PM 22b) Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.	2.5	2.20	2.5	2.2	2.5	2.6	Scale
	<i>Additional Information:</i> 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.							
	(PM xg1) Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority coastal areas (cumulative starting in FY 07).	64	131	96	131	96	128	Impaired Segments
	<i>Additional Information:</i> In 2008, Gulf of Mexico coastal wetlands habitats included 3,769,370 acres.							
	(PM xg2) Restore, enhance, or protect a cumulative number of acres of important coastal and marine habitats.	18,200	25,215	26,000	29,344	27,500	30,000	Acres
<i>Additional Information:</i> In 2008, 25,215 acres were restored, enhanced, or protected in the Gulf of Mexico.								
(6) Restore and Protect	(PM li5) Percent of goal achieved in reducing trade-equalized (TE) point source nitrogen discharges to Long					52	52	Percent Goal Achieved

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
Long Island Sound	Island Sound from the 1999 baseline of 59,146 TE lbs/day.							
	<i>Additional Information:</i> The 2000 TMDL baseline is 59,146 Trade-Equalized (TE) pounds/day. The 2014 TMDL target is 22,774 TE/pounds/day.							
	(PM li6) Percent of goal achieved in restoring, protecting or enhancing 240 acres of coastal habitat from the 2008 baseline of 1,199 acres.					33	50	Percent Goal Achieved
	<i>Additional Information:</i> The Long Island Sound Study established a goal to restore or protect 240 additional acres of coastal habitat from 2009-2014, from a 2008 baseline of 1,199 acres.							
	(PM li7) Percent of goal achieved in reopening 50 river and stream miles to diadromous fish passage from the 2008 baseline of 124 miles.					33	50	Percent Goal Achieved
	<i>Additional Information:</i> The Long Island Sound Study established a goal to reopen 50 river/stream miles to diadromous fish passages in 2009-2014, from a 2008 baseline of 124 miles.							
(7) Restore and Protect the South Florida Ecosystem	(PM sf3) At least seventy five percent of the monitored stations in the near shore and coastal waters of the Florida Keys National Marine Sanctuary will maintain Chlorophyll a(CHLA) levels at less than to equal to 0.35 ug l-1 and light clarity(Kd)levels at less than or equal to 0.20 m-1.						75	Percent Stations
	<i>Additional Information:</i> In 2005, Total water quality was at chl < 0.2 ug/l, light attenuation < 0.13/meter, DIN < 0.75 micromolar, and TP < 0.2 micromolar.							
	(PM sf4) At least seventy five percent of the monitored stations in the near shore and coastal waters of the Florida Keys National Marine Sanctuary will maintain dissolved inorganic nitrogen (DIN) levels at less than or equal to 0.75 uM and total phosphorus (TP) levels at less than or equal to .25 uM.						75	Percent Stations
	<i>Additional Information:</i>							
	(PM sf5) Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 ppb total phosphorus criterion throughout the Everglades Protection Area marsh.	Maintain	Not Maintained	Maintain	Not Maintained	Maintain	Maintain	Parts/Billion
<i>Additional Information:</i> In 2005, 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								

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	water treatment areas.							
(8) Restore and Protect the Puget Sound Basin	(PM ps1) Improve water quality and enable the lifting of harvest restrictions in acres of shellfish bed growing areas impacted by degrading or declining water quality.	450	1,566	600	1,730	1,800	1,925	Acres
	<i>Additional Information:</i> In 2008, 1,566 acres (cumulative) of shellfish-bed growing areas improved water quality and lifted harvest restrictions.							
	(PM ps2) Remediate acres of prioritized contaminated sediments.	100	123	125	123.1	123	127	Acres
	<i>Additional Information:</i> In 2008, 123 acres of prioritized contaminated sediments were remediated.							
	(PM ps3) Restore the acres of tidally and seasonally influenced estuarine wetlands.	2,310	4,413	5,700	5,751	6,500	7,250	Acres
<i>Additional Information:</i> In 2008, 4,413 acres (cumulative) of tidally- and seasonally-influenced estuarine wetlands were restored								
(9) Restore and Protect the Columbia River Basin	(PM cr1) Protect, enhance, or restore acres of wetland habitat and acres of upland habitat in the Lower Columbia River watershed (cumulative starting FY 06).	8,000	12,986	10,000	15,700	16,000	16,300	Acres
	<i>Additional Information:</i> In 2005, 96,770 acres of wetlands were available for protection, enhancement or restoration in the Lower Columbia River Estuary.							
	(PM cr2) Clean up acres of known contaminated sediments (cumulative starting FY 06).			5	10	20	60	Acres
	<i>Additional Information:</i> In 2006, 400 acres of known highly contaminated sediments were found in the main-stem of the Lower Columbia and Lower Willamette Rivers.							
	(PM cr3) Demonstrate a reduction in mean concentration of contaminants of concern found in water and fish tissue (cumulative starting in FY 06.)						10	Mean Concentration
<i>Additional Information:</i>								

Objective - 4 - Enhance Science and Research: 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.

Sub-Objective	Performance Measures	Performance Data				Unit
		FY 2008	FY 2009	FY 2010	FY 2011	

		Target	Actual	Target	Actual			
(1) Human Health Research	(PM H07) Percentage of human health program publications rated as highly cited papers.	25.5	25.60	No Target Established	Biennial	26.5	No Target Established	Percent
	<i>Additional Information:</i> This metric provides a systematic way of quantifying research performance and impact by counting the number of times an article is cited within other publications. The "highly cited" data are based on the percentage of all program publications that are cited in the top 10 percent of their field, as determined by "Thomson's Essential Science Indicator" (ESI). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "highly cited" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels such as the BOSC in their program reviews.							
	(PM H29) Percentage of planned outputs delivered in support of public health outcomes long-term goal.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM H30) Percentage of planned outputs delivered in support of mechanistic data long-term goal.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM H31) Percentage of planned outputs delivered in support of aggregate and cumulative risk long-term goal.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM H32) Percentage of planned outputs delivered in support of the susceptible subpopulations long-term goal.	100	100	100	100	100	100	Percent
<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.								

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(2) Ecosystem Research	(PM I19) Percentage of Ecological Research publications rated as highly-cited publications.	No Target Established	Biennial	21.4	Data Avail 2010	No Target Established	22.4	Percent
	<i>Additional Information:</i> This metric provides a systematic way of quantifying research performance and impact by counting the number of times an article is cited within other publications. The "highly cited" data are based on the percentage of all program publications that are cited in the top 10 percent of their field, as determined by "Thomson's Essential Science Indicator" (ESI). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "highly cited" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels such as the BOSC in their program reviews.							
	(PM I20) Percentage of Ecological research publications in "high-impact" journals.	No Target Established	Biennial	21.3	Data Avail 2010	No Target Established	22.3	Percent
	<i>Additional Information:</i> This measure provides a systematic way of quantifying research quality and impact by counting those articles that are published in prestigious journals. The "high impact" data are based on the percentage of all program articles that are published in prestigious journals, as determined by "Thomson's Journal Citation Reports" (JCR). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "high impact" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels such as the BOSC in their program reviews.							
(3) Human Health Risk Assessment Research	(PM H83) Percentage of planned outputs delivered in support of HHRA Technical Support Documents.	90	89	90	100	90	90	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
(4) Global Climate Change Research	(PM H76) Percentage of Global publications rated as highly cited publications.	No Target Established	25	23	Data Avail 2010	No Target Established	24	Percent
	<i>Additional Information:</i> The criteria and the "highly cited" rankings will be provided using "Thomson's Essential Science Indicator (ESI)							
	(PM H77) Percentage of Global publications in high impact journals.	No Target Established	24.1	24.6	Data Avail 2010	No Target Established	25.6	Percent
	<i>Additional Information:</i> The criteria and the "impact factor" rankings will be provided using "Thomson's Journal Citation Reports (JCR)							
	(PM H79) Percentage of planned outputs delivered.	100	100	100	100	100	100	Percent
<i>Additional Information:</i> Annual research outputs will be outlined in the program's revised Multi-Year Plan. This measure will track progress toward completing those milestones across the program.								
(6) Safe Pesticides and	(PM I06) Percentage of planned outputs delivered in	100	100	100	100	100	100	Percent

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
Products Research	support of the SP2 program's long-term goal one.							
	<i>Additional Information:</i> Annual research outputs are included in the program's Multi-Year Plan. At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs. The program strives to complete 100 percent of its planned outputs each year.							
	(PM I08) Percentage of planned outputs delivered in support of the SP2 program's long-term goal two.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> Annual research outputs are included in the program's Multi-Year Plan. At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs. The program strives to complete 100 percent of its planned outputs each year.							
	(PM I10) Percentage of planned outputs delivered in support of the SP2 program's long-term goal three.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> Annual research outputs are included in the program's Multi-Year Plan. At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs. The program strives to complete 100 percent of its planned outputs each year.							
	(PM I11) Percentage of SP2 publications rated as highly cited publications.	23.2	Data Avail 2010	No Target Established	Biennial	24.2	No Target Established	Percent
	<i>Additional Information:</i> This metric provides a systematic way of quantifying research performance and impact by counting the number of times an article is cited within other publications. The "highly cited" data are based on the percentage of all program publications that are cited in the top 10 percent of their field, as determined by "Thomson's Essential Science Indicator" (ESI). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors.							
	(PM I12) Percent of SP2 publications in "high impact" journals.	36.2	Data Avail 2010	No Target Established	Biennial	37.2	No Target Established	Percent
<i>Additional Information:</i> This measure provides a systematic way of quantifying research quality and impact by counting those articles that are published in prestigious journals. The "high impact" data are based on the percentage of all program articles that are published in prestigious journals, as determined by "Thomson's Journal Citation Reports" (JCR). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors.								
(7) Homeland Security Research	(PM H72) Percentage of planned outputs delivered in support of efficient and effective clean-ups and safe disposal of contamination wastes.	100	92	100	85	100	80	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM H73) Percentage of planned outputs delivered in support of water security initiatives.	100	83	100	100	100	80	Percent

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	<p><i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.</p>							

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, tribes, businesses, and the public that promote environmental stewardship and long-term sustainable outcomes.

Objective - 1 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Address Environmental Problems from Air Pollution	(PM 400) Reduce, treat, or eliminate air pollutants through concluded enforcement actions.					480	480	Million Pounds
	<i>Additional Information:</i> FY 2005-2008 Average Baseline: 480 million pounds.							
	(PM 401) 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	127	Entities
	<i>Additional Information:</i> FY 2007-2008 Average Baseline: 151 entities. Results reported under this measure include: enforcement settlements, compliance incentive audits, direct compliance assistance delivered by EPA staff only, and Federal inspections that result in direct or preventative environmental benefits.							
(2) Address Environmental Problems from Water Pollution	(PM 402) Reduce, treat, or eliminate water pollutants through concluded enforcement actions.					320	320	Million Pounds
	<i>Additional Information:</i> FY 2005-2008 Average Baseline: 320 million pounds.							
	(PM 403) 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	608	Entities
	<i>Additional Information:</i> FY 2007-2008 Average Baseline: 626 entities. Results reported under this measure include: enforcement settlements, compliance incentive audits, direct compliance assistance delivered by EPA staff only, and Federal inspections that result in direct or preventative environmental benefits.							
(3) Address Environmental Problems from Waste, Toxics, and Pesticides	(PM 404) Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.					3.8	3.8	Million Pounds
	<i>Additional Information:</i> FY 2005-2008 Average Baseline: 3.8 million pounds.							
	(PM 405) Reduce, treat, or eliminate hazardous waste					6,500	6,500	Million Pounds

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
Pollution	through concluded enforcement actions.							
	<i>Additional Information:</i> FY 2008 Baseline: 6,500 million pounds.							
	(PM 406) 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	213	Entities
	<i>Additional Information:</i> FY 2007-2008 Average Baseline: 235 entities. Results reported under this measure include: enforcement settlements, compliance incentive audits, direct compliance assistance delivered by EPA staff only, and Federal inspections that result in direct or preventative environmental benefits.							
(4) Criminal Enforcement	(PM 407) Percent of recidivism.					<1	<1	Percent
	<i>Additional Information:</i> FY 1998-2009 Average Baseline: <1 percent.							
	(PM 408) Percent of closed cases with criminal enforcement consequences (indictment, conviction, fine, or penalty).					33	33	Percent
	<i>Additional Information:</i> FY 2006-2008 Average Baseline: 33 percent.							

Objective - 2 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Prevent Pollution and Promote Environmental Stewardship	(PM 262) Gallons of water reduced by P2 program participants.	1.64 B	21.18 B	1.79 B	Data Avail 10/2010	26.2 B	24.9 B	Gallons
	<i>Additional Information:</i> In 2006, the P2 program conserved 4.37 billion gallons of water.							
	(PM 263) Business, institutional and government costs reduced by P2 program participants.	45.9 M	227.2 M	130 M	Data Avail 10/2010	1,060 M	1,550 M	Dollars Saved
	<i>Additional Information:</i> In 2006, the P2 program saved businesses, institutions, and governments \$632 million dollars.							

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(PM 264) Pounds of hazardous materials reduced by P2 program participants.	429 M	469.8 M	494 M	Data Avail 10/2010	1,625 M	1,880 M	Pounds	
<i>Additional Information:</i> In 2006, the Pollution Prevention program reduced 960 Million Pounds of hazardous materials.								
(PM 297) Metric Tons of Carbon Dioxide Equivalent (MTCO2e) reduced, conserved, or offset by Pollution Prevention (P2) program participants.			2 M	Data Avail 10/2010	5.9 M	11.6 M	MTCO2e	
<i>Additional Information:</i> In 2006, the Pollution Prevention Program reduced, conserved, or offset 1.53 Million metric tons of Co2 equivalent.								
(PM PB5) Quantity of priority chemicals reduced from all phases of the manufacturing lifecycle through source reduction and/or recycling.	1.0 M	5.70	1.0	7.05	0.75	0.75	Pounds	
<i>Additional Information:</i> The National Partnership for Environmental Priorities (NPEP) program reduced approximately 7.05 million pounds of priority chemicals during FY 2009. NPEP now has over 260 partners, including many federal and state facilities, who have removed more than nearly 16.3 million pounds of priority chemicals through both source reduction and recycling activities.								

Objective - 3 - 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.

Sub-Objective	Performance Measures	Performance Data						Unit	
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target		
		Target	Actual	Target	Actual				
(1) Improve Human Health and the Environment in Indian Country	(PM 5PQ) Percent of Tribes implementing federal regulatory environmental programs in Indian country (cumulative).	6	14.16	7	12.6	14	18	Percent Tribes	
	<i>Additional Information:</i> There are 574 tribal entities that are eligible for GAP funding								
	(PM 5PR) Percent of Tribes conducting EPA approved environmental monitoring and assessment activities in Indian country (cumulative.)	21	42.31	23	40	42	45	Percent Tribes	
<i>Additional Information:</i> There are 574 tribal entities that are eligible for GAP funding									

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
	(PM 5PS) Percent of Tribes with an environmental program (cumulative).	57	57	60	64	65	67	Percent Tribes
<i>Additional Information:</i> There are 574 tribal entities that are eligible for GAP funding								

Objective - 4 - Enhance Society's Capacity for Sustainability through Science and Research: 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.

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(1) Science and Technology for Sustainability	(PM I28) 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.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM I29) Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-developed decision support tools and methodologies.	100	100	100	100	100	100	Percent
	<i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.							
	(PM I30) Percentage of planned outputs delivered in support of STS's goal that decision makers adopt	100	100	100	100	100	100	Percent

Sub-Objective	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	innovative technologies developed or verified by ORD.							
	<p><i>Additional Information:</i> At the end of the fiscal year, the program reports on its success in meeting its planned annual outputs (detailed in the program's Multi-Year Plan). The program strives to complete 100 percent of its planned outputs each year so that it can best meet EPA and other partners' needs. To ensure the ambitiousness of its annual output measures, ORD has better formalized the process for developing and modifying program outputs, including requiring that ORD programs engage partners when making modifications. Involving partners in this process helps to ensure the ambitiousness of outputs on the basis of partner utility. In addition, EPA's Board of Scientific Counselors (BOSC) periodically reviews programs' goals and outputs and determines whether they are appropriate and ambitious.</p>							
	(PM 131) Percentage of Science and Technology for Sustainability (STS) publications in "high impact" journals.	No Target Established	Biennial	35.3	35.4	No Target Established	36	Percent
	<p><i>Additional Information:</i> This measure provides a systematic way of quantifying research quality and impact by counting those articles that are published in prestigious journals. The "high impact" data are based on the percentage of all program articles that are published in prestigious journals, as determined by "Thomson's Journal Citation Reports" (JCR). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "high impact" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels such as the BOSC in their program reviews</p>							

ENABLING AND SUPPORT PROGRAMS

NPM: OFFICE OF ADMINISTRATION AND RESOURCES MANAGEMENT

	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(PM 006) Percent of GS employees hired within 80 calendar days.							60	Percent
<i>Additional Information:</i> In FY 2008, OPM issued an 80-day hiring model for the GS schedule employees. This 80-day hiring measure will better focus hiring improvements needed from an applicant's, managers' and HR staffs' perspective and drive Agency-wide change. The Agency established a baseline of 58 percent in FY08.								
(PM 098) Cumulative percentage reduction in energy consumption.	9	13	12	18	15	18		Percent
<i>Additional Information:</i> On January 24, 2007, the President signed Executive Order: Strengthening Federal Environment, Energy, and Transportation Management, requiring all Federal Agencies to reduce its Green House Gas intensity and its energy use by 3 percent annually through FY 2015. For the Agency's 29 reporting facilities, the FY 2003 energy consumption of British Thermal Units (BTUs) per square foot is 346,518 BTUs per square foot.								

NPM: OFFICE OF ENVIRONMENTAL INFORMATION

	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010 Target	FY 2011 Target	
		Target	Actual	Target	Actual			
(PM 052) Number of major EPA environmental systems that use the CDX electronic requirements enabling faster receipt, processing, and quality checking of data.	45	48	50	55	60	67		Systems
<i>Additional Information:</i> Zero. The Central Data Exchange program began in FY 2001. Prior to that there were no data flows using CDX.								
(PM 053) 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	59	60	59	65	65		Users
<i>Additional Information:</i> Zero. The Central Data Exchange program began in FY 2001. Prior to that there were no nodes for states and tribes.								

	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	(PM 054) Number of users from states, tribes, laboratories, and others that choose CDX to report environmental data electronically to EPA.	100,000	127,575	130,000	184,109	195,000	205,000	Users
<i>Additional Information:</i> Zero. The Central Data Exchange program began in FY 2001. Prior to that there were no users.								
	(PM 408) Percent of Federal Information Security Management Act reportable systems that are certified and accredited.	100	100	100	100	100	100	Percent
<i>Additional Information:</i> FISMA assigns specific responsibilities to Federal agencies and National Institute of Standards and Technology (NIST) to strengthen information system security. The continued goal, as required by FISMA, is for the Agency to achieve a continuous 100 percent compliance status with Certification and Accreditation (C&A) of all reportable systems.								

NPM: INSPECTOR GENERAL

	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	(PM 35A) Environmental and business actions taken for improved performance or risk reduction.	334	463	318	272	334	334	Actions
<i>Additional Information:</i> In FY 2009 the OIG established a revised baseline of 444 environmental and business actions taken for improved performance or risk reduction. The baseline was adjusted to reflect an average of the actual reported results for the period FY 2006-2008. The baseline in actions taken has increased as a subsequent time lag response to both the previous years' recommendations and an OIG concentrated effort to identify unimplemented recommendations for actions by EPA. *The program which this measure supports received funds from ARRA. The additional incremental results expected from ARRA funds are noted in its FY 2010 and FY 2011 Target.								
	(PM 35B) Environmental and business recommendations or risks identified for corrective action.	971	624	903	983	903	903	Recommendations
<i>Additional Information:</i> In FY 2009 the OIG established a revised baseline of 865 environmental and business recommendations or risks identified for corrective actions. The baseline was adjusted to reflect an average of the actual reported results for the period FY 2006-2008. The baseline has generally decreased to reflect the transfer of DCAA audit oversight from the OIG directly to the EPA, and a significant gap between the OIG ceiling and actual staffing levels. *The program which this measure supports received funds from ARRA. The additional incremental results expected from ARRA funds are noted in its FY 2010 and FY 2011 Target.								

	Performance Measures	Performance Data						Unit
		FY 2008		FY 2009		FY 2010	FY 2011	
		Target	Actual	Target	Actual	Target	Target	
	(PM 35C) Return on the annual dollar investment, as a percentage of the OIG budget, from audits and investigations.	150	186	120	150	120	120	Percent
	<i>Additional Information:</i> In FY 2009 the OIG established a revised baseline of 176 percent in potential dollar return on investment as a percentage of OIG budget from identified opportunities for savings, questioned costs, fines, recoveries and settlements. The baseline was adjusted to reflect an average of the actual reported results for the period FY 2006-2008. The baseline has generally decreased to reflect the transfer of DCAA audit oversight from the OIG directly to the EPA, and a significant gap between the OIG ceiling and actual staffing levels.							
	(PM 35D) Criminal, civil, administrative, and fraud prevention actions.	80	84	80	95	75	80	Actions
						*ARRA:3	*ARRA:8	
	<i>Additional Information:</i> In FY 2009 the OIG established a revised baseline of 80 criminal, civil and administrative actions, which has remained constant over time. *The program which this measure supports received funds from ARRA. The additional incremental results expected from ARRA funds are noted in its FY 2010 and FY 2011 Target.							

PERFORMANCE MEASURES SUPPLEMENTAL TABLE

Assessment Measures	Year Data Available
Goal 1: Clean Air and Global Climate Change	
<i>Long-Term Performance Measures</i>	
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 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.	FY 2013
Utility of ORD's research for reducing uncertainty in the science that supports standard-setting and air quality management decisions.	FY 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
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 2014
Sulfur dioxide emissions from electric power generation sources.	FY 2014
Percentage of program outputs appearing in the Office of Air and Radiation's National Ambient Air Quality Standard Staff Paper.	FY 2012
Percent progress toward completion of a hierarchy of air pollutant sources based on the risk they pose to human health. (Research)	UD
<i>Efficiency Performance Measures</i>	
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 2010
Population covered by Radiation Protection Program monitors per million dollars invested.	FY 2010
Average time of availability of quality assured ambient radiation air monitoring data during an emergency.	FY 2010
Total federal dollars spent per school joining the SunWise program.	FY 2010
Tons of greenhouse gas emissions (MMTCE) prevented per societal dollar in the Building sector.	FY 2014

Assessment Measures	Year Data Available
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 2010
Cumulative percent reduction in the number of days to process State Implementation Plan revisions, weighted by complexity.	FY 2010
Total cost (public and private) per future premature lung cancer death prevented through lowered radon exposure.	FY 2012
Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP.	FY 2010
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 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.	UD
Goal 2: Clean and Safe Water	
<i>Long-Term Performance Measures</i>	
Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal.	FY 2014
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 2014
Number of baseline monitoring stations showing improved water quality in tribal waters.	FY 2012
Number of waterbodies identified by States (in 2000 or subsequent years) as being primarily NPS-impaired that are partially or fully restored.	FY 2012

Assessment Measures	Year Data Available
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
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 public 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 2013
Usefulness of ORD’s characterization methodologies, data, and tools by EPA’s Office of Water and other key stakeholders in developing health risk assessments, producing regulatory decisions, implementing new and revised rules, and achieving simultaneous compliance under the Safe Drinking Water Act.	FY 2013
<i>Efficiency Performance Measures</i>	
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 provided.	FY 2012
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
Percent variance from planned cost and schedule.	UD
Goal 3: Land Preservation and Restoration	
<i>Long-Term Performance Measures</i>	
Acres of land ready for re-use at Superfund sites.	UD

Assessment Measures	Year Data Available
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 PRP-lead removal actions completed under EPA oversight.	FY 2014
<i>Efficiency Performance Measures</i>	
Cleanups complete (3-year rolling average) per total cleanup dollars.	UD
Number of annual confirmed UST releases per federal, state and territorial costs.	UD
Human Exposure avoided per million dollars spent on fund-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
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.	2012
Goal 4: Healthy Communities and Ecosystems	
<i>Long-Term Performance Measures</i>	
% 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 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 2013
Acres protected or restored in NEP study areas.	FY 2014
Assessed or cleaned Brownfields properties redeveloped.	UD
Average cost and average time to produce or update an Endangered Species Bulletin.	FY 2011
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

Assessment Measures	Year Data Available
Cumulative number of chemicals for which proposed values for Acute Exposure Guidelines Levels (AEGL) have been developed.	FY2011
Cumulative reduction in the production adjusted risk based score of releases and transfers of toxic chemicals from manufacturing facilities.	FY2011
Cumulative reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities.	FY2011
Determination of the extent of the impact of endocrine disruptors on humans, wildlife, and the environment to better inform the federal and scientific communities.	UD
Number of Beneficial Use Impairments removed within Areas of Concern.	FY 2014
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 urban watersheds that do not exceed EPA aquatic life benchmarks for two key pesticides of concern.	FY 2014
Percent of agricultural watersheds that do not exceed EPA aquatic life benchmarks for two key pesticides of concern.	FY2010, 2014
Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment.	FY2011
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.	FY 2012
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 achieve positive environmental outcomes.	FY 2012
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.	FY 2012
Percentage of regulatory decisions in which decision-makers used HHRA peer-reviewed health assessments.	FY 2012
Utility of ORD's methods, model, and data for risk assessors and risk managers to characterize aggregate and cumulative risk in order to manage risk of humans exposed to multiple environmental stressors.	FY 2012
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 2013

Assessment Measures	Year Data Available
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 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 2012
Utility of ORD's methods, models, and data for OPPTS and other organizations to make decisions related to products of biotechnology.	FY 2015
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 2015
Utility of ORD's methods, models, and data for risk assessors and risk managers to characterize and provide adequate protection for susceptible subpopulations.	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 2015
Utility of ORD's priority health hazard assessments for Agency, state and local risk assessors.	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 2012
Utility of ORD Integrated Science Assessments (ISAs) for providing best available scientific information on identifiable effects resulting from exposure to criteria pollutants.	FY 2012
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 2011
<i>Annual Performance Measures</i>	
Percent progress toward completion of a framework linking global change to air quality.	UD

Assessment Measures	Year Data Available
<i>Efficiency Performance Measures</i>	
Acres of brownfields made ready for reuse per million dollars.	UD
Additional people served per million dollars (US and Mexico federal expenditures).	FY 2012
Percent variance from planned cost and schedule (Ecological Research).	UD
Percent variance from planned cost and schedule (Global Research).	UD
Percent variance from planned cost and schedule (Pesticides and Toxics Research).	UD
Average cost to produce assessment documents (Human Health Risk Assessment).	UD
Contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program.	UD
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).	UD
Goal 5: Compliance and Environmental Stewardship	
<i>Long-Term Performance Measures</i>	
Pounds of pollution reduced, treated, or eliminated.	UD
Cumulative business, institutional and government costs reduced by P2 program participants.	FY2011, 2014
Cumulative pounds of hazardous materials reduced by P2 program participants.	FY2011, 2014
Cumulative gallons of water reduced by Pollution Prevention (P2) program participants.	FY2011, 2014
Cumulative Metric Tons of Carbon Dioxide Equivalent (MTCO _{2e}) 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 2015
Utility of ORD-developed decision support tools and methodologies for promoting environmental stewardship and sustainable environmental management practices.	FY 2015
Utility of innovative technologies developed or verified by ORD for solving environmental problems and contributing to sustainable outcomes.	FY 2015

Assessment Measures	Year Data Available
Reduction in recidivism. (criminal enforcement)	UD
<i>Annual Performance Measures</i>	
Percent of compliance actions taken as a result of inspection/enforcement. (pest. enforcement)	UD
Percent of violators committing subsequent violations. (pest. enforcement)	UD
Reduction in recidivism (criminal enforcement).	UD
Severity of the crimes investigated (as measured by the percent of open high impacts cases (criminal enforcement).	UD
<i>Efficiency Performance Measures</i>	
Number of enforcement actions taken (Federal + State) per million dollars of cost (Federal + State). (pest enforcement)	UD
Percent variance from planned cost and schedule (Sustainability Research).	UD
Ratio of number of students that have improved environmental knowledge per total dollar expended, reported as dollar per student.	UD

VERIFICATION AND VALIDATION

The data verification and validation has been updated to reflect changes in performance measures for FY 2010.

The complete FY 2011 data verification and validation is available at:

<http://epa.gov/ocfo/budget/2011/2011cj.htm>

**Environmental Protection Agency
2011 Annual Performance Plan and Congressional Justification**

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COORDINATION WITH OTHER FEDERAL AGENCIES

Environmental Programs

Goal 1- Clean Air and Global Climate Change

Objective: Healthier Outdoor Air

The Environmental Protection Agency (EPA) cooperates with other federal, state, Tribal, and local agencies in achieving goals related to ground level ozone and particulate matter (PM). EPA continues to work closely with the U.S. Department of Agriculture (USDA) 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), and U.S. Forest Service 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 efforts 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 work to further distribute NASA satellite products and National Oceanic and Atmospheric Administration (NOAA) air quality forecast products to Regions, states, local agencies, and Tribes to provide a better understanding of air quality on a day-to-day basis and to assist with PM forecasting. EPA will also work with NASA to develop a better understanding of PM formation using satellite data. EPA works with the Department of the Army on advancing emission measurement technology and with NOAA for meteorological support for our modeling and monitoring efforts. EPA collects realtime ozone and PM measurements from State and local agencies, which are then sent to NOAA to both feed the Air Quality Forecast model and offer initial verification of its results.

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 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) 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, and other programs targeted to reduce air toxics from mobile sources are coordinated with DOT. (These partnerships can involve policy assessments and toxic emission reduction strategies in different regions of the country.) EPA is also working with the National Highway Transportation Administration and the USDA on greenhouse gas transportation rules. EPA is working with DOE, 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 Department of Defense. This partnership will provide for the joint undertaking of air-monitoring/emission factor research and regulatory implementation.

To reduce air toxics emissions that may inadvertently increase worker exposure, 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, the U.S. Fish and Wildlife Service (USFWS), the National Park Service, the U.S. Geological Survey (USGS), the USDA, and the U.S. Forest Service.

EPA 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. EPA is a partner with the Centers for Disease Control and Prevention in the development of the National Environmental Public Health Tracking Network, providing air quality indicators as well as air pollution health effects expertise.

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 in 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 complements EPA's programs on children's health, Trade and the Environment, and trans-boundary air pollution. In addition, EPA partners with other organizations worldwide, including the United Nations Environment Programme, the European Union, the Organization for Economic Development and Cooperation, the United Nations Economic Commission for Europe, the North American Commission for Environmental Cooperation, the World Bank, the Asian Development Bank, the

Clean Air Initiative for Asian Cities, and our air quality colleagues in Canada, Mexico, Europe, China, and Japan.

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 works very closely with the Department of State and other Federal agencies in international negotiations among Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer and in developing the implementing regulations. While the environmental goal of the Montreal Protocol is to protect the ozone layer, the ozone depleting substances it controls are also significant greenhouse gases. Therefore, this work also protects the Earth's climate system. According to a 2007 study published in the *Proceedings of the National Academy of Sciences*¹, chemical controls implemented under the Montreal Protocol will – by 2010 - have delayed the onset of serious climate effects by a decade. EPA works on several multinational environmental agreements to simultaneously protect the ozone layer and climate system, including working closely with the Department of State and other Federal agencies, including OMB, OSTP, CEQ, USDA, FDA, Commerce, NOAA, and NASA.

¹ Guus J. M. Velders, Stephen O. Andersen, John S. Daniel, David W. Fahey, and Mack McFarland; *The Importance of the Montreal Protocol in Protecting Climate*; PNAS 2007 104:4814-4819; published online before print March 8, 2007; doi:10.1073/pnas.0610328104.

EPA works with other agencies, including the Office of the United States Trade Representative and Department of Commerce, to analyze potential trade implications in stratospheric protection regulations that affect imports and exports. 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 has continued discussions with DOD to assist in the effective transition from ODS and high-GWP substitutes to a suite of substitutes with lower GWPs.

EPA works 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 also consults with USDA on domestic methyl bromide needs.

EPA coordinates closely with Department of State and 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's SunWise program works with the National Weather Service (NWS) to coordinate the UV Index, a forecast of the next day's ultraviolet radiation levels, which helps people determine appropriate sun-protective behaviors. The SunWise program also collaborates with the CDC when developing new sun safety and skin cancer prevention resources, including a shade planning guide, state-specific skin cancer fact sheets, and other school- and community-based resources. SunWise collaborates with state and local governments through the SunWise Communities program. SunWise is a successful environmental and health education program that teaches children and their caregivers how to protect themselves from overexposure to the sun through the use of classroom-, school-, and community-based components. More than 22,000 schools have received SunWise teaching materials—reaching more than one million students over the life of the program. The most recent study of the program, conducted in 2006–2007, found that for every dollar invested in SunWise, between approximately \$2 and \$4 in medical care costs and productivity losses are saved and concluded that from a cost/benefit and cost-effectiveness perspective, it is worthwhile to educate children about sun safety.²

EPA coordinates with NASA and NOAA to monitor the state of the stratospheric ozone layer and to collect and analyze UV data, including science assessments that help the public understand what the world may have looked like without the Montreal Protocol and its amendments³. EPA works with NASA on assessing essential uses and other exemptions for

² Jessica W. Kyle, James K. Hammitt, Henry W. Lim, Alan C. Geller, Luke H. Hall-Jordan, Edward W. Maibach, Edward C. De Fabo, Mark C. Wagner; "[Economic Evaluation of the U.S. Environmental Protection Agency's SunWise Program: Sun Protection Education for Young Children](#)." *Pediatrics*, Vol. 121 No. 5 May 2008, pp. e1074-e1084

³ *The Ozone Layer: Ozone Depletion, Recovery in a Changing Climate, and the "World Avoided;"* Findings and Summary of the U.S. Climate Change Science Program Synthesis and Assessment Product 2.4; November 2008.

critical shuttle and rocket needs, as well as effects of direct emissions of high-speed aircraft flying in the stratosphere.

EPA works with DOE on GreenChill⁴ and Responsible Appliance Disposal (RAD)⁵ efforts. The GreenChill Advanced Refrigeration Partnership is an EPA cooperative alliance with the supermarket industry and other stakeholders to promote advanced technologies, strategies, and practices that reduce refrigerant charges and emissions of ozone-depleting substances and greenhouse gases. EPA's RAD Program is a partnership program that protects the ozone layer and reduces emissions of greenhouse gases through the recovery of ozone-depleting chemicals from old refrigerators, freezers, air conditioners, and dehumidifiers.

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. 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 its regulations. EPA also works with the Department of Transportation (DOT) on initiatives to promote the use of non-nuclear density gauges for highway paving. EPA is also working with tribes to locate and clean up radioactive wastes produced from uranium mining that contaminate tribal water resources with radionuclides and heavy metals, while identifying and providing new sources of clean drinking water for these at-risk communities.. EPA also works with NRC and DOE on the development of state-of-the-art tracking systems for radioactive sources in U.S. commerce and the prevention of radioactive contaminated metals and products from entering the United States.

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.

EPA works closely with other Federal agencies when developing radiation policy guidance under its Federal Guidance authority. This authority was transferred to EPA from the Federal Radiation Council in 1970 and tasks the Administrator with making radiation protection recommendations to the President. When signed by the President, Federal Guidance recommendations are addressed to all Federal agencies and are published in the *Federal Register*. Risk managers at all levels of government use this information to assess health risks from radiation exposure and to determine appropriate levels for clean-up of radioactively contaminated sites. EPA's radiation science is widely relied on and is the objective foundation

⁴ For more information, see: www.epa.gov/greenchill

⁵ For more information, see: www.epa.gov/ozone/partnerships/rad

for EPA, other Federal agencies and states to develop radiation risk management policy, standards and guidance.

EPA is a charter member and co-chairs the Interagency Steering Committee on Radiation Standards (ISCORS). ISCORS was created at the direction of Congress. Through quarterly meetings and the activities of its six subcommittees, member agencies are kept informed of cross-cutting issues related to radiation protection, radioactive waste management, and emergency preparedness and response. ISCORS also helps coordinate a U.S. response to radiation-related issues internationally, such as the recent proposed revision of the Basic Safety Standards by the International Atomic Energy Agency.

Promoting international assistance, EPA serves as an expert member of the International Atomic Energy Agency's (IAEA) 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 Treasury Department will administer proposed tax incentives for specific investments that will reduce emissions. EPA is working with DOE to demonstrate technologies that oxidize ventilation air methane from coal mines. EPA is broadening its public information transportation choices campaign as a joint effort with DOT. EPA coordinates with each of the above-mentioned agencies to ensure that our programs are complementary and in no way duplicative.

This coordination is evident in work recently completed by an interagency task force, including representatives from the Department of State, EPA, DOE, USDA, DOT, Office of Management and Budget (OMB), Department of Commerce, USGCRP, NOAA, NASA, and the DoD, to prepare the Third National Communication to the Secretariat as required under the Framework Convention on Climate Change (FCCC). The FCCC was ratified by the United States Senate in 1992. A portion of the Third National Communication describes policies and measures (such as ENERGY STAR and EPA's Clean Automotive Technology initiative) undertaken by the U.S. to reduce greenhouse gas emissions, implementation status of the policies and measures, and their actual and projected benefits. One result of this interagency review process has been a

refinement of future goals for these policies and measures which were communicated to the Secretariat of the FCCC in 2002. The “U.S. Climate Action Report 2002: Third National Communication of the United States of America under the United Nations Framework Convention on Climate Change” is available at: <http://unfccc.int/resource/docs/natc/usnc3.pdf> .

EPA works primarily with the Department of State, USAID and DOE as well as with regional organizations in implementing climate-related programs and projects. In addition, EPA partners with others worldwide, including international organizations such as the United Nations Environment Programme, the United Nations Development Programme, the International Energy Agency, the OECD, the World Bank, the Asian Development Bank, and our colleagues in Canada, Mexico, Europe and Japan.

Objective: Enhance Science and Research

EPA coordinates its air quality research with other Federal agencies through the Subcommittee on Air Quality Research⁶ 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 plan⁷ for Federal research on the health and environmental effects, exposures, atmospheric processes, source characterization and control of fine airborne particulate matter. The Agency is also a charter member of NARSTO,⁸ an international public-private partnership established in 1995 to improve management of air quality across North America. EPA coordinates specific research projects with other Federal agencies where appropriate and supports air-related research at universities and nonprofit organizations through its Science to Achieve Results (STAR) research grants program.

Goal 2- Clean and Safe Water

Objective: Protect Human Health

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.

⁶ For more information, see <<http://www.al.noaa.gov/AORS/>>.

⁷ For more information, see <<http://www.al.noaa.gov/AORS/reports/srppm.html>>.

⁸ For more information, see <<http://www.narsto.org/>>.

Geologic Sequestration

EPA coordinates with federal agencies to plan and obtain research-related data, to coordinate regulatory programs, and to coordinate implementation of regulations to protect underground sources of drinking water during geologic sequestration (GS) activities. EPA works with the Department of Energy (DOE) to plan research on monitoring, modeling, verification, public participation, and other topics related to DOE-sponsored GS partnership programs. EPA also coordinates with USGS, IRS, DOI, and USDOT to ensure that SDWA regulations for GS sites are appropriately coordinated with efforts to map geologic sequestration capacity, provide tax incentives for CO₂ sequestration, and manage the movement of CO₂ from capture facilities to GS sites.

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.

Tribal Access Coordination

In 2003 EPA and its Federal partners in USDA, HUD, HHS, and DOI set a very ambitious goal to reduce the number of homes without access to safe drinking water by 50% by 2015. 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.

Source Water Protection

EPA is coordinating with USDA and Department of Education to develop educational materials for future farmers on reducing contamination of sources of drinking water in rural areas.

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).

Collaboration with Centers for Disease Control (CDC)

CDC is building state capacity by directly assisting state health departments develop skills and tools to improve waterborne disease investigation and prevention. EPA is assisting CDC by

providing technical input regarding drinking water issues. The two agencies are also investigating the health risks associated with contaminant problems in drinking water distribution systems. EPA and CDC regularly share expertise and information on drinking water related health effects, risk factors, and research.

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

Urban Waters

In this new effort, EPA will build on existing interagency collaborations (HUD, DOT, NOAA, USDA) and develop new federal partnerships to advance urban waters goals of: helping communities establish and maintain safe and equitable public access to their urban waterways; empowering and supporting communities in revitalizing their urban waters and the surrounding land; and linking urban water restoration to other community priorities such as employment, education, economic revitalization, housing, transportation, health, safety and quality of life. To meet these goals, EPA will partner with other agencies to coordinate authorities, resources, expertise and local support.

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 29.6% of the land in the United States and administers over 90% of these public lands through four agencies: Forest Service (FS), Fish & Wildlife Service (FWS), National Park Service (NPS) and Bureau of Land Management (BLM). In managing these extensive public lands, federal agencies have a substantial influence on the protection and restoration of many waters of the US. Land management agency focus on water issues has increased significantly, with the FS, FWS, and BLM all initiating new water quality and watershed protection efforts. EPA has been conducting joint national assessments with these agencies to enhance watershed protection and quantify restoration needs on federal lands. National assessments of FWS and FS properties have already documented the extent and type of impaired waters on these agencies' lands, developed GIS databases, reported national summary statistics, and developed interactive reference products (on any scale, local to national), accessible to staff throughout the agencies. Similar joint assessments are planned with the other major federal land management agencies. These assessments have already influenced the agencies in positive ways. The FS and the FWS have GPRA-related performance measures that involve impaired waters, now coordinated with the same EPA baseline. The FS used their national assessment data to institute improvements in a national monitoring and BMP training program. Also, under an MOA between EPA and FS, numerous aquatic restoration projects have been jointly funded and carried out. The FWS is using their national assessment data to develop a \$10M – 20M out-year budget initiative concerning water conservation, quality, and quantity monitoring and management in the National Wildlife Refuge System, and also using the assessment in National Fish Hatcheries System planning. Further, EPA assessments and datasets made significant contributions to the government-wide National Fish Habitat Action Plan (NFHAP) 2010 national assessment of fish habitat condition.

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.

Marine Pollution Prevention

EPA works 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 Cruise Lines International Association 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. EPA will also continue to participate in site visits and the review of clean up plans for individual Navy and Maritime Administration vessel-to-reef projects.

EPA works closely with a number of other Federal agencies to prepare reports as well as respond to reports to Congress. More specifically, EPA works/and will continue to 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. EPA also will continue to participate on an interagency working group tasked to review and make recommendations in a report to Congress on best management practices for the storage and disposal of obsolete vessels owned or operated by the Federal Government.

EPA also participates on the Committee on Marine Transportation System (CMTS) regarding environmental issues such as dredging and ship channel configuration, as well as reducing pollutant sources during operations and cargo handling. The CMTS is a cabinet-level committee and has an established partnership amongst 18 different Federal agencies.

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 operational discharges from vessels. 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 of 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.⁹ 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 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.

⁹ http://www.whitehouse.gov/the_press_office/Memorandum-for-the-Heads-of-Executive-Departments-and-Agencies-3-9-09/

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 and NIEHS, in providing numerous Superfund related services in order to accomplish the program’s mission. In FY 2011, 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, DOE, and other federal agencies 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 in 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, OECA 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, also known as Federal Facility Agreements or FFAs, which provide enforceable schedules for the progression of the entire cleanup; 2) these FFAs are monitored for compliance; and 3) Federal sites that are transferred to new owners are transferred in an environmentally responsible manner. It is this program's responsibility to ensure that Federal agencies, by law, comply with Superfund cleanup

obligations “in the same manner and to the same extent” as private entities. 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 2011, 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 MOU¹⁰ 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.

¹⁰ For more information please go to: Interagency Steering Committee on Multimedia Environmental Models MOU, <http://www.iscmem.org/Memorandum.htm>

Goal 4-Healthy Communities and Ecosystems

Objective: Chemical and Pesticide Risks

Coordination with state lead agencies and with the USDA provides added impetus to the implementation of the Certification and Training program. States also provide essential activities in developing and implementing the Endangered Species and Worker Protection programs and are involved in numerous special projects and investigations, including emergency response efforts. The Regions provide technical guidance and assistance to the states and Tribes in the implementation of all pesticide program activities.

EPA uses a range of outreach and coordination approaches for pesticide users, agencies implementing various pesticide programs and projects, and the general public. Outreach and coordination activities are essential to effective implementation of regulatory decisions. In addition coordination activities protect workers and endangered species, provide training for pesticide applicators, promote integrated pest management and environmental stewardship, and support for compliance through EPA's Regional programs and those of the states and Tribes.

In addition to the training that EPA provides to farm workers and restricted use pesticide applicators, EPA works with the State Cooperative Extension Services designing and providing specialized training for various groups. Such training includes instructing private applicators on the proper use of personal protective equipment and application equipment calibration, handling spill and injury situations, farm family safety, preventing pesticide spray drift, and pesticide and container disposal. Other specialized training is provided to public works employees on grounds maintenance, to pesticide control operators on proper insect identification, and on weed control for agribusiness.

EPA coordinates with and uses information from a variety of Federal, state and international organizations and agencies in our efforts to protect the safety of America's health and environment from hazardous or higher risk pesticides. In May 1991, the USDA implemented the Pesticide Data Program (PDP) to collect objective and statistically reliable data on pesticide residues on food commodities. This action was in response to public concern about the effects of pesticides on human health and environmental quality. EPA uses PDP data to improve dietary risk assessment to support the registration of pesticides for minor crop uses.

PDP is critical to implementing the Food Quality Protection Act (FQPA). The system provides improved data collection of pesticide residues, standardized analytical and reporting methods, and sampling of foods most likely consumed by infants and children. PDP sampling, residue, testing and data reporting are coordinated by the Agricultural Marketing Service using cooperative agreements with ten participating states representing all regions of the country. PDP serves as a showcase for Federal-state cooperation on pesticide and food safety issues.

FQPA requires EPA to consult with other government agencies on major decisions. EPA, USDA and FDA work closely together using both a MOU and working committees to deal with a variety of issues that affect the involved agencies' missions. For example, agencies work together on residue testing programs and on enforcement actions that involve pesticide residues

on food, and we coordinate our review of antimicrobial pesticides. The Agency coordinates with USDA/ARS in promotion and communication of resistance management strategies. Additionally, we participate actively in the Federal Interagency Committee on Invasive Animals and Pathogens (ITAP) which includes members from USDA, DOL, DoD, DHS and CDC to coordinate planning and technical advice among Federal entities involved in invasive species research, control and management.

While EPA is responsible for making registration and tolerance decisions, the Agency relies on others to carry out some of the enforcement activities. Registration-related requirements under FIFRA are enforced by the states. The HSS/FDA enforces tolerances for most foods and the USDA/Food Safety and Inspection Service enforces tolerances for meat, poultry and some egg products.

Internationally, the Agency collaborates with the Intergovernmental Forum on Chemical Safety (IFCS), the CODEX Alimentarius Commission, the North American Commission on Environmental Cooperation (CEC), the Organization for Economic Cooperation and Development (OECD) and NAFTA Commission. These activities serve to coordinate policies, harmonize guidelines, share information, correct deficiencies, build other nations' capacity to reduce risk, develop strategies to deal with potentially harmful pesticides and develop greater confidence in the safety of the food supply.

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.

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."

EPA has partnered with NIEHS since 1998 to fund over ten Children's Environmental Health and Disease Prevention Centers nation wide through its STAR grants program. A 2009 RFA will fund the next generation of these Centers, some of which will continue to work with existing cohorts of children and some of which will explore new concepts in children's health as new "formative" centers.

EPA is an active partner in the National Children's Study (NCS), and has been since its inception in 2000. NCS is an interagency study funded by NIH and conducted in partnership with CDC and ATSDR. EPA is represented on the Interagency Coordinating Committee (3 members from ORD and one member from OCHPEE) and provides advice and expertise on a number of NCS committees and workgroups. As the pilot phase, initiated in 2009, is evaluated, opportunities for further collaborative and adjunct studies will be explored.

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.

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.

The U.S.-Mexico Border 2012 Program represents a successful joint effort between the U.S. and Mexican governments in working with the 10 Border States and local communities to improve the region's environmental health, consistent with the principles of sustainable development. 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

EPA will continue its work in partnership with other federal agencies to address the environmental and public health issues facing communities with environmental justice concerns. In 2011, the Agency 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. EPA and its federal partners are 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 for environmental justice pursuant to Executive Order 12898, EPA shares its knowledge and 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.

National Ocean Policy

EPA will continue to participate in the implementation of the objectives laid out by the Interagency Oceans Policy Task Force, which was established by President Obama on June 12, 2009. The Task Force was led by the White House Council on Environmental Quality and consisted of 24 senior-level officials from Administration agencies, departments, and offices.

The new National Oceans Policy and the Coastal and Marine Spatial Planning Framework will help EPA combine its resources with those of other federal agencies, such as NOAA, Department of Interior, USDA and the Army Corps of Engineers, to better protect coastal and marine ecosystems, and to achieve the goal for clean and safe water in areas such as the Gulf of Mexico, the Great Lakes, the Chesapeake Bay, and the 28 estuaries that make up the National Estuary Program.

Wetlands

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 Force¹¹ 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

¹¹ 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.

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.

Chesapeake Bay

The Chesapeake Bay Program is a partnership of several federal agencies, states, local governments, nongovernmental organizations, academic institutions, and other interested stakeholders. Only through the coordinated efforts of all of these entities will the preservation and restoration of the Chesapeake Bay be achieved. Recognizing this need for coordination, office directors from many of the federal agencies that form the Chesapeake Bay Program meet on a regular basis. This group, which is chaired by EPA, includes office directors from:

- 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 (USGS)
- U.S. Forest Service
- National Park Service
- U.S. Navy (representing Department of Defense)

EPA is also the lead agency representing the federal government on the Chesapeake Executive Council, which oversees the policy direction of the Chesapeake Bay Program. In addition to the EPA Administrator, 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 the Secretary of Agriculture.

President Obama's May 2009 Executive Order (EO) on Chesapeake Bay Protection and Restoration has brought the federal agencies interested in the Bay and its watershed to a new level of interagency coordination and cooperation. The EO established the Federal Leadership Committee (FLC) for the Chesapeake Bay, which is chaired by EPA and includes the U.S. Departments of Agriculture (USDA), Commerce, Defense, Homeland Security, the Interior, and Transportation. Working together, the agencies listed above and the additional FLC agencies produced seven reports on specific Bay and watershed issues for FLC consideration. The reports were released in draft on September 9, 2009, and as revised versions on November 24, 2009. The FLC released a draft coordinated implementation strategy on November 9, 2009. A final version of the strategy will be released by May 12, 2010.

Many of the initiatives resulting from the EO will result in increased or improved federal coordination. The development of a new accountability and reporting system, for example, depends on explicit coordination and data sharing from all of the federal agencies listed above, as well as numerous state and local agencies. Revitalized efforts to improve and account for agricultural best management practices depend upon cooperation between EPA, USDA, USGS, and others.

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. In response to the U.S. Ocean Action Plan, thirteen Federal agencies formed a Regional Partnership under the leadership of the U.S. Environmental Protection Agency (EPA), the National Oceanic and Atmospheric Administration (NOAA), and the U.S. Department of Interior to provide support to the Gulf of Mexico Alliance, a partnership of the five Gulf states. This Federal Workgroup includes:

- Council on Environmental Quality
- National Aeronautics and Space Administration
- National Science Foundation
- U. S. Army Corps of Engineers
- U.S. Department of Agriculture
- U.S. Department of Commerce, NOAA
- U.S. Department of Defense
- U.S. Department of Energy
- U.S. Department of Interior
- U.S. Department of Health and Human Services
- U.S. Department of State
- U.S. Department of Transportation
- U.S. Environmental Protection Agency

Through a collaborative approach and integration of federal efforts, the Gulf of Mexico Alliance Governors' Action Plan I (2006-2009) and Action Plan II (2009-2014) have identified specific actions needed to improve the health of the Gulf coastal region and addressed priority issues

facing the Gulf with scientific and technical experts and resource managers to leverage the resources needed to support state and community actions.

Report on the Environment and assisting CDC in its Public health Surveillance efforts.

Through a collaborative approach, the priority issues of the Gulf are being addressed with scientific and technical experts and resource managers 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.¹² 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.

Goal 5-Compliance and Environmental Stewardship

Objective: Improve Compliance

The Enforcement and Compliance Assurance Program coordinates closely with DOJ on all civil and criminal environmental 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

¹² For more information, see <<http://es.epa.gov/ncer/childrenscnters/>>

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 collaborates with the SBA to maintain current environmental compliance information at Business.gov, a website initiated as an e-government initiative in 2004 to help small businesses comply with government regulations. 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 USACE on wetlands issues.

Under 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. EPA's Enforcement and Compliance Assurance Program also coordinates with USDA on regulation of animal feeding operations and 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 enforcement of the TSCA lead-based paint notification requirements.

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 international, 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.

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 2011, EPA will also continue its efforts to support the *FedCenter*, the Federal Facilities Stewardship and Compliance Assistance Center (www.fedcenter.gov), which is now governed by a board of more than a dozen contributing Federal agencies.

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 2011, OECA will also work with its Regions, states and directly with a number of other Federal agencies to improve RCRA, CWA and other statutory compliance at Federal facilities, including through integrated strategies, which array the full range of Agency tools to promote compliance in an effective, efficient manner.

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 the Federal Regulatory Commission), and the Department of Defense.

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.

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 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, 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 United States Global Change Research Program (Education Interagency workgroup).

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>.

Additionally, EPA is working closely with other federal agencies as well as the Domestic Policy Council to implement President Obama's directive regarding the tribal consultation process. The President's November 5th, 2009 Memorandum directs each executive department to develop a detailed plan to implement Executive Order (EO) 13175, "Consultation and Coordination with Indian Tribal Governments," issued by President Clinton in 2000. Under EO 13175, "all departments and agencies are charged with engaging in regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and are responsible for strengthening the government-to-government relationship between the United States and Indian tribes."

EPA is working with other federal entities that deal with tribal issues to ensure that the most effective communication strategies are being used. Although approaches vary according to agency or department, there is much to be gained from working closely with other agencies throughout this process. This collaboration will not only strengthen the federal-tribal relationship, but will also strengthen the approach used to implement EPA's policies on human health and the environment in Indian country.

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, homeland security - including intelligence coordination, Congressional and intergovernmental relations, the Science Advisory Board, children's health, 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 (DOC) 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 (DOI), 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 EPA, through the Aging Initiative, is a member of the Federal Interagency Task Force on Older American Indians. The purpose of the Forum is to assist tribes funded under Title VI of the Older Americans Act. It also is a member of the Department of Health and Human Services (HHS) supported Working Group on Home Energy and Health. In May 2009, the National Energy Assistance Directors' Association convened a Working Group on Home Energy and Health. The purpose of the Working Group is to develop strategies and capacity at the state and local level to approach energy assistance as a matter of public health, including measures of home energy burden in needs assessment activities such as Healthy People 2020; facilitating more efficient and cost-effective outreach for energy assistance through new partnerships with environmental health and long-term care services organizations; demonstrating cost savings for state Medicaid programs achieved through coordination with Low Income Home Energy Assistance Program (LIHEAP) and related affordable energy programs; and strengthening the health basis for protecting low-income households against the loss of utility service for nonpayment.

The Office of Children's Health Protection (OCHP) provides leadership for cross-Agency efforts to protect children from exposure to toxins, pollution and other environmental health threats in their homes, their schools, and their communities. Children are at greater risk of harm from exposure to environmental toxins than adults because of their unique physiology and behavior patterns. The OCHP ensures that children's unique vulnerabilities are carefully considered in agency policy and regulatory development, and that children's environmental health is central in our outreach and public education activities. The Office of Children's Health Protection and Environmental Education works with other Federal departments and agencies to coordinate diverse program and research efforts to help ensure that children's environmental health is protected where they live, learn, work and play.

EPA's Office of Homeland Security (OHS) works closely with many other Federal departments and agencies to meet the goals of presidential homeland security directives and plans. These efforts include working through the Interagency Planning Committees (IPCs) and other avenues to ensure that EPA's efforts are integrated into, and can build upon, the efforts of other Federal agencies. OHS also coordinates the development of responses to inquiries from the White House, Department of Homeland Security (DHS), 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 coordination with 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 (HBCU) 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. OSBP coordinates with the Minority Business Development Agency, the Department of Veteran's Affairs, the Department of Defense (DoD),

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)

OCFO makes active contributions to standing interagency management committees, including the Chief Financial Officers Council focusing on improving resources management and accountability throughout the Federal government. OCFO 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. In addition, OCFO participates in numerous Office of Management and Budget (OMB)-led E-Gov initiatives such as the Financial Management and Budget Formulation and Execution Lines of Business, and has interagency agreements with (DoD) and USDA for processing agency payroll and travel transactions, respectively. OCFO also participates with the DOC's Bureau of Census in maintaining the Federal Assistance Awards Data System (FAADS). OCFO also coordinates appropriately with Congress and other Federal agencies, such as Department of Treasury, OMB, the Government Accountability Office (GAO), and the General Services Administration (GSA).

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;
- 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; and
- 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 GSA, and the DOC's National Institute of Standards and Technology to implement the Smart Card program.

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. The e-Rulemaking Program's award-winning *Regulations.gov* web site is a single web site where citizens can access and comment on all proposed Federal regulations. Tens of millions of individuals have used the site to find, view, and comment on proposed regulations. The e-Rulemaking Program's award-winning Federal Docket Management System (FDMS - publicly accessible at www.regulations.gov) 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 180 bureaus, and boards, 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 EPA. 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 and resources, 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 United States. 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 also will 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. At least 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 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: EPA, Export-Import Bank (EXIM), GSA, National Aeronautics and Space Administration (NASA), Nuclear Regulatory Commission (NRC), Pension Benefit Guaranty Corporation (PBGC), and the Social Security Administration (SSA)

Geospatial Information: EPA works extensively with DOI, NOAA, U.S. Geological Survey (USGS), National Aeronautics and Space Administration (NASA), the USDA, the DHS and over 20 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 emergency 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, Department of Energy (DoE), DoD, USDA, Smithsonian, National science Foundation (NSF), State, and Department of Transportation (DOT). Under the ten-year strategic plan, 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.

Chesapeake Bay Program: Operating under Executive Order No. 13508, EPA is working to help restore the Chesapeake Bay. Federal Partners in this initiative are: National Oceanic and Atmospheric Administration (NOAA); Natural Resources Conservation Service; U.S. Fish and Wildlife Service; U.S. Army Corps of Engineers; USGS; U.S. Forest Service; National Park Service; and the U.S. Navy (representing Department of Defense). The States of New York, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, Virginia, and the District of Columbia, are also participating in the effort. Using the Exchange Network (EPA's existing network facilitating data sharing among and with the states and tribes), OEI will develop a similar resource for the agencies working on the Chesapeake Bay, and will couple it with ge-positioning technologies.

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 Computer Crimes 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 DOI and USDA, 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 the Agency's response to each of the management challenges that EPA's Office of Inspector General (OIG) reported to EPA's Administrator in its April 28, 2009 memorandum, *EPA's Key Management Challenges for Fiscal Year 2009*, and the Major Management Challenges identified by the Government Accountability Office (GAO) in March 2009.

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. Addressing Emerging Climate Change Issues

Summary of Challenge: According to GAO, the federal government's approach to climate change has been ad hoc and is not well coordinated across government agencies. For example, the federal government lacks a comprehensive approach for targeting federal research dollars toward the development and deployment of low-carbon technologies. EPA, as well as other agencies, has been slow to implement recommendations.

Agency Response: Over the last year and during the first few months of the Obama Administration, EPA has taken several important actions to address climate change. Currently, EPA plays a key role in developing and implementing President Obama's ambitious climate change agenda. For instance, the Agency is participating in strategic discussions and providing technical advice and analysis on the full range of domestic climate policies and technologies. This includes cap-and-trade; transportation; energy efficiency and renewable energy; and new technologies, such as carbon capture and storage.

Additionally, EPA is taking regulatory actions to address climate change and continuing to implement its ongoing voluntary partnership programs. In October 2009, EPA issued a regulation establishing, for the first time, a nationwide mandatory greenhouse gas reporting program for large sources of greenhouse gases and fuel suppliers, which account for about 85 percent of national emissions. Reporting under this program is expected to begin in 2011. In July 2008, EPA proposed regulations under the Safe Drinking Water Act ensuring a protective regulatory framework for commercial-scale facilities that sequester carbon dioxide in geologic formations. EPA is responding to the 2007 Supreme Court decision in *Massachusetts v. EPA* and has recently issued under the Clean Air Act a finding that greenhouse gases endanger public health and welfare and that emissions from new motor vehicles contribute to that threat. EPA, in conjunction with DOT, plans to issue new greenhouse gas emission standards for light vehicles in the spring of 2010. EPA is also developing new greenhouse gas standards for heavy duty vehicles and is considering appropriate regulatory actions for other transportation sources, in response to several petitions which call for the Agency to address these sources. EPA also proposed a Renewable Fuel Standard as revised by the Energy Independent and Security Act, requiring the United States to incorporate 36 billion gallons of biofuels, including requirements for advanced and cellulosic fuels, into its fuel supply by 2022. EPA has provided extensive technical advice and economic modeling on the major climate and energy bills passed by the House and introduced in the Senate.

Recognizing that climate change cuts across many programs and offices within the Agency, senior leadership is taking steps to expand and improve communication and coordination on emerging climate change issues. Coordination mechanisms have been established among EPA offices working on climate change, including daily planning calls, regular meetings at the Deputy Administrator level, and extensive outreach across offices and with the EPA regions. These processes will ensure that the Agency receives information and input, draws effectively on its resources, and provides useful information to its stakeholders around the country. EPA has also identified two High Priority Performance Goals to improve the country's ability to measure and control GHG emissions. Specifically, EPA will ensure that data collected for the Greenhouse Gas Reporting Rule is made publically available in a timely fashion, and that they implement regulations designed to reduce GHG emissions from light duty vehicles sold in the United States starting with model year 2012.

Finally, EPA continues to deliver on all commitments under its ongoing partnership programs to reduce greenhouse gases, focused on energy efficiency, transportation, and other sectors. Experience and knowledge gained through these programs is also informing EPA's input into the broader climate policy discussion.

2. Improving Implementation of the Clean Air Act

Summary of Challenge: GAO reports that EPA faces many challenges related to implementation of the Clean Air Act, including those related to coordination with other federal agencies, analyses of health impacts from air pollution, and delays in regulating mercury and

other air toxics. EPA also faces challenges relating to numerous regulatory proposals that have been overturned or remanded by the courts.

Agency Response: Over the years, GAO has conducted various studies that identified key challenges EPA faces in implementing the Clean Air Act and made recommendations intended to enhance the effectiveness of its clean air program. The Agency has devoted substantial resources to addressing GAO's recommendations and ensuring the effective implementation of clean air programs, and it is making substantial progress. Advances include working with the Children's Health Protection Advisory Committee to ensure transparency. Additionally, the Agency is using the best possible science in its decision-making processes. The Agency is working to expand toxics monitoring in affected communities, quantifying and understanding the sources of uncertainty in its benefit analyses, and taking action on rules that have been rejected by the Courts.

3. Water and Wastewater Infrastructure/Reducing Pollution in the Nation's Waters

Summary of Challenge: *Under the Clean Water Act (CWA) and the Safe Drinking Water Act (SDWA), EPA is responsible for assisting water and wastewater facilities in meeting their water treatment requirements. Many drinking water and wastewater systems across the country are unable to maintain compliance with federal water standards due to repairs and new constructions. While EPA has established programs to help address infrastructure costs, such as the Four Pillars of Sustainable Infrastructure and National Alliance for Water Efficiency, these programs do not represent a cohesive national strategy for solving the problem of aging and deteriorating infrastructure.*

Both OIG and GAO have cited water infrastructure as a challenge for the Agency. OIG believes EPA needs to take the lead in developing a coherent federal strategy, within the limits of its statutory authorities and responsibilities, to assess the investment requirements and work with states and local governments to organize resources to meet water and wastewater infrastructure needs. GAO notes that, while EPA partners with federal, state, and local agencies and others to reduce pollution in the nation's waters, many pollution sources are difficult to monitor and regulate. Among the most daunting water pollution control problems, the nation's water utilities face billions of dollars in upgrades to aging and deteriorating infrastructures that, left unaddressed, can affect the quality of our water.

Agency Response: EPA is doing everything possible within its authority, responsibilities, and resource constraints to change the way the country views, values, manages, and uses water and wastewater infrastructure. Its Sustainable Infrastructure (SI) Initiative continues to be a top Agency priority and has been active in the past year. While, long-term sustainability will ultimately occur at the local level, EPA has provided and continues to provide national leadership. As part of that strategy, we are working to ensure that federal dollars provided through the State Revolving Funds act as a catalyst for efficient system-wide planning, improvements in technical, financial, and managerial capacity, and the design, construction, and on-going management of sustainable water infrastructure.

For example, EPA continues to partner with six of the major professional associations for water and wastewater to promote the ten attributes of an Effectively Managed Utility. This first-of-its-kind national collaboration enables utilities to operate under a common management framework, which is helping the sector move toward sustainability in a unified manner. Building on existing efforts, the collaborating organizations have recently released a set of case studies that document the success of a number of utilities who have used the Effective Utility Management (EUM) framework. The EUM “Primer” has also been adapted into a web-based tool and presentation to make it more available to utilities across the country.

Recognizing that water efficiency has significant implications for infrastructure, EPA has continued to pursue and expand the WaterSense program, launched in 2006. The WaterSense label makes it easy for consumers to 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 is essential to the national awareness and acceptance that everyone must help pay for our infrastructure needs.

EPA has also reached out to other federal agencies and departments to work together on infrastructure sustainability. In collaboration with the Department of Transportation (DOT), the Agency recently released a set of case studies on Asset Management, an area of common interest for water and highway infrastructure. EPA also has signed a partnership agreement with the Department of Housing and Urban Development and DOT that focuses on sustainable communities and smart growth. This new federal partnership could have significant interconnections with water and wastewater infrastructure in some communities.

Other recent activities taken under the SI Initiative include:

- Actively working with a long list of partners to implement our Green Infrastructure Action Plan. The focus of this work is on green infrastructure approaches to managing wet weather. Among other activities, the Action Plan aims to better document costs, benefits, and effectiveness of practices; incorporate green infrastructure into Long Term Control Plans for combined sewer overflows; and foster implementation in communities across the country.
- Initiating an effort to study how the Agency can effectively increase the engagement of local officials and decision-makers on SI issues. This effort will result in an outreach plan to be implemented in the coming year.

In these and other ways, EPA has taken a leading role with federal partners and has worked to increase public awareness and appreciation of the need for sustainable water infrastructure. Expanding EPA’s efforts would require increased authority and resources.

4. 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 managing land development, increasing implementation of agricultural conservation practices, monitoring and expediting the installation of nutrient removal technology at wastewater treatment plants, seeking greater reduction in air emissions, and 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.

Agency Response: EPA's Chesapeake Bay Program (CBP) is a unique regional partnership that directs and conducts the restoration of the Chesapeake Bay by bringing together local, state, and federal governments, non-profit organizations, watershed residents, and academic institutions. The CBP continues to respond to and implement OIG and GAO recommendations.

In spring 2009, the CBP office changed its management structure to better align the policy, advisory, and technical committees and workgroups with the five goals of the Chesapeake 2000 Agreements: protect and restore fisheries; protect and restore vital habitats; protect and restore water quality; maintain health watersheds; and foster stewardship. The new structure also aligns with the Chesapeake Action Plan and provides a clear focus on the goals and outcomes that the Agency is trying to achieve.

On May 12, 2009, President Obama signed Executive Order 13508, *Chesapeake Bay Protection and Restoration*, launching a “new era” of federal leadership and action to protect and restore the Chesapeake Bay. The Order, which establishes a Federal Leadership Committee (FLC) that will oversee the development and coordination of programs and activities, will help define the next generation of tools and actions to restore water quality in the Bay. Additionally, the Order describes changes to be made to regulations, programs, and policies to implement these actions.

EPA chairs the FLC, which includes senior representatives of the Departments of Agriculture, Commerce, Defense, Homeland Security, the Interior, Transportation, and well as other agencies. On November 9, 2009, EPA and the other FLC agencies released a draft comprehensive strategy for the protection and restoration of the Chesapeake Bay and its watershed as called for in section 203 of the EO. Also in November 2009, EPA and other agencies released individual reports on specific challenges in the Chesapeake Bay as required

under section 202 of the EO. The agencies are engaged in a significant public outreach effort to explain the strategy and reports and to hear directly from members of the public as to their perspectives on the ideas contained in these documents.

EPA's recommended actions under the EO include:

- Development of watershed implementation plans by the six Bay watershed states and the District of Columbia;
- Requiring the states and District to develop milestones detailing near-term actions and loading reduction targets to evaluate progress toward water quality goals;
- Undertaking new rulemakings to reduce nutrient and sediment loadings to the Chesapeake Bay from concentrated animal feeding operations, stormwater, new or expanding sources of nutrient and/or sediment, and other pollutant sources as EPA deems necessary; and
- Establishing an enhanced partnership with the U.S. Department of Agriculture to accelerate the adoption of conservation practices by agricultural interests in the Bay watershed.

In May 2010, the FLC will release the final strategy responding to EO 13508. The strategy is expected to include target dates and milestones for implementation of the actions being undertaken by each FLC agency.

In fall 2010, the FLC will publish annual Chesapeake Bay Action Plans that describe how federal funding will be put toward Bay restoration in the coming year. The plans will be accompanied by an annual progress report. To strengthen accountability, the Committee will ensure that an independent evaluator periodically reports on progress toward meeting the goals of the Order.

A centerpiece of EPA's activities is the implementation of the nation's largest and most complex Total Maximum Daily Load (TMDL) for the entire Chesapeake Bay watershed. A TMDL is essentially a plan that defines how much of a particular pollutant may be discharged in to a particular waterbody while allowing the waterbody to meet its water quality standards and designated uses. Through watershed implementation plans, EPA expects that the Bay states and the District of Columbia will provide specific timelines for enhancing programs and implementing actions to reduce pollution, with all measures needed to reach the TMDL pollution load limits in place no later than 2025. EPA's High Priority Performance Goal is tied to the development and submission of those watershed implementation plans.

By FY 2011, EPA expects the states and D.C. to divide their TMDL-allocated pollution reductions to the local level so that counties, municipalities, conservation districts and watershed organizations understand their role in meeting water quality goals. EPA expects that by 2017 pollution controls will be in place that should result in approximately 60 percent of the required reductions.

5. Safe Reuse of Contaminated Sites

Summary of Challenge: EPA places increasing emphasis on the reuse of contaminated or once-contaminated properties and has a performance measure to define a population of contaminated sites that are ready for reuse. EPA faces “significant and increasing” challenges in this area, however, due to the common practice of not removing all sources of contamination from hazardous sites; a regulatory structure that places key responsibilities for monitoring and enforcing the long-term safety of contaminated sites on non-EPA parties that may lack necessary resources, information, and skill; changes in site risks as site conditions change over time; and existing weaknesses in EPA’s oversight of the long-term safety of sites. EPA will continually need to assess challenges it faces as well as challenges among the diverse group of non-EPA parties it must work with to ensure sites are safely reused. To address the challenges, these assessments should include consideration of new or expanded authorities and regulations, organization structures, and dedicated funding and resources.

Agency Response: In its April 2009 report, OIG identified a number of concerns associated with ensuring the long-term safety of contaminated sites, and EPA agrees with OIG’s recommendations.

OIG stated that “EPA’s management of the long-term oversight and monitoring requirements for the safe reuse of contaminated sites has lagged behind their marketing of site reuse opportunities and showcase successes.” Using a variety of tools, regions are working closely with prospective users to ensure they understand the limitations associated with the site and use the site in a way that prevents exposures. Comfort letters and Ready for Reuse determinations lay out any limitations that need to be followed to ensure protectiveness. Some regions have official processes for prospective users that ensure the reuse will be compatible with the remedy. In addition, EPA works closely with state and local governments to ensure that mechanisms such as institutional controls are maintained to permit safe reuse of sites. EPA also conducts 5-year reviews at all sites to ensure continued remedy protection where waste is left in place.

OIG also notes that states were not financially prepared to take over their long-term monitoring and maintenance responsibilities. The Agency is aware of a few instances in which states did not have the funding needed to continue their responsibilities. Though state budgets have been constrained, states have strived to maintain their responsibilities. Further, OIG specifies that states failed to enforce cleanup agreements. EPA continually encourages state enforcement of cleanup agreements, meeting with the Association of State and Territorial Waste Management Officials member states and offering technical assistance. In response to OIG’s concern that EPA is not following Superfund site deletion guidance or 5-year review procedures, the Agency has new procedures and processes in place to ensure that deletion actions comply with the National Contingency Plan and EPA guidance. Additionally, current procedures remain in place to ensure appropriate implementation of 5-year review guidance. Finally, OIG believes that EPA does not have systems in place to determine whether a site cleanup is in noncompliance. The Agency is working to finalize the draft *Guidance on Tracking Substantial Noncompliance with*

CERCLA Enforcement Instruments in CERCLIS. Once the guidance is issued, regions began entering compliance tracking data into CERCLIS in the fourth quarter of FY 2009.

6. Speeding the Pace of Cleanup at Superfund and other Hazardous Waste Sites

Summary of Challenge: *In 1980 Congress passed the Comprehensive Environmental Response, Compensation, and Liability Act, better known as Superfund, which gave the federal government the authority to ensure the cleanup of hazardous waste sites both on private and public land. GAO believes that declining appropriations (when adjusted for inflation) have slowed the pace of cleanups. Further, GAO notes that EPA has not implemented a 1980 mandate requiring businesses to demonstrate that they can pay for potential environmental cleanups, that is, to provide financial assurance. GAO has recommended that EPA (1) ensure that financial assurances are in place for sites that manufacture or use toxic chemicals; (2) improve the institutional controls at contaminated sites; (3) ensure that owners of underground storage tanks maintain access to adequate financial resources and state insurance funds provide reliable coverage for cleanups; and (4) establish a formal structure to centrally track and monitor the status of cleanup efforts.*

Agency Response: EPA recognizes the need for program improvements in the areas GAO has identified and has efforts underway to address GAO's concerns regarding the pace of cleanup at Superfund and other hazardous waste sites.

In July 2009, EPA published a notice in the Federal Register identifying the classes of facilities for which financial responsibility requirements will first be developed and also identified additional classes on January 6, 2010. Next, a proposed and final rule for these classes will be developed. This substantial regulatory effort is scheduled to continue through 2012.

EPA released a strategy to ensure institutional control (IC) implementation at Superfund sites in September 2004, developed an IC tracking system to ensure that sites have appropriate ICs in place, and provided public access to IC information at Superfund sites. EPA is also developing guidance on implementation and assurance plans for ICs. These efforts recognize that there is a significant role for local and state governments in the planning, implementing, monitoring and enforcing of ICs relied upon in cleanup of many contaminated sites. EPA also supports several Association of State and Territorial Waste Management Officials subcommittees that focus on ICs and long-term stewardship.

EPA acknowledges the importance of adequate financial responsibility coverage for cleanup and has already taken steps to address GAO's recommendation. For instance to ensure compliance with the Energy Policy Act, states and EPA inspectors are required to verify financial responsibility as part of the mandatory 3-year inspection requirement. for underground storage tanks. EPA is also enhancing its oversight of state funds through additional guidance and consultation.

With respect to GAO's last recommendation, EPA already tracks Superfund cleanup efforts through its CERCLIS database, which contains information (including site contaminant information) on all Superfund sites.

7. Transforming EPA's Processes for Assessing and Controlling Toxic Chemicals

***Summary of Challenge:** GAO notes that EPA's ability to protect public health and the environment depends on credible and timely assessment of the risks posed by toxic chemicals. Such chemical assessments are the cornerstone of scientifically sound environmental decisions, policies, and regulations under a variety of statutes, such as the Toxic Substances Control Act (TSCA). EPA's Integrated Risk Information System (IRIS), which contains assessments of more than 500 toxic chemicals, is at a serious risk of becoming obsolete because EPA has been unable to keep its existing assessments current or to complete assessments of important chemicals of concerns. In a number of reports, GAO identified actions EPA needs to take to (1) enhance its ability under TSCA to obtain health and safety information from the chemical industry and (2) streamline and increase the transparency of IRIS.*

Agency Response: GAO identified "Transforming EPA's Processes for Assessing and Controlling Toxic Chemicals" as a high-risk area in its January 2009 High-Risk Series. In the report, GAO states that the Agency needs to take actions to streamline and increase the transparency of the development of human health assessments under the Integrated Risk Information System (IRIS) Program and enhance its ability under the Toxic Substance Control Act (TSCA) to obtain health and safety information from the chemical industry. EPA acknowledges the issues that GAO has raised and has already begun to address concerns.

The IRIS Program is a human health assessment program that evaluates quantitative and qualitative risk information on effects that may result from exposure to environmental contaminants. Through the IRIS Program, EPA provides the highest quality science-based human health assessments to support Agency regulatory activities. In May 2009, the Agency announced reforms to IRIS that will revitalize the program and ensure its scientific quality, integrity, transparency, and timeliness. Specifically, the Agency has developed a new IRIS assessment development process that includes a streamlined review schedule for most chemicals to ensure that the majority of assessments are posted on the IRIS database within 2 years of the start date. In addition, interagency comments will now be part of the public record, increasing the transparency of the process. Lastly, the President's FY2011 Budget maintains increases to funding and staff initially provided in FY2010 to enable more assessments to be completed.

GAO also raised concerns about TSCA. TSCA authorizes EPA to obtain information on chemicals and regulate chemicals that pose an unreasonable risk to human health and the environment. The Agency has taken major steps to strengthen its chemicals management program under TSCA. For instance, the Administrator identified better management of chemical risk as one of her top five priorities. To support this priority, the Agency proposed in its 2010 President's Budget submission, a significant investment to support EPA's toxics program. Key elements of the Administrator's emerging strategy for improving EPA's ability to reduce

chemical risks include completing long-standing efforts to obtain needed chemical hazard and exposure data, accelerating progress in assessing such data to identify chemicals posing the greatest and most immediate risks, and using the full array of EPA's current regulatory tools to reduce known chemical risks.

8. Improving Agency-wide Management

Summary of Challenge: EPA has launched various initiatives to address cross-cutting general management issues, including environmental enforcement and compliance, human capital management, and the development and use of environmental information. However, these initiatives have generally fallen considerably short of their intended results.

Agency Response:

Environmental Enforcement and Compliance

In FY 2004, the Agency piloted the State Review Framework (SRF) to address concerns about consistency in the minimum level of enforcement activity across states and the oversight of state programs by EPA regions. The SRF uses 12 core elements to assess 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 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, the Agency identified four areas that were recurring issues across states and programs: data entry and reporting; significant non-compliance and high priority violations identification; timely enforcement; and calculation and documentation of penalties. In September 2008, the Agency made key improvements and initiated Round 2, which included additional and enhanced training for regions and states, streamlined reporting through a standard template, clearer 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. First, the region and state define the state's attributes and deficiencies and develop a schedule for implementing needed changes. Second, the region and state jointly develop a plan to address performance, using established mechanisms such as Performance

Partnership Agreements, Performance Partnership Grants, or categorical grant agreements to codify the plans. Third, the region and state manage and monitor implementation of the plan to ensure progress as planned and to identify and address issues as they arise. EPA completed 15 SRF reviews in 2009.

In 2009, EPA began to make the SRF reports publicly available by putting all Round 1 reports on the internet. EPA will make Round 2 reports available on the internet as they are finalized. EPA is also making data available on the status of program improvements identified in the SRF reviews. By making this information public, EPA has increased the accountability of environmental enforcement programs.

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 maintain a level of consistency across state programs, ensuring that states meet minimum standards and implement fair and consistent enforcement of environmental laws and consistent protection of human health and the environment across the country. The Agency plans to use the “SRF Tracker” to analyze trends in findings and track corrective actions to report on the results of the SRF.

Human Capital

As part of ongoing resource management efforts, EPA has been exploring how to maximize the productivity of its limited staff and other resources. During each year’s budget process, EPA reviews the staffing funding, levels, and allocation to address all activities. OIG and GAO routinely report that EPA (and other agencies) need to increase the efficiency of resource use in functional areas. Toward this end, EPA and many other federal agencies have begun to specialize in particular functional areas and provide these services externally to other federal agencies. For example, EPA has contracted with the Department of Defense for its payroll services.

In February 2009, the Agency procured contractor to conduct a workload benchmarking study of six major functions that it shares with other federal agencies, including regulatory development, scientific research, enforcement, financial management, environmental monitoring, and permitting.

The study is designed to build EPA’s understanding of the determinants other Agencies consider in setting staffing levels for these functions. The analysis will also help EPA expand its understanding of workload drivers, major products, and staffing allocation alternatives to consider in these six functional areas. The benchmarking may highlight areas that need additional review if disparities surface, or it may point to possible pilot efforts. This enhanced understanding will allow EPA to continue to better determine the next steps in improving efficiency, targeting resources to the most critical priorities, and providing critical background information for Agency leadership to consider when making budget allocation decisions.

Environmental Information

EPA's Report on the Environment (ROE) provides peer-reviewed scientific environmental indicators on status and trends of the nation's environment that are important to the Agency. The ROE effort is a cross-agency and interagency program with strong collaboration and partnership between EPA program offices and regions. The indicators and associated gaps and limitations provide valuable input to planning and decision making in the Agency. To date, roughly a third of the indicators included in EPA's 2008 ROE are used as the basis of the quantified strategic performance metrics established in the Agency's current (2006-11) and prospective (2009-14) Strategic Plans. ROE collaborators continue to look for new data and information sources to expand the number of indicators and have implemented routine updating procedures to ensure that decision makers have the most current information available.

9. Threat and Risk Assessment

Summary of Challenge: *OIG notes that, in the past year, EPA has not developed and applied threat and risk assessments in decision making. According to OIG, relative threats and risks to human health and the environment are not assessed and decisions based on the highest priority. As discussed in its recent reports on EPA's enforcement and air programs, OIG believes the Agency's environmental laws focus on a single media, goals are designed to implement separate legislative mandates, and available technological solutions address specific pollutant sources. In 2008, OIG stated that EPA needed to establish and implement a risk-based strategy to assess threats to human health and the environment across media.*

Agency Response: EPA confirms that its last comparative risk study was completed nearly 20 years ago. However, the Agency believes that the approach used at that time—to rank all environmental risks in a very aggregate manner—is no longer useful. Current Agency analyses, which look more deeply into environmental threats, are more useful in decision making. For instance, the Agency is conducting a forward-looking study that explores the relative risks, costs, feasibility, and the synergisms of controlling various air pollutants. The Agency is also nearing completion of the 812 Prospective Study, which reviews the costs and benefits of various future actions to control air pollution. Additionally, the Agency is working with a number of watersheds, including the Chesapeake Bay, Great Lakes, and national estuaries, to take a holistic perspective, considering cross-media issues and planning actions with the greatest benefit. The Agency has also developed a system that helps identify where to focus permitting and methods that use measurement tools to focus on enforcement priorities.

EPA has several other efforts underway, such as the Community Action for a Renewed Environment (CARE) program, identification of environmental justice communities, sector strategies, environmental management systems, smart growth, and green building to address risk more holistically across media. The Agency believes these initiatives encourage a more disaggregated approach to identifying risk that will enhance its ability to focus its resources on the highest risk. EPA will continue to use a variety of means, including its strategic planning and budgeting processes, to incorporate risk and threat assessment in its decision-making.

10. Meeting Homeland Security Requirements

Summary of Challenge: *OIG continues to raise concerns about EPA's homeland security efforts and actions. Although EPA has taken actions to strengthen homeland security, OIG reports show that the Agency's plans for responding to incidents of national significance do not (1) document the methodology used to determine the required resources, (2) address coordination with other federal, state or local emergency response agencies, (3) contain designation or process descriptions for handling crisis communications, (4) include key milestones for completing critical homeland security responsibilities, and (5) establish accountable entities, within EPA, responsible for completing critical homeland security requirements. OIG states that the Agency has not yet implemented recommendations outlined in its 2008 report. Additionally, OIG believes that many of the Agency's actions to address homeland security (e.g., implementing the Radiation Ambient Monitoring System, and a national equipment tracking system) are behind schedule. OIG notes that effectively managing its homeland security program will require the Agency to think differently about how it responds, coordinates with others, and communicates in nationally significant emergencies.*

Agency Response: EPA has a Homeland Security Work Plan, updated annually, which identifies the Agency's homeland security focus and efforts in four homeland security priority areas: water security, decontamination, emergency response, and internal preparedness. These priority areas have been identified as a result of specific responsibilities assigned to EPA by external entities and the Agency's homeland security requirements and assignments.

As part of this plan 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 to assess short, medium, and long-term goals and results. The three tiers are:

- Desired End States – describe the final outcome of homeland security projects or efforts once EPA believes it has met the President's or other externally imposed directives.
- Desired Results – reflect specific programmatic areas through which EPA seeks to make progress toward achieving the desired end state.
- 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.

Although some regions and special teams currently have systems in place to manage their equipment inventories, EPA acknowledges the need for a national equipment inventory to ensure that the Agency can identify and access appropriate equipment in support of nationally significant events.

To address findings and recommendations for the national equipment tracking system, EPA expedited development of the Equipment Module of the Emergency Management Portal, a warehouse management and equipment tracking system. All regions and special teams are required to use the new system for tracking emergency response equipment. This application has been improved over several versions; Version 6.1, scheduled for November 2009, will complete

the off-line synchronization option for those warehouses with poor connectivity. The completion date for the tracking warehouses for emergency response equipment was December 21, 2009.

In November 2009, the Agency issued its National Approach to Response Plan and completed the corrective actions that address recommendations in OIG's Report No 2008-P00055-167 "EPA Should Continue to Improve Its National Emergency Response Planning." EPA will continue to use its Homeland Security Priority Work Plan to systematically assess homeland security priorities and projects and achieve its homeland security objectives.

11. Oversight of Delegation of States

***Summary of Challenge:** A critical management challenge for EPA is overseeing its delegation of programs to the states, mostly due to differences between state and federal policies, interpretations, strategies, and priorities. While EPA has improved its oversight, particularly in priority setting and enforcement planning with states, the Agency needs accurate data and consistent policy interpretation to ensure effective oversight of all delegated regulatory and voluntary programs. OIG believes that EPA must address the limitations in the availability, quality, and robustness of program implementation and effectiveness data.*

Agency Response: As OIG notes, state oversight is a very complex and changeable arena. Through federal statutes, implementing regulations, and program design, states are allowed flexibility in how they manage and implement environmental programs. Within EPA, national program managers are directly responsible for state oversight of individual programs. The Agency has committees, workgroups, special projects and initiatives to continuously improve Agency programs delegated to states.

To provide more collaboration at the national level, the Agency, working with states, established the Partnership Council of the Office of Water and States (PCOWS). PCOWS addresses the challenges of increasing workloads, pending demands of energy and climate change, and declining resources. It also tests the early and on-going engagement of states in planning, budgeting, and implementation activities for the national water program. As the first national level forum for the discussion of strategic priorities with the states, PCOWS will ensure that core and key program activities are given appropriate priority in budget decisions and identify opportunities for work sharing for priority activities and maximizing resources.

EPA has made improvements in its enforcement priority setting, planning, and state oversight. Currently, using the State Review Framework (SRF), the Agency conducts oversight reviews to evaluate the performance of state compliance and enforcement programs. The SRF enables assessment of program effectiveness and identification of areas for management improvements that is consistent across EPA regions and states. In October 2009, the Administrator released a Clean Water Act Enforcement Action Plan aimed to focus Federal and State enforcement to the most significant sources and most serious violations, strengthen state oversight and improve transparency and accountability to the public. This action plan will result in a redesigned

enforcement program with clear expectations for state performance, joint accountability metrics and reporting on performance to the public.

In July 2009, the Administrator renewed the Agency's commitment to use the National Environmental Information Exchange, which both EPA and states view as a critical component of cost effective exchange of data and information between EPA, states, and the public.

12. Voluntary Programs

Summary of Challenge: *OIG reviews of voluntary programs that address air toxics, greenhouse gas reduction, pollution prevention, etc. indicate performance and data verification for voluntary programs is a systemic problem for EPA. According to OIG, without comprehensive, valid, and reliable performance data, EPA can not ensure that programs are efficiently and effectively providing intended and claimed environmental benefits. EPA needs to determine the extent to which voluntary programs can effectively address environmental and human health challenges.*

Agency Response: EPA programs and regions support a range of regulatory and voluntary programs designed to help achieve environmental result (e.g., improving air quality, lowering greenhouse gases, reducing chemical risk). Currently, there are over 40 officially designated voluntary (Now called partnership) programs administered by EPA at the federal level (more exists at the state and local levels). Voluntary (Partnership) programs can enhance or complement regulatory programs, and help to address significant issues difficult not amenable to traditional regulatory approaches.

The Agency has developed guidelines on partnership program design, measurement, marketing, and evaluation. However, most voluntary programs are managed by individual national program managers who use various methods to track and report program effectiveness and impact on the environment. EPA's Innovation Action Council has identified program management improvements including codifying minimum requirements for program design and operation; making new program notification mandatory; defining categories of Partnership Programs; and developing new guidelines for evaluating a partnership program. The Agency has disseminated this information, and assessed the degree to which the improvements are being implemented. Support and training are being offered to programs which have not yet met the requirements of the improvements.

According to the National Advisory Council for Environmental Policy and Technology, "There is a widespread misperception that EPA's primary stewardship tool consists of voluntary partnership programs. The reality is, however, that the Agency has many additional assets to promote stewardship, such as regulatory programs, grants, information, public speeches, and in-house operations. EPA achieves its most effective results when it uses these tools in concert."¹³

¹³ <http://www.epa.gov/ocem/nacept/reports/pdf/2008-0328-everyones-business-final.pdf>

EPA is taking steps to improve performance information to determine the effectiveness of partnership programs. For example, an interim evaluation of the Nanoscale Materials Stewardship Program notes that as much as 90 percent of the different nanoscale materials that are likely to be commercially available were not reported. The Agency's conclusion then was that it had learned a great deal about nanoscale materials in commerce, but the program did not provide the needed breadth of health and safety data and the participation rate was lower than hoped. In response, EPA is developing a mandatory reporting rule under TSCA Section 8(a) to require companies to report data on existing uses, production volumes, specific physical properties, chemical and structural characteristics, methods of manufacture and processing, exposure and release information, and available health and safety data. EPA is also developing a mandatory test rule under TSCA Section 4 to require companies to test a number of manufactured nanomaterials for health and environmental effects. The information submitted under these regulations will further EPA's understanding of the uses and potential risks of manufactured nanomaterials, and strengthen the scientific basis for taking appropriate risk management actions. Another example of continuous improvement of performance information can be found with the pollution prevention (P2) programs. While EPA agrees that not all P2 programs had standard operating procedures in place for performance data at the time of the audit, many did. The program is currently working to incorporate lessons learned across the program and develop comprehensive standard operating procedures and QA/QC practices for performance information.

13. EPA's Organization and Infrastructure

Summary of Challenge: Since EPA was formed in 1970, a comprehensive study has not been completed to analyze EPA's mission, organization, and the related number and location of employees needed to most effectively carry out the Agency's mission at the least cost. OIG believes EPA remains challenged in maintaining the right number of people in the right places to most effectively accomplish its mission and achieve strategic goals. OIG recommends that, with the assistance of external parties (oversight committees), EPA conduct a comprehensive study to assess its mission, workforce, and infrastructure requirements in order to accomplish its mission and reduce operating costs.

Agency Response: EPA acknowledges 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. EPA does not have the resources nor the authority to conduct such a broad review. However, it has conducted periodic nationwide assessments to identify cost-saving opportunities as a result of mission and personnel changes, including most recently, a November 2009 rent efficiencies exercise that identified several opportunities for space consolidation and right-sizing at locations across the country. The resulting report is under review by Agency senior management.

Currently, EPA maintains an inventory of buildings—owned and leased—that supports its current mission. Through its master space planning process, the Agency will continue to identify and fulfill its long-term facility requirements. The Agency plans to establish a senior level

workgroup that will examine space management and usage at Agency facilities and identify opportunities for greater efficiencies from a mission, workforce and infrastructure perspective.

Under the Space Consolidation and Rent Avoidance Project, the Agency has released approximately 228,000 square feet of space, resulting in an annual rent avoidance of more than \$7.3 million. In FY 2010 and 2011, the Agency plans to release approximately 99,300 square feet of additional space in headquarters and regional facilities for an estimated annual rent avoidance of nearly \$3.9 million.

14. Management of Stimulus Funds

Summary of Challenge: EPA received \$7.2 billion in ARRA funds for six existing programs: 1) Clean Water State Revolving Fund (SRF), 2) Drinking Water SRF, 3) Hazardous Substance Superfund, 4) Diesel Emissions Reduction, 5) Leaking Underground Storage Tanks, and 6) Brownfields. OIG acknowledges that the Agency has already taken steps to address ARRA requirements. However, OIG believes EPA faces significant challenges in meeting all ARRA requirements while at the same time carrying out ongoing environmental programs. For instance, since most ARRA funds will be awarded through assistance agreements and contracts, EPA's grants and contracts personnel will have to manage stimulus grants and contracts in addition to their normal workload. To reduce the risk of fraud, waste, and abuse of federal funds, OIG indicates that EPA will need to assign sufficient, trained staff to ensure proper oversight of grants and contracts.

Agency Response: From the passage of the act, the Agency agreed that "EPA faces significant challenges in meeting all ARRA requirements while at the same time carrying out ongoing environmental programs." The Agency is determined to meet these challenges and ensure that the Recovery Act investments create jobs, meet environmental goals and that public funds are obligated and expended responsibly and transparently.

The Agency has done considerable work to demonstrate effective management and oversight of ARRA funds and activities. For instance, in accordance with OMB guidance, EPA created a senior-level Steering Committee to oversee its ARRA strategy and implementation. The senior-level Stimulus Steering Committee established subcommittees on grants, contracts, finance and resources, performance measurement and other crucial areas composed of experienced staff to raise, research and address challenges promptly. Coordinating through the principal steering committee, EPA succeeded in obligating almost all of the program funds available, establishing performance metrics, developing guidance for recipients on reporting and meeting additional requirements of the Act such as Davis-Bacon, Recipient Reporting, and Buy American. These subcommittees also worked to meet ambitious and detailed public reporting requests.

To ensure transparency and accountability of its ARRA activities, EPA also developed and implemented a comprehensive ARRA Stewardship Plan that identifies potential programmatic and administrative risks, details specific control activities to mitigate those risks, and specifically defines Agency roles and responsibilities in performing and monitoring those activities. The plan

addresses seven functional areas: grants management, interagency agreements, contracts, payroll/human capital, budget execution, performance reporting, and financial reporting. The risks identified in the Plan are based on the five GAO internal control standards and various internal control objectives referenced in the OMB guidance. The Steering Committee receives quarterly status reports on internal controls related to the oversight of ARRA funds.

The vast majority of funding for ARRA activities has been provided using grants and contracts from existing programs that currently have strong internal controls. The Agency has put in place additional internal controls for contracts and grants to address ARRA funds. The Agency issued guidance on the award of ARRA contracts and grants (March and October), and interagency agreements (April). EPA also developed a plan for a stakeholder outreach initiative that outlines how the Agency will communicate information on ARRA contracts and grants opportunities to potential customers and stakeholders (through instructional fact sheets, webinars, etc.). We believe that the existing internal controls and the Stewardship Plan, will help the Agency ensure proper oversight of ARRA funds for grants, contracts, and interagency agreements. The Agency will periodically reassess the risks identified in the Stewardship Plan and make adjustments as needed.

With regard to OIG's concerns about staff workload, and as noted in the Agency's response to the Recovery Accountability and Transparency Board's Contracts and Grants Staffing and Qualification Survey, EPA generally has, at this time, sufficient trained resources to manage ARRA grants and contracts. In making ARRA implementation our top priority, we have had to disinvest in some of our non-ARRA grant and contract work. This includes, among other things, delays in non-ARRA awards and closeouts, less frequent post-award monitoring and extending milestones under our Grants Management Plan. The Agency will continue to carefully assess the level of disinvestment to ensure it does not jeopardize our internal controls for effective grants and contracts management.

15. Performance Measurement

Summary of Challenge: While EPA has been recognized for its efforts to align budgeting, planning, and accounting systems to track and report resources, OIG believes the Agency continues to face challenges in measuring the human health and environmental results of its programs. OIG notes that program results are not immediately recognized or demonstrated until years later, that linking environmental activities to outcomes is difficult due to external factors beyond EPA's control, and that performance measures often focus on program activities instead of improvements to human health or the environment. Additionally, OIG indicates that although the Report on the Environment provides a broad perspective on the condition of the Nation's environment, the Agency still faces limitations, gaps, and challenges in gathering and analyzing information on key environmental indicators. To address these concerns, OIG recommends that the Agency focus on the logic of program design to ensure that programs and processes are designed so that managers can measure, evaluate, and demonstrate results for resources used, allowing for transparency and accountability for program performance.

Agency Response: EPA acknowledges the inherent difficulties in aligning environmental information, performance measures, and results. However, the Agency has made performance measurement improvement and performance management a high priority and is pursuing many actions to address challenges.

EPA's program offices have the ultimate responsibility in designing their programs and corresponding performance measures to assess results. The Agency continues to offer training and technical assistance in logic modeling and program evaluation and design. Additionally, the Agency has made significant strides in strengthening its performance management framework and furthering access to and the quality of performance data to improve their utility for decision-making. For example, senior managers can easily view progress on key performance measures using "Measures Central," an Agency-wide database, and the Executive Management Dashboard, an intranet-based application. Over the last few years, EPA has conducted an Agency-wide effort to improve the systems, quality of the measures, and data in the systems. EPA's work to strengthen performance management contributed to the Agency's winning—in consecutive years—the President's Quality Award for Management Excellence. EPA is the second federal agency ever to receive this award, and the only Agency to have won it twice.

EPA has accomplished significant progress in addressing the inherent challenges of performance measurement. For instance, the Agency conducted an annual review of FY 2009 and FY 2010 measures to further improve the linkages between its operational measures, senior management priorities, and long-term environmental and health goals. Additionally, the Agency strengthened governance/oversight of the overall quality of the measures and data in the Measures Central through modifications to the system, guidance, and training, and it has added ARRA performance measures to the system. The Agency has also produced Measures Central Mid- and End-of-Year Reports to improve transparency in performance data reporting across programs and regional offices and to monitor progress.

EPA continues to engage with state, tribal, and regional stakeholders and has developed a number of tools to increase collaboration, transparency, efficiency, and the management utility of the Agency's annual commitment process. EPA offices collaborated internally to develop data quality Management Action Plans (MAP I and MAP II), which will ensure the accuracy and reliability of ARRA environmental and performance data. These MAPs require the development and certification of a Data Quality Record for each ARRA performance measure along with pre-dissemination review, as required by OMB and the Agency's Information Quality Guidelines, prior to each public report.

EPA USER FEE PROGRAM

In FY 2011, EPA will have several user fee programs in operation. These user fee programs and proposals are as follows:

Current Fees: Pesticides

The FY 2011 President's Budget reflects the continued collection of Maintenance fees for review of existing pesticide registrations, and Enhanced Registration Service Fees for the accelerated review of new pesticide registration applications.

- **Pesticides Maintenance Fee Extension**

The Maintenance fee provides funding for the Reregistration program and a certain percentage supports the processing of applications involving "me-too" or inert ingredients. In FY 2011, 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 2011, the Agency expects to collect \$14 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 2011 under current law.

- **Lead Accreditation and Certification Fee**

The Toxic Substances Control Act, Title IV, Section 402(a)(3), mandates the development of a schedule of fees for persons operating lead training programs accredited under the 402/404 rule and for lead-based paint contractors certified under this rule. The training programs ensure that lead paint abatement is done safely. Fees collected for this activity are deposited in the U.S. Treasury. EPA estimates that \$1 million will be deposited in FY 2011.

- **Motor Vehicle and Engine Compliance Program Fee**

This fee is authorized by the Clean Air Act of 1990 and is managed by the Air and Radiation program. Fee collections began in August 1992. This fee is imposed on manufacturers of light-duty vehicles, light and heavy trucks and motorcycles. The fees cover EPA's cost of certifying new engines and vehicles and monitoring compliance of in-use engines and vehicles. In 2004, EPA promulgated a rule that updated existing fees and established fees for newly-regulated vehicles and engines. 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 engines (chainsaws, weed-whackers, leaf-blowers, lawnmowers, tillers, etc.), marine (boat motors, watercraft, jet-skis), locomotive, aircraft and recreational vehicles (off-road motorcycles, all-terrain vehicles, snowmobiles). 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 2011, EPA expects to collect \$20.7 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 statutorily blocked by the Pesticides Registration Improvement Renewal Act (PRIA) through 2012. Legislative language will be submitted to allow for the collection of Pesticide Tolerance fees in FY 2011 and in subsequent years. In FY 2011, EPA expects to collect \$3 million from this fee.

- **Enhanced Registration Services**

Legislative language will be submitted proposing to publish a new fee schedule to collect an additional \$10 million in FY 2011 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 \$29 million in order to more closely align fee collections with program costs. The President's Budget proposes to relieve the burden on the general taxpayer and finance the costs of operating the Reregistration program from those who directly benefit from EPA's reregistration activities.

Fee Proposals: Other

- **Pre-Manufacturing Notification Fee**

Legislative language will be submitted to remove the statutory cap in the Toxic Substances Control Act on Pre-Manufacturing Notification Fees. In FY 2011, EPA expects to collect an additional \$4 million by removing the statutory cap.

- **Accelerated Chemical Risk Reduction Fee**

Under proposed TSCA reform legislation, the Agency envisions collecting fees to directly support implementation of the restructured chemicals management program.

WORKING CAPITAL FUND

In FY 2011, the Agency begins its fifteenth 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 2010, will continue into FY 2011. 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 Resources Management, 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 2011 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 2011, 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

PRIA: Pesticide Registration Improvement Act

PRIRA: Pesticide Registration Improvement Renewal 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 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS Budget Dollars (X1000)
State and Local Air Quality Management	CAA, Section 103	Air pollution control agencies as defined in section 302(b) of the CAA.	S/L monitoring and data collection activities in support of the PM2.5 monitoring and air toxics networks and associated program costs.	\$54,850.0	Goal 1, Obj. 1	\$52,350.0
State and Local Air Quality Management	CAA, Sections 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	\$241,730.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS Budget Dollars (X1000)
State and Local Air Quality Management	CAA Section 103	Air pollution control agencies as defined in section 302(b) of the CAA.	S/L monitoring procurement activities in support of the NAAQS.	\$0.0	Goal 1, Obj. 1	\$15,000.0
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	\$13,566.0
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.	\$229,264.0	Goal 2, Obj. 2	\$274,264.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS Budget Dollars (X1000)
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
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	\$17,167.0
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.	\$105,700.0	Goal 2, Obj. 1	\$105,700.0
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	\$11,109.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS 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	\$103,346.0	Goal 3, Obj. 1 Obj. 2	\$105,412.0
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 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS 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); EPA Act 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.	States	Provide funding for States' underground storage tank programs.	\$2,500.0	Goal 3, Obj. 1	\$2,550.0
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.	\$13,520.0	Goal 4, Obj. 1	\$13,690.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS 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.	\$14,564.0	Goal 4, Obj. 1	\$14,855.0
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, enforcement actions by: 1) the Lead-Based Paint program, and 2) States that obtained a “waiver” under the Asbestos program.	\$5,099.0	Goal 5, Obj. 1	\$5,201.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS 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	\$19,085.0
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 Authorization for the Exchange Network Grant Program over the previous eight years has been provided by the annual appropriations for EPA: FY 2002 to FY 2009 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	\$10,200.0

Grant Title	Statutory Authorities	Eligible Recipients	Eligible Uses	FY 2010 Enacted Budget Dollars (X1000)	FY 2011 Goal/ Objective	FY 2011 PRS 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	\$5,039.0
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.	\$62,875.0	Goal 5, Obj. 3	\$71,375.0
Categorical Grant: Multi-Media Tribal Implementation	TCA in annual Appropriations Acts.	Tribal Governments	Implement environmental programs	\$0.0	Goal 5, Obj. 3	\$30,000.0

Environmental Protection Agency

FY 2011 Annual Performance Plan and Congressional Justification

**Program Projects by Appropriation
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Acquisition Management	\$54,993.6	\$57,253.0	\$58,436.0	\$1,183.0
EPM	\$31,332.7	\$32,404.0	\$33,934.0	\$1,530.0
Superfund	\$23,521.1	\$24,684.0	\$24,337.0	(\$347.0)
LUST	\$139.8	\$165.0	\$165.0	\$0.0
Administrative Law	\$4,584.8	\$5,275.0	\$5,332.0	\$57.0
EPM	\$4,584.8	\$5,275.0	\$5,332.0	\$57.0
Alternative Dispute Resolution	\$2,649.9	\$2,040.0	\$2,303.0	\$263.0
EPM	\$1,280.5	\$1,147.0	\$1,390.0	\$243.0
Superfund	\$1,369.4	\$893.0	\$913.0	\$20.0
Audits, Evaluations, and Investigations	\$50,919.3	\$54,766.0	\$55,802.0	\$1,036.0
IG	\$40,605.1	\$44,791.0	\$45,646.0	\$855.0
Superfund	\$10,314.2	\$9,975.0	\$10,156.0	\$181.0
Beach / Fish Programs	\$3,102.2	\$2,944.0	\$2,974.0	\$30.0
EPM	\$3,102.2	\$2,944.0	\$2,974.0	\$30.0
Brownfields	\$23,793.1	\$24,152.0	\$27,397.0	\$3,245.0
EPM	\$23,793.1	\$24,152.0	\$27,397.0	\$3,245.0
Brownfields Projects	\$102,024.7	\$100,000.0	\$138,254.0	\$38,254.0
Superfund	\$106.7	\$0.0	\$0.0	\$0.0
STAG	\$101,918.0	\$100,000.0	\$138,254.0	\$38,254.0
Categorical Grant: Beaches Protection	\$9,905.2	\$9,900.0	\$9,900.0	\$0.0
STAG	\$9,905.2	\$9,900.0	\$9,900.0	\$0.0
Categorical Grant: Brownfields	\$50,586.9	\$49,495.0	\$49,495.0	\$0.0
STAG	\$50,586.9	\$49,495.0	\$49,495.0	\$0.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Categorical Grant: Environmental Information	\$12,628.5	\$10,000.0	\$10,200.0	\$200.0
STAG	\$12,628.5	\$10,000.0	\$10,200.0	\$200.0
Categorical Grant: Hazardous Waste Financial Assistance	\$102,332.3	\$103,346.0	\$105,412.0	\$2,066.0
STAG	\$102,332.3	\$103,346.0	\$105,412.0	\$2,066.0
Categorical Grant: Homeland Security	\$5,916.9	\$0.0	\$0.0	\$0.0
STAG	\$5,916.9	\$0.0	\$0.0	\$0.0
Categorical Grant: Lead	\$14,295.1	\$14,564.0	\$14,855.0	\$291.0
STAG	\$14,295.1	\$14,564.0	\$14,855.0	\$291.0
Categorical Grant: Nonpoint Source (Sec. 319)	\$214,498.2	\$200,857.0	\$200,857.0	\$0.0
STAG	\$214,498.2	\$200,857.0	\$200,857.0	\$0.0
Categorical Grant: Pesticides Enforcement	\$19,208.7	\$18,711.0	\$19,085.0	\$374.0
STAG	\$19,208.7	\$18,711.0	\$19,085.0	\$374.0
Categorical Grant: Pesticides Program Implementation	\$12,772.0	\$13,520.0	\$13,690.0	\$170.0
STAG	\$12,772.0	\$13,520.0	\$13,690.0	\$170.0
Categorical Grant: Pollution Control (Sec. 106)	\$216,836.3	\$229,264.0	\$274,264.0	\$45,000.0
STAG	\$216,836.3	\$229,264.0	\$274,264.0	\$45,000.0
Categorical Grant: Pollution Prevention	\$4,932.3	\$4,940.0	\$5,039.0	\$99.0
STAG	\$4,932.3	\$4,940.0	\$5,039.0	\$99.0
Categorical Grant: Public Water System Supervision (PWSS)	\$99,440.1	\$105,700.0	\$105,700.0	\$0.0
STAG	\$99,440.1	\$105,700.0	\$105,700.0	\$0.0
Categorical Grant: Radon	\$8,370.4	\$8,074.0	\$8,074.0	\$0.0
STAG	\$8,370.4	\$8,074.0	\$8,074.0	\$0.0
Categorical Grant: Sector Program	\$2,717.7	\$0.0	\$0.0	\$0.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
STAG	\$2,717.7	\$0.0	\$0.0	\$0.0
Categorical Grant: State and Local Air Quality Management	\$223,541.5	\$226,580.0	\$309,080.0	\$82,500.0
STAG	\$223,541.5	\$226,580.0	\$309,080.0	\$82,500.0
Categorical Grant: Targeted Watersheds	\$8,946.4	\$0.0	\$0.0	\$0.0
STAG	\$8,946.4	\$0.0	\$0.0	\$0.0
Categorical Grant: Toxics Substances Compliance	\$5,276.9	\$5,099.0	\$5,201.0	\$102.0
STAG	\$5,276.9	\$5,099.0	\$5,201.0	\$102.0
Categorical Grant: Tribal Air Quality Management	\$13,962.5	\$13,300.0	\$13,566.0	\$266.0
STAG	\$13,962.5	\$13,300.0	\$13,566.0	\$266.0
Categorical Grant: Tribal General Assistance Program	\$61,681.1	\$62,875.0	\$71,375.0	\$8,500.0
STAG	\$61,681.1	\$62,875.0	\$71,375.0	\$8,500.0
Categorical Grant: Underground Injection Control (UIC)	\$11,332.4	\$10,891.0	\$11,109.0	\$218.0
STAG	\$11,332.4	\$10,891.0	\$11,109.0	\$218.0
Categorical Grant: Underground Storage Tanks	\$4,549.5	\$2,500.0	\$2,550.0	\$50.0
STAG	\$4,549.5	\$2,500.0	\$2,550.0	\$50.0
Categorical Grant: Wastewater Operator Training	\$23.3	\$0.0	\$0.0	\$0.0
STAG	\$23.3	\$0.0	\$0.0	\$0.0
Categorical Grant: Water Quality Cooperative Agreements	\$14.0	\$0.0	\$0.0	\$0.0
STAG	\$14.0	\$0.0	\$0.0	\$0.0
Categorical Grant: Wetlands Program Development	\$15,345.1	\$16,830.0	\$17,167.0	\$337.0
STAG	\$15,345.1	\$16,830.0	\$17,167.0	\$337.0
Categorical Grant: Local Govt Climate Change	\$0.0	\$10,000.0	\$0.0	(\$10,000.0)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
STAG	\$0.0	\$10,000.0	\$0.0	(\$10,000.0)
Categorical Grants: Multi-Media Tribal Implementation	\$0.0	\$0.0	\$30,000.0	\$30,000.0
STAG	\$0.0	\$0.0	\$30,000.0	\$30,000.0
Central Planning, Budgeting, and Finance	\$115,139.8	\$111,439.0	\$114,023.0	\$2,584.0
EPM	\$89,875.3	\$82,834.0	\$86,039.0	\$3,205.0
Superfund	\$24,154.9	\$27,490.0	\$26,934.0	(\$556.0)
LUST	\$1,109.6	\$1,115.0	\$1,050.0	(\$65.0)
Children and Other Sensitive Populations: Agency Coordination	\$6,832.4	\$7,100.0	\$10,159.0	\$3,059.0
EPM	\$6,832.4	\$7,100.0	\$10,159.0	\$3,059.0
Civil Enforcement	\$140,340.9	\$148,634.0	\$191,161.0	\$42,527.0
EPM	\$138,113.2	\$146,636.0	\$187,755.0	\$41,119.0
Oil Spills	\$2,060.5	\$1,998.0	\$2,559.0	\$561.0
Superfund	\$167.2	\$0.0	\$0.0	\$0.0
LUST	\$0.0	\$0.0	\$847.0	\$847.0
Civil Rights / Title VI Compliance	\$11,898.0	\$12,224.0	\$12,366.0	\$142.0
EPM	\$11,898.0	\$12,224.0	\$12,366.0	\$142.0
Clean Air Allowance Trading Programs	\$30,254.6	\$30,754.0	\$31,157.0	\$403.0
S&T	\$9,918.4	\$9,963.0	\$9,979.0	\$16.0
EPM	\$20,336.2	\$20,791.0	\$21,178.0	\$387.0
Clean School Bus Initiative	\$45.3	\$0.0	\$0.0	\$0.0
STAG	\$45.3	\$0.0	\$0.0	\$0.0
Climate Protection Program	\$113,064.7	\$132,841.0	\$139,990.0	\$7,149.0
S&T	\$15,880.0	\$19,797.0	\$16,940.0	(\$2,857.0)
EPM	\$97,184.7	\$113,044.0	\$123,050.0	\$10,006.0
Commission for Environmental Cooperation	\$396.4	\$0.0	\$0.0	\$0.0
EPM	\$396.4	\$0.0	\$0.0	\$0.0
Compliance Assistance and Centers	\$26,113.9	\$26,688.0	\$0.0	(\$26,688.0)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
EPM	\$24,996.0	\$25,622.0	\$0.0	(\$25,622.0)
Oil Spills	\$293.5	\$269.0	\$0.0	(\$269.0)
Superfund	\$22.0	\$0.0	\$0.0	\$0.0
LUST	\$802.4	\$797.0	\$0.0	(\$797.0)
Compliance Incentives	\$8,839.3	\$9,560.0	\$0.0	(\$9,560.0)
EPM	\$8,710.0	\$9,560.0	\$0.0	(\$9,560.0)
Superfund	\$129.3	\$0.0	\$0.0	\$0.0
Compliance Monitoring	\$99,722.3	\$100,616.0	\$111,826.0	\$11,210.0
EPM	\$98,457.1	\$99,400.0	\$110,467.0	\$11,067.0
Oil Spills	\$0.0	\$0.0	\$139.0	\$139.0
Superfund	\$1,265.2	\$1,216.0	\$1,220.0	\$4.0
Congressional, Intergovernmental, External Relations	\$48,750.3	\$51,944.0	\$57,473.0	\$5,529.0
EPM	\$48,743.0	\$51,944.0	\$57,473.0	\$5,529.0
Superfund	\$7.3	\$0.0	\$0.0	\$0.0
Congressionally Mandated Projects	\$134,674.8	\$187,427.0	\$0.0	(\$187,427.0)
S&T	\$5,282.0	\$5,700.0	\$0.0	(\$5,700.0)
EPM	\$4,983.5	\$16,950.0	\$0.0	(\$16,950.0)
STAG	\$124,409.3	\$164,777.0	\$0.0	(\$164,777.0)
Criminal Enforcement	\$54,585.7	\$57,703.0	\$59,454.0	\$1,751.0
EPM	\$45,527.6	\$49,637.0	\$51,312.0	\$1,675.0
Superfund	\$9,058.1	\$8,066.0	\$8,142.0	\$76.0
Diesel Emissions Reduction Grant Program	\$44,367.3	\$60,000.0	\$60,000.0	\$0.0
STAG	\$44,367.3	\$60,000.0	\$60,000.0	\$0.0
Drinking Water Programs	\$101,610.1	\$105,861.0	\$109,155.0	\$3,294.0
S&T	\$3,359.7	\$3,637.0	\$3,827.0	\$190.0
EPM	\$98,250.4	\$102,224.0	\$105,328.0	\$3,104.0
Endocrine Disruptors	\$10,937.0	\$8,625.0	\$8,601.0	(\$24.0)
EPM	\$10,937.0	\$8,625.0	\$8,601.0	(\$24.0)
Enforcement Training	\$3,887.5	\$4,177.0	\$0.0	(\$4,177.0)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
EPM	\$3,110.6	\$3,278.0	\$0.0	(\$3,278.0)
Superfund	\$776.9	\$899.0	\$0.0	(\$899.0)
Environment and Trade	\$371.1	\$0.0	\$0.0	\$0.0
EPM	\$371.1	\$0.0	\$0.0	\$0.0
Environmental Education	\$8,762.9	\$9,038.0	\$6,448.0	(\$2,590.0)
EPM	\$8,762.9	\$9,038.0	\$6,448.0	(\$2,590.0)
Environmental Justice	\$6,084.9	\$7,885.0	\$8,123.0	\$238.0
EPM	\$5,460.3	\$7,090.0	\$7,317.0	\$227.0
Superfund	\$624.6	\$795.0	\$806.0	\$11.0
Exchange Network	\$18,363.2	\$18,457.0	\$20,135.0	\$1,678.0
EPM	\$17,440.8	\$17,024.0	\$18,702.0	\$1,678.0
Superfund	\$922.4	\$1,433.0	\$1,433.0	\$0.0
Facilities Infrastructure and Operations	\$481,429.3	\$496,978.0	\$510,344.0	\$13,366.0
S&T	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
EPM	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
B&F	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
Oil Spills	\$576.1	\$505.0	\$534.0	\$29.0
Superfund	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
LUST	\$895.5	\$904.0	\$916.0	\$12.0
Federal Stationary Source Regulations	\$29,494.5	\$27,158.0	\$34,991.0	\$7,833.0
EPM	\$29,494.5	\$27,158.0	\$34,991.0	\$7,833.0
Federal Support for Air Quality Management	\$105,095.7	\$111,062.0	\$142,331.0	\$31,269.0
S&T	\$11,395.0	\$11,443.0	\$7,697.0	(\$3,746.0)
EPM	\$93,700.7	\$99,619.0	\$134,634.0	\$35,015.0
Federal Support for Air Toxics Program	\$26,220.4	\$26,844.0	\$0.0	(\$26,844.0)
S&T	\$2,052.4	\$2,398.0	\$0.0	(\$2,398.0)
EPM	\$24,168.0	\$24,446.0	\$0.0	(\$24,446.0)
Federal Vehicle and Fuels Standards and Certification	\$76,035.5	\$91,782.0	\$100,761.0	\$8,979.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
S&T	\$76,035.5	\$91,782.0	\$100,761.0	\$8,979.0
Financial Assistance Grants / IAG Management	\$29,355.4	\$28,432.0	\$29,784.0	\$1,352.0
EPM	\$26,422.9	\$25,487.0	\$26,466.0	\$979.0
Superfund	\$2,932.5	\$2,945.0	\$3,318.0	\$373.0
Forensics Support	\$17,146.5	\$17,801.0	\$18,410.0	\$609.0
S&T	\$14,450.6	\$15,351.0	\$15,909.0	\$558.0
Superfund	\$2,695.9	\$2,450.0	\$2,501.0	\$51.0
Geographic Program: Chesapeake Bay	\$26,317.8	\$50,000.0	\$62,957.0	\$12,957.0
EPM	\$26,317.8	\$50,000.0	\$62,957.0	\$12,957.0
Geographic Program: Great Lakes	\$22,026.9	\$0.0	\$0.0	\$0.0
EPM	\$22,026.9	\$0.0	\$0.0	\$0.0
Geographic Program: Gulf of Mexico	\$4,837.5	\$6,000.0	\$4,515.0	(\$1,485.0)
EPM	\$4,837.5	\$6,000.0	\$4,515.0	(\$1,485.0)
Geographic Program: Lake Champlain	\$3,147.5	\$4,000.0	\$1,434.0	(\$2,566.0)
EPM	\$3,147.5	\$4,000.0	\$1,434.0	(\$2,566.0)
Geographic Program: Long Island Sound	\$3,072.9	\$7,000.0	\$3,000.0	(\$4,000.0)
EPM	\$3,072.9	\$7,000.0	\$3,000.0	(\$4,000.0)
Geographic Program: Other	\$5,223.2	\$7,273.0	\$4,687.0	(\$2,586.0)
EPM	\$5,223.2	\$7,273.0	\$4,687.0	(\$2,586.0)
Geographic Program: Mississippi River Basin	\$0.0	\$0.0	\$12,400.0	\$12,400.0
EPM	\$0.0	\$0.0	\$12,400.0	\$12,400.0
Geographic Program: Puget Sound	\$11,256.6	\$50,000.0	\$20,000.0	(\$30,000.0)
EPM	\$11,256.6	\$50,000.0	\$20,000.0	(\$30,000.0)
Geographic Program: San Francisco Bay	\$4,922.0	\$7,000.0	\$5,000.0	(\$2,000.0)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
EPM	\$4,922.0	\$7,000.0	\$5,000.0	(\$2,000.0)
Geographic Program: South Florida	\$2,279.6	\$2,168.0	\$2,148.0	(\$20.0)
EPM	\$2,279.6	\$2,168.0	\$2,148.0	(\$20.0)
Great Lakes Legacy Act	\$32,782.7	\$0.0	\$0.0	\$0.0
EPM	\$32,782.7	\$0.0	\$0.0	\$0.0
Great Lakes Restoration	\$0.0	\$475,000.0	\$300,000.0	(\$175,000.0)
EPM	\$0.0	\$475,000.0	\$300,000.0	(\$175,000.0)
Homeland Security: Communication and Information	\$6,983.0	\$6,926.0	\$4,324.0	(\$2,602.0)
EPM	\$6,983.0	\$6,926.0	\$4,324.0	(\$2,602.0)
Homeland Security: Critical Infrastructure Protection	\$32,565.9	\$31,622.0	\$18,520.0	(\$13,102.0)
S&T	\$23,961.7	\$23,026.0	\$16,105.0	(\$6,921.0)
EPM	\$6,837.2	\$6,836.0	\$2,415.0	(\$4,421.0)
Superfund	\$1,767.0	\$1,760.0	\$0.0	(\$1,760.0)
Homeland Security: Preparedness, Response, and Recovery	\$100,305.3	\$98,660.0	\$78,884.0	(\$19,776.0)
S&T	\$41,771.8	\$41,657.0	\$34,598.0	(\$7,059.0)
EPM	\$3,054.1	\$3,423.0	\$2,012.0	(\$1,411.0)
Superfund	\$55,479.4	\$53,580.0	\$42,274.0	(\$11,306.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	\$16,999.3	\$16,226.0	\$16,249.0	\$23.0
S&T	\$587.0	\$593.0	\$594.0	\$1.0
EPM	\$6,648.8	\$6,369.0	\$6,391.0	\$22.0
B&F	\$8,559.9	\$8,070.0	\$8,070.0	\$0.0
Superfund	\$1,203.6	\$1,194.0	\$1,194.0	\$0.0
Human Health Risk Assessment	\$45,254.5	\$48,193.0	\$48,976.0	\$783.0
S&T	\$41,478.1	\$44,789.0	\$45,626.0	\$837.0
Superfund	\$3,776.4	\$3,404.0	\$3,350.0	(\$54.0)
Human Resources Management	\$48,851.3	\$48,027.0	\$51,923.0	\$3,896.0
EPM	\$43,373.2	\$42,447.0	\$44,842.0	\$2,395.0
Superfund	\$5,475.1	\$5,580.0	\$7,081.0	\$1,501.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
LUST	\$3.0	\$0.0	\$0.0	\$0.0
IT / Data Management	\$112,128.3	\$119,068.0	\$118,891.0	(\$177.0)
S&T	\$3,852.1	\$4,385.0	\$4,111.0	(\$274.0)
EPM	\$90,809.5	\$97,410.0	\$98,060.0	\$650.0
Oil Spills	\$36.3	\$24.0	\$0.0	(\$24.0)
Superfund	\$17,266.1	\$17,087.0	\$16,720.0	(\$367.0)
LUST	\$164.3	\$162.0	\$0.0	(\$162.0)
Indoor Air: Radon Program	\$5,718.1	\$6,319.0	\$6,076.0	(\$243.0)
S&T	\$371.0	\$453.0	\$461.0	\$8.0
EPM	\$5,347.1	\$5,866.0	\$5,615.0	(\$251.0)
Information Security	\$5,578.5	\$6,697.0	\$7,758.0	\$1,061.0
EPM	\$4,565.3	\$5,912.0	\$7,030.0	\$1,118.0
Superfund	\$1,013.2	\$785.0	\$728.0	(\$57.0)
Infrastructure Assistance: Alaska Native Villages	\$18,438.4	\$13,000.0	\$10,000.0	(\$3,000.0)
STAG	\$18,438.4	\$13,000.0	\$10,000.0	(\$3,000.0)
Infrastructure Assistance: Clean Water SRF	\$706,139.0	\$2,100,000.0	\$2,000,000.0	(\$100,000.0)
STAG	\$706,139.0	\$2,100,000.0	\$2,000,000.0	(\$100,000.0)
Infrastructure Assistance: Drinking Water SRF	\$865,448.7	\$1,387,000.0	\$1,287,000.0	(\$100,000.0)
STAG	\$865,448.7	\$1,387,000.0	\$1,287,000.0	(\$100,000.0)
Infrastructure Assistance: Mexico Border	\$12,911.8	\$17,000.0	\$10,000.0	(\$7,000.0)
STAG	\$12,911.8	\$17,000.0	\$10,000.0	(\$7,000.0)
Infrastructure Assistance: Puerto Rico	\$3,849.0	\$0.0	\$0.0	\$0.0
STAG	\$3,849.0	\$0.0	\$0.0	\$0.0
International Capacity Building	\$1,072.1	\$0.0	\$0.0	\$0.0
EPM	\$1,072.1	\$0.0	\$0.0	\$0.0
International Sources of Pollution	\$6,836.1	\$8,628.0	\$8,759.0	\$131.0
EPM	\$6,836.1	\$8,628.0	\$8,759.0	\$131.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
LUST / UST	\$24,468.7	\$24,037.0	\$26,809.0	\$2,772.0
EPM	\$13,581.6	\$12,424.0	\$14,647.0	\$2,223.0
LUST	\$10,887.1	\$11,613.0	\$12,162.0	\$549.0
LUST Cooperative Agreements	\$64,864.4	\$63,570.0	\$63,192.0	(\$378.0)
LUST	\$64,864.4	\$63,570.0	\$63,192.0	(\$378.0)
LUST Prevention	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0
LUST	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0
Legal Advice: Environmental Program	\$42,633.9	\$43,408.0	\$44,754.0	\$1,346.0
EPM	\$41,917.2	\$42,662.0	\$44,002.0	\$1,340.0
Superfund	\$716.7	\$746.0	\$752.0	\$6.0
Legal Advice: Support Program	\$14,236.7	\$14,419.0	\$15,735.0	\$1,316.0
EPM	\$14,236.7	\$14,419.0	\$15,735.0	\$1,316.0
Marine Pollution	\$13,064.7	\$13,397.0	\$13,590.0	\$193.0
EPM	\$13,064.7	\$13,397.0	\$13,590.0	\$193.0
NEPA Implementation	\$15,249.8	\$18,258.0	\$18,524.0	\$266.0
EPM	\$15,249.8	\$18,258.0	\$18,524.0	\$266.0
National Estuary Program / Coastal Waterways	\$27,082.7	\$32,567.0	\$27,233.0	(\$5,334.0)
EPM	\$27,082.7	\$32,567.0	\$27,233.0	(\$5,334.0)
Not Specified	\$0.0	(\$40,000.0)	(\$10,000.0)	\$30,000.0
Rescissions	\$0.0	(\$40,000.0)	(\$10,000.0)	\$30,000.0
Oil Spill: Prevention, Preparedness and Response	\$14,445.6	\$14,944.0	\$14,547.0	(\$397.0)
Oil Spills	\$14,445.6	\$14,944.0	\$14,547.0	(\$397.0)
POPs Implementation	\$94.9	\$0.0	\$0.0	\$0.0
EPM	\$94.9	\$0.0	\$0.0	\$0.0
Pesticides: Protect Human Health from Pesticide Risk	\$64,111.6	\$66,694.0	\$68,472.0	\$1,778.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
S&T	\$3,159.3	\$3,750.0	\$3,806.0	\$56.0
EPM	\$60,952.3	\$62,944.0	\$64,666.0	\$1,722.0
Pesticides: Protect the Environment from Pesticide Risk	\$44,652.9	\$44,482.0	\$45,343.0	\$861.0
S&T	\$2,121.9	\$2,279.0	\$2,312.0	\$33.0
EPM	\$42,531.0	\$42,203.0	\$43,031.0	\$828.0
Pesticides: Realize the Value of Pesticide Availability	\$13,215.5	\$13,682.0	\$14,702.0	\$1,020.0
S&T	\$442.8	\$537.0	\$546.0	\$9.0
EPM	\$12,772.7	\$13,145.0	\$14,156.0	\$1,011.0
Pollution Prevention Program	\$19,958.8	\$18,050.0	\$15,419.0	(\$2,631.0)
EPM	\$19,958.8	\$18,050.0	\$15,419.0	(\$2,631.0)
RCRA: Corrective Action	\$38,451.0	\$40,029.0	\$40,003.0	(\$26.0)
EPM	\$38,451.0	\$40,029.0	\$40,003.0	(\$26.0)
RCRA: Waste Management	\$67,198.4	\$68,842.0	\$67,911.0	(\$931.0)
EPM	\$67,198.4	\$68,842.0	\$67,911.0	(\$931.0)
RCRA: Waste Minimization & Recycling	\$13,680.9	\$14,379.0	\$14,822.0	\$443.0
EPM	\$13,680.9	\$14,379.0	\$14,822.0	\$443.0
Radiation: Protection	\$14,745.6	\$15,885.0	\$16,159.0	\$274.0
S&T	\$2,484.4	\$2,095.0	\$2,127.0	\$32.0
EPM	\$9,962.0	\$11,295.0	\$11,439.0	\$144.0
Superfund	\$2,299.2	\$2,495.0	\$2,593.0	\$98.0
Radiation: Response Preparedness	\$6,170.1	\$7,253.0	\$7,351.0	\$98.0
S&T	\$3,497.5	\$4,176.0	\$4,263.0	\$87.0
EPM	\$2,672.6	\$3,077.0	\$3,088.0	\$11.0
Reduce Risks from Indoor Air	\$25,041.7	\$21,521.0	\$22,924.0	\$1,403.0
S&T	\$706.5	\$762.0	\$768.0	\$6.0
EPM	\$24,335.2	\$20,759.0	\$22,156.0	\$1,397.0
Regional Geographic Initiatives	\$32.5	\$0.0	\$0.0	\$0.0
EPM	\$32.5	\$0.0	\$0.0	\$0.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Regional Science and Technology	\$3,311.4	\$3,271.0	\$3,283.0	\$12.0
EPM	\$3,311.4	\$3,271.0	\$3,283.0	\$12.0
Regulatory Innovation	\$21,827.7	\$18,917.0	\$19,828.0	\$911.0
EPM	\$21,827.7	\$18,917.0	\$19,828.0	\$911.0
Regulatory/Economic-Management and Analysis	\$17,677.1	\$19,404.0	\$22,640.0	\$3,236.0
EPM	\$17,677.1	\$19,404.0	\$22,640.0	\$3,236.0
Research: Computational Toxicology	\$13,710.1	\$20,048.0	\$21,855.0	\$1,807.0
S&T	\$13,710.1	\$20,048.0	\$21,855.0	\$1,807.0
Research: Drinking Water	\$43,762.7	\$49,155.0	\$52,258.0	\$3,103.0
S&T	\$43,762.7	\$49,155.0	\$52,258.0	\$3,103.0
Research: Endocrine Disruptor	\$9,948.7	\$11,355.0	\$17,378.0	\$6,023.0
S&T	\$9,948.7	\$11,355.0	\$17,378.0	\$6,023.0
Research: Fellowships	\$5,760.7	\$11,083.0	\$17,286.0	\$6,203.0
S&T	\$5,760.7	\$11,083.0	\$17,286.0	\$6,203.0
Research: Global Change	\$17,264.1	\$20,826.0	\$21,985.0	\$1,159.0
S&T	\$17,264.1	\$20,826.0	\$21,985.0	\$1,159.0
Research: Human Health and Ecosystems	\$155,752.0	\$159,511.0	\$154,093.0	(\$5,418.0)
S&T	\$155,752.0	\$159,511.0	\$154,093.0	(\$5,418.0)
Research: Land Protection and Restoration	\$31,513.8	\$36,286.0	\$34,015.0	(\$2,271.0)
S&T	\$11,696.8	\$14,111.0	\$13,800.0	(\$311.0)
Oil Spills	\$382.8	\$639.0	\$689.0	\$50.0
Superfund	\$19,010.1	\$21,191.0	\$19,069.0	(\$2,122.0)
LUST	\$424.1	\$345.0	\$457.0	\$112.0
Research: Pesticides and Toxics	\$28,200.0	\$27,347.0	\$27,645.0	\$298.0
S&T	\$28,200.0	\$27,347.0	\$27,645.0	\$298.0
Research: Water Quality	\$64,926.0	\$61,918.0	\$68,858.0	\$6,940.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
S&T	\$64,926.0	\$61,918.0	\$68,858.0	\$6,940.0
Research: Clean Air	\$90,271.0	\$81,917.0	\$85,322.0	\$3,405.0
S&T	\$90,271.0	\$81,917.0	\$85,322.0	\$3,405.0
Research: Sustainability	\$19,541.7	\$27,360.0	\$25,292.0	(\$2,068.0)
S&T	\$19,445.7	\$27,287.0	\$25,292.0	(\$1,995.0)
Superfund	\$96.0	\$73.0	\$0.0	(\$73.0)
Science Advisory Board	\$5,052.1	\$6,278.0	\$5,902.0	(\$376.0)
EPM	\$5,052.1	\$6,278.0	\$5,902.0	(\$376.0)
Science Policy and Biotechnology	\$2,084.4	\$1,840.0	\$1,850.0	\$10.0
EPM	\$2,084.4	\$1,840.0	\$1,850.0	\$10.0
Small Business Ombudsman	\$2,623.3	\$3,028.0	\$3,040.0	\$12.0
EPM	\$2,623.3	\$3,028.0	\$3,040.0	\$12.0
Small Minority Business Assistance	\$2,319.6	\$2,350.0	\$2,358.0	\$8.0
EPM	\$2,319.6	\$2,350.0	\$2,358.0	\$8.0
State and Local Prevention and Preparedness	\$12,152.1	\$13,303.0	\$13,529.0	\$226.0
EPM	\$12,152.1	\$13,303.0	\$13,529.0	\$226.0
Stratospheric Ozone: Domestic Programs	\$5,961.8	\$5,934.0	\$5,711.0	(\$223.0)
EPM	\$5,961.8	\$5,934.0	\$5,711.0	(\$223.0)
Stratospheric Ozone: Multilateral Fund	\$9,697.0	\$9,840.0	\$9,865.0	\$25.0
EPM	\$9,697.0	\$9,840.0	\$9,865.0	\$25.0
Superfund: EPA Emergency Preparedness	\$9,934.8	\$9,632.0	\$9,776.0	\$144.0
Superfund	\$9,934.8	\$9,632.0	\$9,776.0	\$144.0
Superfund: Emergency Response and Removal	\$224,789.2	\$202,330.0	\$202,784.0	\$454.0
Superfund	\$224,789.2	\$202,330.0	\$202,784.0	\$454.0
Superfund: Enforcement	\$172,412.0	\$172,668.0	\$176,532.0	\$3,864.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Superfund	\$172,412.0	\$172,668.0	\$176,532.0	\$3,864.0
Superfund: Federal Facilities	\$32,761.5	\$32,105.0	\$31,543.0	(\$562.0)
Superfund	\$32,761.5	\$32,105.0	\$31,543.0	(\$562.0)
Superfund: Remedial	\$669,293.0	\$605,438.0	\$605,438.0	\$0.0
Superfund	\$669,293.0	\$605,438.0	\$605,438.0	\$0.0
Superfund: Support to Other Federal Agencies	\$6,575.0	\$6,575.0	\$5,920.0	(\$655.0)
Superfund	\$6,575.0	\$6,575.0	\$5,920.0	(\$655.0)
Superfund: Federal Facilities Enforcement	\$9,265.5	\$10,570.0	\$10,909.0	\$339.0
Superfund	\$9,265.5	\$10,570.0	\$10,909.0	\$339.0
Surface Water Protection	\$200,635.0	\$208,626.0	\$226,471.0	\$17,845.0
EPM	\$200,635.0	\$208,626.0	\$226,471.0	\$17,845.0
TRI / Right to Know	\$15,409.5	\$14,933.0	\$16,494.0	\$1,561.0
EPM	\$15,409.5	\$14,933.0	\$16,494.0	\$1,561.0
Targeted Airshed Grants	\$0.0	\$20,000.0	\$0.0	(\$20,000.0)
STAG	\$0.0	\$20,000.0	\$0.0	(\$20,000.0)
Toxic Substances: Chemical Risk Management	\$6,802.7	\$6,025.0	\$6,260.0	\$235.0
EPM	\$6,802.7	\$6,025.0	\$6,260.0	\$235.0
Toxic Substances: Chemical Risk Review and Reduction	\$48,269.9	\$54,886.0	\$55,820.0	\$934.0
EPM	\$48,269.9	\$54,886.0	\$55,820.0	\$934.0
Toxic Substances: Lead Risk Reduction Program	\$14,260.7	\$14,329.0	\$14,413.0	\$84.0
EPM	\$14,260.7	\$14,329.0	\$14,413.0	\$84.0
Trade and Governance	\$5,413.2	\$6,227.0	\$6,202.0	(\$25.0)
EPM	\$5,413.2	\$6,227.0	\$6,202.0	(\$25.0)
Tribal - Capacity Building	\$13,174.7	\$12,080.0	\$15,005.0	\$2,925.0
EPM	\$13,174.7	\$12,080.0	\$15,005.0	\$2,925.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
US Mexico Border	\$5,621.8	\$4,969.0	\$4,979.0	\$10.0
EPM	\$5,621.8	\$4,969.0	\$4,979.0	\$10.0
Wetlands	\$23,124.1	\$25,940.0	\$28,231.0	\$2,291.0
EPM	\$23,124.1	\$25,940.0	\$28,231.0	\$2,291.0
SUB-TOTAL, EPA	\$7,794,420.7	\$10,297,864.0	\$10,020,000.0	(\$277,864.0)
Recovery Act Resources	\$7,100,098.3	\$0.0	\$0.0	\$0.0
TOTAL, EPA	\$14,894,519.0	\$10,297,864.0	\$10,020,000.0	(\$277,864.0)

\$10M rescission implemented in FY2009 against PY funds. No impact to actuals.

**Environmental Protection Agency
FY 2011 Annual Performance Plan and Congressional Justification**

**Program Projects by Program Area
(Dollars in Thousands)**

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Science & Technology				
Air Toxics and Quality				
Clean Air Allowance Trading Programs	\$9,918.4	\$9,963.0	\$9,979.0	\$16.0
Federal Support for Air Quality Management	\$11,395.0	\$11,443.0	\$7,697.0	(\$3,746.0)
Federal Support for Air Toxics Program	\$2,052.4	\$2,398.0	\$0.0	(\$2,398.0)
Federal Vehicle and Fuels Standards and Certification	\$76,035.5	\$91,782.0	\$100,761.0	\$8,979.0
Radiation: Protection	\$2,484.4	\$2,095.0	\$2,127.0	\$32.0
Radiation: Response Preparedness	\$3,497.5	\$4,176.0	\$4,263.0	\$87.0
Subtotal, Air Toxics and Quality	\$105,383.2	\$121,857.0	\$124,827.0	\$2,970.0
Climate Protection Program				
Climate Protection Program				
<i>Energy STAR</i>	\$0.0	\$1,000.0	\$0.0	(\$1,000.0)
<i>Climate Protection Program (other activities)</i>	\$15,880.0	\$18,797.0	\$16,940.0	(\$1,857.0)
Subtotal, Climate Protection Program	\$15,880.0	\$19,797.0	\$16,940.0	(\$2,857.0)
Subtotal, Climate Protection Program	\$15,880.0	\$19,797.0	\$16,940.0	(\$2,857.0)
Enforcement				
Forensics Support	\$14,450.6	\$15,351.0	\$15,909.0	\$558.0
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
<i>Water Sentinel</i>	\$16,798.2	\$18,576.0	\$11,643.0	(\$6,933.0)
<i>Homeland Security: Critical Infrastructure Protection (other activities)</i>	\$7,163.5	\$4,450.0	\$4,462.0	\$12.0
Subtotal, Homeland Security: Critical Infrastructure Protection	\$23,961.7	\$23,026.0	\$16,105.0	(\$6,921.0)
Homeland Security: Preparedness, Response, and Recovery				
<i>Decontamination</i>	\$24,064.7	\$24,857.0	\$21,703.0	(\$3,154.0)
<i>Laboratory Preparedness and Response</i>	\$648.8	\$499.0	\$0.0	(\$499.0)
<i>Safe Building</i>	\$2,181.0	\$1,996.0	\$0.0	(\$1,996.0)
<i>Homeland Security: Preparedness, Response, and Recovery (other activities)</i>	\$14,877.3	\$14,305.0	\$12,895.0	(\$1,410.0)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Subtotal, Homeland Security: Preparedness, Response, and Recovery	\$41,771.8	\$41,657.0	\$34,598.0	(\$7,059.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	\$587.0	\$593.0	\$594.0	\$1.0
Subtotal, Homeland Security	\$66,320.5	\$65,276.0	\$51,297.0	(\$13,979.0)
Indoor Air				
Indoor Air: Radon Program	\$371.0	\$453.0	\$461.0	\$8.0
Reduce Risks from Indoor Air	\$706.5	\$762.0	\$768.0	\$6.0
Subtotal, Indoor Air	\$1,077.5	\$1,215.0	\$1,229.0	\$14.0
IT / Data Management / Security				
IT / Data Management	\$3,852.1	\$4,385.0	\$4,111.0	(\$274.0)
Operations and Administration				
Facilities Infrastructure and Operations				
<i>Rent</i>	\$36,892.0	\$33,947.0	\$30,950.0	(\$2,997.0)
<i>Utilities</i>	\$15,710.5	\$19,177.0	\$19,893.0	\$716.0
<i>Security</i>	\$8,812.7	\$10,260.0	\$10,349.0	\$89.0
<i>Facilities Infrastructure and Operations (other activities)</i>	\$12,104.4	\$9,534.0	\$9,303.0	(\$231.0)
Subtotal, Facilities Infrastructure and Operations	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Subtotal, Operations and Administration	\$73,519.6	\$72,918.0	\$70,495.0	(\$2,423.0)
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide Risk	\$3,159.3	\$3,750.0	\$3,806.0	\$56.0
Pesticides: Protect the Environment from Pesticide Risk	\$2,121.9	\$2,279.0	\$2,312.0	\$33.0
Pesticides: Realize the Value of Pesticide Availability	\$442.8	\$537.0	\$546.0	\$9.0
Subtotal, Pesticides Licensing	\$5,724.0	\$6,566.0	\$6,664.0	\$98.0
Research: Clean Air				
Research: Clean Air	\$90,271.0	\$81,917.0	\$85,322.0	\$3,405.0
Research: Global Change	\$17,264.1	\$20,826.0	\$21,985.0	\$1,159.0
Subtotal, Research: Clean Air	\$107,535.1	\$102,743.0	\$107,307.0	\$4,564.0
Research: Clean Water				
Research: Drinking Water	\$43,762.7	\$49,155.0	\$52,258.0	\$3,103.0
Research: Water Quality	\$64,926.0	\$61,918.0	\$68,858.0	\$6,940.0
Subtotal, Research: Clean Water	\$108,688.7	\$111,073.0	\$121,116.0	\$10,043.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Research / Congressional Priorities				
Congressionally Mandated Projects	\$5,282.0	\$5,700.0	\$0.0	(\$5,700.0)
Research: Human Health and Ecosystems				
Human Health Risk Assessment	\$41,478.1	\$44,789.0	\$45,626.0	\$837.0
Research: Computational Toxicology	\$13,710.1	\$20,048.0	\$21,855.0	\$1,807.0
Research: Endocrine Disruptor	\$9,948.7	\$11,355.0	\$17,378.0	\$6,023.0
Research: Fellowships	\$5,760.7	\$11,083.0	\$17,286.0	\$6,203.0
Research: Human Health and Ecosystems				
<i>Human Health</i>	\$76,613.3	\$83,904.0	\$80,122.0	(\$3,782.0)
<i>Ecosystems</i>	\$79,116.9	\$75,607.0	\$73,971.0	(\$1,636.0)
<i>Research: Human Health and Ecosystems (other activities)</i>	\$21.8	\$0.0	\$0.0	\$0.0
Subtotal, Research: Human Health and Ecosystems	\$155,752.0	\$159,511.0	\$154,093.0	(\$5,418.0)
Subtotal, Research: Human Health and Ecosystems	\$226,649.6	\$246,786.0	\$256,238.0	\$9,452.0
Research: Land Protection				
Research: Land Protection and Restoration	\$11,696.8	\$14,111.0	\$13,800.0	(\$311.0)
Research: Sustainability				
Research: Sustainability	\$19,445.7	\$27,287.0	\$25,292.0	(\$1,995.0)
Toxic Research and Prevention				
Research: Pesticides and Toxics	\$28,200.0	\$27,347.0	\$27,645.0	\$298.0
Water: Human Health Protection				
Drinking Water Programs	\$3,359.7	\$3,637.0	\$3,827.0	\$190.0
Total, Science & Technology	\$797,065.1	\$846,049.0	\$846,697.0	\$648.0
Environmental Program & Management				
Air Toxics and Quality				
Clean Air Allowance Trading Programs	\$20,336.2	\$20,791.0	\$21,178.0	\$387.0
Federal Stationary Source Regulations	\$29,494.5	\$27,158.0	\$34,991.0	\$7,833.0
Federal Support for Air Quality Management				
<i>Clean Diesel Initiative</i>	\$238.1	\$0.0	\$0.0	\$0.0
<i>Federal Support for Air Quality Management (other activities)</i>	\$93,462.6	\$99,619.0	\$134,634.0	\$35,015.0
Subtotal, Federal Support for Air Quality Management	\$93,700.7	\$99,619.0	\$134,634.0	\$35,015.0
Federal Support for Air Toxics Program	\$24,168.0	\$24,446.0	\$0.0	(\$24,446.0)
Radiation: Protection	\$9,962.0	\$11,295.0	\$11,439.0	\$144.0
Radiation: Response Preparedness	\$2,672.6	\$3,077.0	\$3,088.0	\$11.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Stratospheric Ozone: Domestic Programs	\$5,961.8	\$5,934.0	\$5,711.0	(\$223.0)
Stratospheric Ozone: Multilateral Fund	\$9,697.0	\$9,840.0	\$9,865.0	\$25.0
Subtotal, Air Toxics and Quality	\$195,992.8	\$202,160.0	\$220,906.0	\$18,746.0
Brownfields				
Brownfields	\$23,793.1	\$24,152.0	\$27,397.0	\$3,245.0
Climate Protection Program				
Climate Protection Program				
<i>Energy STAR</i>	\$39,085.5	\$52,606.0	\$55,475.0	\$2,869.0
<i>Methane to markets</i>	\$3,847.3	\$4,569.0	\$4,591.0	\$22.0
<i>Asian Pacific Partnership</i>	(\$1.0)	\$0.0	\$0.0	\$0.0
<i>Greenhouse Gas Reporting Registry</i>	\$5,163.1	\$16,685.0	\$20,750.0	\$4,065.0
<i>Climate Protection Program (other activities)</i>	\$49,089.8	\$39,184.0	\$42,234.0	\$3,050.0
Subtotal, Climate Protection Program	\$97,184.7	\$113,044.0	\$123,050.0	\$10,006.0
Subtotal, Climate Protection Program	\$97,184.7	\$113,044.0	\$123,050.0	\$10,006.0
Compliance				
Compliance Assistance and Centers	\$24,996.0	\$25,622.0	\$0.0	(\$25,622.0)
Compliance Incentives	\$8,710.0	\$9,560.0	\$0.0	(\$9,560.0)
Compliance Monitoring	\$98,457.1	\$99,400.0	\$110,467.0	\$11,067.0
Subtotal, Compliance	\$132,163.1	\$134,582.0	\$110,467.0	(\$24,115.0)
Enforcement				
Civil Enforcement	\$138,113.2	\$146,636.0	\$187,755.0	\$41,119.0
Criminal Enforcement	\$45,527.6	\$49,637.0	\$51,312.0	\$1,675.0
Enforcement Training	\$3,110.6	\$3,278.0	\$0.0	(\$3,278.0)
Environmental Justice	\$5,460.3	\$7,090.0	\$7,317.0	\$227.0
NEPA Implementation	\$15,249.8	\$18,258.0	\$18,524.0	\$266.0
Subtotal, Enforcement	\$207,461.5	\$224,899.0	\$264,908.0	\$40,009.0
Environmental Protection / Congressional Priorities				
Congressionally Mandated Projects	\$4,983.5	\$16,950.0	\$0.0	(\$16,950.0)
Geographic Programs				
Great Lakes Restoration	\$0.0	\$475,000.0	\$300,000.0	(\$175,000.0)
Geographic Program: Chesapeake Bay	\$26,317.8	\$50,000.0	\$62,957.0	\$12,957.0
Geographic Program: Great Lakes	\$22,026.9	\$0.0	\$0.0	\$0.0
Geographic Program: San Francisco Bay	\$4,922.0	\$7,000.0	\$5,000.0	(\$2,000.0)
Geographic Program: Puget Sound	\$11,256.6	\$50,000.0	\$20,000.0	(\$30,000.0)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Geographic Program: South Florida	\$2,279.6	\$2,168.0	\$2,148.0	(\$20.0)
Geographic Program: Mississippi River Basin	\$0.0	\$0.0	\$12,400.0	\$12,400.0
Geographic Program: Long Island Sound	\$3,072.9	\$7,000.0	\$3,000.0	(\$4,000.0)
Geographic Program: Gulf of Mexico	\$4,837.5	\$6,000.0	\$4,515.0	(\$1,485.0)
Geographic Program: Lake Champlain	\$3,147.5	\$4,000.0	\$1,434.0	(\$2,566.0)
Geographic Program: Other				
<i>Lake Pontchartrain</i>	\$970.0	\$1,500.0	\$978.0	(\$522.0)
<i>Community Action for a Renewed Environment (CARE)</i>	\$2,842.1	\$2,448.0	\$2,448.0	\$0.0
<i>Geographic Program: Other (other activities)</i>	\$1,411.1	\$3,325.0	\$1,261.0	(\$2,064.0)
Subtotal, Geographic Program: Other	\$5,223.2	\$7,273.0	\$4,687.0	(\$2,586.0)
Regional Geographic Initiatives	\$32.5	\$0.0	\$0.0	\$0.0
Subtotal, Geographic Programs	\$83,116.5	\$608,441.0	\$416,141.0	(\$192,300.0)
Homeland Security				
Homeland Security: Communication and Information	\$6,983.0	\$6,926.0	\$4,324.0	(\$2,602.0)
Homeland Security: Critical Infrastructure Protection				
<i>Decontamination</i>	\$122.6	\$99.0	\$0.0	(\$99.0)
<i>Homeland Security: Critical Infrastructure Protection (other activities)</i>	\$6,714.6	\$6,737.0	\$2,415.0	(\$4,322.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	\$6,837.2	\$6,836.0	\$2,415.0	(\$4,421.0)
Homeland Security: Preparedness, Response, and Recovery				
<i>Decontamination</i>	\$1,194.1	\$3,423.0	\$2,012.0	(\$1,411.0)
<i>Homeland Security: Preparedness, Response, and Recovery (other activities)</i>	\$1,860.0	\$0.0	\$0.0	\$0.0
Subtotal, Homeland Security: Preparedness, Response, and Recovery	\$3,054.1	\$3,423.0	\$2,012.0	(\$1,411.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	\$6,648.8	\$6,369.0	\$6,391.0	\$22.0
Subtotal, Homeland Security	\$23,523.1	\$23,554.0	\$15,142.0	(\$8,412.0)
Indoor Air				
Indoor Air: Radon Program	\$5,347.1	\$5,866.0	\$5,615.0	(\$251.0)
Reduce Risks from Indoor Air	\$24,335.2	\$20,759.0	\$22,156.0	\$1,397.0
Subtotal, Indoor Air	\$29,682.3	\$26,625.0	\$27,771.0	\$1,146.0
Information Exchange / Outreach				
Children and Other Sensitive Populations: Agency Coordination	\$6,832.4	\$7,100.0	\$10,159.0	\$3,059.0
Environmental Education	\$8,762.9	\$9,038.0	\$6,448.0	(\$2,590.0)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Congressional, Intergovernmental, External Relations	\$48,743.0	\$51,944.0	\$57,473.0	\$5,529.0
Exchange Network	\$17,440.8	\$17,024.0	\$18,702.0	\$1,678.0
Small Business Ombudsman	\$2,623.3	\$3,028.0	\$3,040.0	\$12.0
Small Minority Business Assistance	\$2,319.6	\$2,350.0	\$2,358.0	\$8.0
State and Local Prevention and Preparedness	\$12,152.1	\$13,303.0	\$13,529.0	\$226.0
TRI / Right to Know	\$15,409.5	\$14,933.0	\$16,494.0	\$1,561.0
Tribal - Capacity Building	\$13,174.7	\$12,080.0	\$15,005.0	\$2,925.0
Subtotal, Information Exchange / Outreach	\$127,458.3	\$130,800.0	\$143,208.0	\$12,408.0
International Programs				
US Mexico Border	\$5,621.8	\$4,969.0	\$4,979.0	\$10.0
Commission for Environmental Cooperation	\$396.4	\$0.0	\$0.0	\$0.0
Environment and Trade	\$371.1	\$0.0	\$0.0	\$0.0
International Capacity Building	\$1,072.1	\$0.0	\$0.0	\$0.0
POPs Implementation	\$94.9	\$0.0	\$0.0	\$0.0
International Sources of Pollution	\$6,836.1	\$8,628.0	\$8,759.0	\$131.0
Trade and Governance	\$5,413.2	\$6,227.0	\$6,202.0	(\$25.0)
Subtotal, International Programs	\$19,805.6	\$19,824.0	\$19,940.0	\$116.0
IT / Data Management / Security				
Information Security	\$4,565.3	\$5,912.0	\$7,030.0	\$1,118.0
IT / Data Management	\$90,809.5	\$97,410.0	\$98,060.0	\$650.0
Subtotal, IT / Data Management / Security	\$95,374.8	\$103,322.0	\$105,090.0	\$1,768.0
Legal / Science / Regulatory / Economic Review				
Administrative Law	\$4,584.8	\$5,275.0	\$5,332.0	\$57.0
Alternative Dispute Resolution	\$1,280.5	\$1,147.0	\$1,390.0	\$243.0
Civil Rights / Title VI Compliance	\$11,898.0	\$12,224.0	\$12,366.0	\$142.0
Legal Advice: Environmental Program	\$41,917.2	\$42,662.0	\$44,002.0	\$1,340.0
Legal Advice: Support Program	\$14,236.7	\$14,419.0	\$15,735.0	\$1,316.0
Regional Science and Technology	\$3,311.4	\$3,271.0	\$3,283.0	\$12.0
Regulatory Innovation	\$21,827.7	\$18,917.0	\$19,828.0	\$911.0
Regulatory/Economic-Management and Analysis	\$17,677.1	\$19,404.0	\$22,640.0	\$3,236.0
Science Advisory Board	\$5,052.1	\$6,278.0	\$5,902.0	(\$376.0)
Subtotal, Legal / Science / Regulatory / Economic Review	\$121,785.5	\$123,597.0	\$130,478.0	\$6,881.0
Operations and Administration				
Facilities Infrastructure and Operations				

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
<i>Rent</i>	\$155,471.0	\$157,040.0	\$169,915.0	\$12,875.0
<i>Utilities</i>	\$6,585.1	\$13,514.0	\$13,409.0	(\$105.0)
<i>Security</i>	\$24,545.2	\$27,997.0	\$30,901.0	\$2,904.0
<i>Facilities Infrastructure and Operations (other activities)</i>	\$116,343.3	\$116,687.0	\$115,606.0	(\$1,081.0)
Subtotal, Facilities Infrastructure and Operations	\$302,944.6	\$315,238.0	\$329,831.0	\$14,593.0
Central Planning, Budgeting, and Finance	\$89,875.3	\$82,834.0	\$86,039.0	\$3,205.0
Acquisition Management	\$31,332.7	\$32,404.0	\$33,934.0	\$1,530.0
Financial Assistance Grants / IAG Management	\$26,422.9	\$25,487.0	\$26,466.0	\$979.0
Human Resources Management	\$43,373.2	\$42,447.0	\$44,842.0	\$2,395.0
Subtotal, Operations and Administration	\$493,948.7	\$498,410.0	\$521,112.0	\$22,702.0
Pesticides Licensing				
Pesticides: Protect Human Health from Pesticide Risk	\$60,952.3	\$62,944.0	\$64,666.0	\$1,722.0
Pesticides: Protect the Environment from Pesticide Risk	\$42,531.0	\$42,203.0	\$43,031.0	\$828.0
Pesticides: Realize the Value of Pesticide Availability	\$12,772.7	\$13,145.0	\$14,156.0	\$1,011.0
Science Policy and Biotechnology	\$2,084.4	\$1,840.0	\$1,850.0	\$10.0
Subtotal, Pesticides Licensing	\$118,340.4	\$120,132.0	\$123,703.0	\$3,571.0
Resource Conservation and Recovery Act (RCRA)				
RCRA: Waste Management	\$67,198.4	\$68,842.0	\$67,911.0	(\$931.0)
RCRA: Corrective Action	\$38,451.0	\$40,029.0	\$40,003.0	(\$26.0)
RCRA: Waste Minimization & Recycling	\$13,680.9	\$14,379.0	\$14,822.0	\$443.0
Subtotal, Resource Conservation and Recovery Act (RCRA)	\$119,330.3	\$123,250.0	\$122,736.0	(\$514.0)
Toxics Risk Review and Prevention				
Endocrine Disruptors	\$10,937.0	\$8,625.0	\$8,601.0	(\$24.0)
Toxic Substances: Chemical Risk Review and Reduction				
<i>HPV/VCCEP</i>	\$10.0	\$0.0	\$0.0	\$0.0
<i>Toxic Substances: Chemical Risk Review and Reduction (other activities)</i>	\$48,259.9	\$54,886.0	\$55,820.0	\$934.0
Subtotal, Toxic Substances: Chemical Risk Review and Reduction	\$48,269.9	\$54,886.0	\$55,820.0	\$934.0
Pollution Prevention Program	\$19,958.8	\$18,050.0	\$15,419.0	(\$2,631.0)
Toxic Substances: Chemical Risk Management	\$6,802.7	\$6,025.0	\$6,260.0	\$235.0
Toxic Substances: Lead Risk Reduction Program	\$14,260.7	\$14,329.0	\$14,413.0	\$84.0
Subtotal, Toxics Risk Review and Prevention	\$100,229.1	\$101,915.0	\$100,513.0	(\$1,402.0)
Underground Storage Tanks (LUST / UST)				

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
LUST / UST	\$13,581.6	\$12,424.0	\$14,647.0	\$2,223.0
Water: Ecosystems				
Great Lakes Legacy Act	\$32,782.7	\$0.0	\$0.0	\$0.0
National Estuary Program / Coastal Waterways	\$27,082.7	\$32,567.0	\$27,233.0	(\$5,334.0)
Wetlands	\$23,124.1	\$25,940.0	\$28,231.0	\$2,291.0
Subtotal, Water: Ecosystems	\$82,989.5	\$58,507.0	\$55,464.0	(\$3,043.0)
Water: Human Health Protection				
Beach / Fish Programs	\$3,102.2	\$2,944.0	\$2,974.0	\$30.0
Drinking Water Programs	\$98,250.4	\$102,224.0	\$105,328.0	\$3,104.0
Subtotal, Water: Human Health Protection	\$101,352.6	\$105,168.0	\$108,302.0	\$3,134.0
Water Quality Protection				
Marine Pollution	\$13,064.7	\$13,397.0	\$13,590.0	\$193.0
Surface Water Protection	\$200,635.0	\$208,626.0	\$226,471.0	\$17,845.0
Subtotal, Water Quality Protection	\$213,699.7	\$222,023.0	\$240,061.0	\$18,038.0
Total, Environmental Program & Management	\$2,405,796.7	\$2,993,779.0	\$2,891,036.0	(\$102,743.0)
Inspector General				
Audits, Evaluations, and Investigations				
Audits, Evaluations, and Investigations	\$40,605.1	\$44,791.0	\$45,646.0	\$855.0
Total, Inspector General	\$40,605.1	\$44,791.0	\$45,646.0	\$855.0
Building and Facilities				
Homeland Security				
Homeland Security: Protection of EPA Personnel and Infrastructure	\$8,559.9	\$8,070.0	\$8,070.0	\$0.0
Operations and Administration				
Facilities Infrastructure and Operations	\$29,282.8	\$28,931.0	\$31,931.0	\$3,000.0
Total, Building and Facilities	\$37,842.7	\$37,001.0	\$40,001.0	\$3,000.0
Hazardous Substance Superfund				
Air Toxics and Quality				
Radiation: Protection	\$2,299.2	\$2,495.0	\$2,593.0	\$98.0
Audits, Evaluations, and Investigations				

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Audits, Evaluations, and Investigations	\$10,314.2	\$9,975.0	\$10,156.0	\$181.0
Compliance				
Compliance Assistance and Centers	\$22.0	\$0.0	\$0.0	\$0.0
Compliance Incentives	\$129.3	\$0.0	\$0.0	\$0.0
Compliance Monitoring	\$1,265.2	\$1,216.0	\$1,220.0	\$4.0
Subtotal, Compliance	\$1,416.5	\$1,216.0	\$1,220.0	\$4.0
Enforcement				
Environmental Justice	\$624.6	\$795.0	\$806.0	\$11.0
Superfund: Enforcement	\$172,412.0	\$172,668.0	\$176,532.0	\$3,864.0
Superfund: Federal Facilities Enforcement	\$9,265.5	\$10,570.0	\$10,909.0	\$339.0
Civil Enforcement	\$167.2	\$0.0	\$0.0	\$0.0
Criminal Enforcement	\$9,058.1	\$8,066.0	\$8,142.0	\$76.0
Enforcement Training	\$776.9	\$899.0	\$0.0	(\$899.0)
Forensics Support	\$2,695.9	\$2,450.0	\$2,501.0	\$51.0
Subtotal, Enforcement	\$195,000.2	\$195,448.0	\$198,890.0	\$3,442.0
Homeland Security				
Homeland Security: Critical Infrastructure Protection				
<i>Decontamination</i>	\$177.0	\$198.0	\$0.0	(\$198.0)
<i>Homeland Security: Critical Infrastructure Protection (other activities)</i>	\$1,590.0	\$1,562.0	\$0.0	(\$1,562.0)
Subtotal, Homeland Security: Critical Infrastructure Protection	\$1,767.0	\$1,760.0	\$0.0	(\$1,760.0)
Homeland Security: Preparedness, Response, and Recovery				
<i>Decontamination</i>	\$8,777.3	\$10,798.0	\$7,011.0	(\$3,787.0)
<i>Laboratory Preparedness and Response</i>	\$8,933.2	\$9,626.0	\$5,838.0	(\$3,788.0)
<i>Homeland Security: Preparedness, Response, and Recovery (other activities)</i>	\$37,768.9	\$33,156.0	\$29,425.0	(\$3,731.0)
Subtotal, Homeland Security: Preparedness, Response, and Recovery	\$55,479.4	\$53,580.0	\$42,274.0	(\$11,306.0)
Homeland Security: Protection of EPA Personnel and Infrastructure	\$1,203.6	\$1,194.0	\$1,194.0	\$0.0
Subtotal, Homeland Security	\$58,450.0	\$56,534.0	\$43,468.0	(\$13,066.0)
Information Exchange / Outreach				
Congressional, Intergovernmental, External Relations	\$7.3	\$0.0	\$0.0	\$0.0
Exchange Network	\$922.4	\$1,433.0	\$1,433.0	\$0.0
Subtotal, Information Exchange / Outreach	\$929.7	\$1,433.0	\$1,433.0	\$0.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
IT / Data Management / Security				
Information Security	\$1,013.2	\$785.0	\$728.0	(\$57.0)
IT / Data Management	\$17,266.1	\$17,087.0	\$16,720.0	(\$367.0)
Subtotal, IT / Data Management / Security	\$18,279.3	\$17,872.0	\$17,448.0	(\$424.0)
Legal / Science / Regulatory / Economic Review				
Alternative Dispute Resolution	\$1,369.4	\$893.0	\$913.0	\$20.0
Legal Advice: Environmental Program	\$716.7	\$746.0	\$752.0	\$6.0
Subtotal, Legal / Science / Regulatory / Economic Review	\$2,086.1	\$1,639.0	\$1,665.0	\$26.0
Operations and Administration				
Facilities Infrastructure and Operations				
<i>Rent</i>	\$45,071.8	\$44,300.0	\$41,888.0	(\$2,412.0)
<i>Utilities</i>	\$1,837.0	\$3,397.0	\$3,749.0	\$352.0
<i>Security</i>	\$6,056.1	\$8,299.0	\$8,412.0	\$113.0
<i>Facilities Infrastructure and Operations (other activities)</i>	\$21,245.8	\$22,486.0	\$22,588.0	\$102.0
Subtotal, Facilities Infrastructure and Operations	\$74,210.7	\$78,482.0	\$76,637.0	(\$1,845.0)
Financial Assistance Grants / IAG Management	\$2,932.5	\$2,945.0	\$3,318.0	\$373.0
Acquisition Management	\$23,521.1	\$24,684.0	\$24,337.0	(\$347.0)
Human Resources Management	\$5,475.1	\$5,580.0	\$7,081.0	\$1,501.0
Central Planning, Budgeting, and Finance	\$24,154.9	\$27,490.0	\$26,934.0	(\$556.0)
Subtotal, Operations and Administration	\$130,294.3	\$139,181.0	\$138,307.0	(\$874.0)
Research: Human Health and Ecosystems				
Human Health Risk Assessment	\$3,776.4	\$3,404.0	\$3,350.0	(\$54.0)
Research: Land Protection				
Research: Land Protection and Restoration	\$19,010.1	\$21,191.0	\$19,069.0	(\$2,122.0)
Research: Sustainability				
Research: Sustainability	\$96.0	\$73.0	\$0.0	(\$73.0)
Superfund Cleanup				
Superfund: Emergency Response and Removal	\$224,789.2	\$202,330.0	\$202,784.0	\$454.0
Superfund: EPA Emergency Preparedness	\$9,934.8	\$9,632.0	\$9,776.0	\$144.0
Superfund: Federal Facilities	\$32,761.5	\$32,105.0	\$31,543.0	(\$562.0)
Superfund: Remedial	\$669,293.0	\$605,438.0	\$605,438.0	\$0.0
Superfund: Support to Other Federal Agencies	\$6,575.0	\$6,575.0	\$5,920.0	(\$655.0)
Brownfields Projects	\$106.7	\$0.0	\$0.0	\$0.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Subtotal, Superfund Cleanup	\$943,460.2	\$856,080.0	\$855,461.0	(\$619.0)
Total, Hazardous Substance Superfund	\$1,385,412.2	\$1,306,541.0	\$1,293,060.0	(\$13,481.0)
Leaking Underground Storage Tanks				
Enforcement				
Civil Enforcement	\$0.0	\$0.0	\$847.0	\$847.0
Compliance				
Compliance Assistance and Centers	\$802.4	\$797.0	\$0.0	(\$797.0)
IT / Data Management / Security				
IT / Data Management	\$164.3	\$162.0	\$0.0	(\$162.0)
Operations and Administration				
Facilities Infrastructure and Operations				
<i>Rent</i>	\$696.0	\$696.0	\$696.0	\$0.0
<i>Facilities Infrastructure and Operations (other activities)</i>	\$199.5	\$208.0	\$220.0	\$12.0
Subtotal, Facilities Infrastructure and Operations	\$895.5	\$904.0	\$916.0	\$12.0
Acquisition Management	\$139.8	\$165.0	\$165.0	\$0.0
Central Planning, Budgeting, and Finance	\$1,109.6	\$1,115.0	\$1,050.0	(\$65.0)
Human Resources Management	\$3.0	\$0.0	\$0.0	\$0.0
Subtotal, Operations and Administration	\$2,147.9	\$2,184.0	\$2,131.0	(\$53.0)
Research: Land Protection				
Research: Land Protection and Restoration	\$424.1	\$345.0	\$457.0	\$112.0
Underground Storage Tanks (LUST / UST)				
LUST / UST				
<i>EPAAct & Related Authorities Implementation</i>	\$12.6	\$0.0	\$0.0	\$0.0
<i>LUST / UST (other activities)</i>	\$10,874.5	\$11,613.0	\$12,162.0	\$549.0
Subtotal, LUST / UST	\$10,887.1	\$11,613.0	\$12,162.0	\$549.0
LUST Cooperative Agreements				
<i>EPAAct & Related Authorities Implementation</i>	\$3,445.1	\$0.0	\$0.0	\$0.0
<i>LUST Cooperative Agreements (other activities)</i>	\$61,419.3	\$63,570.0	\$63,192.0	(\$378.0)
Subtotal, LUST Cooperative Agreements	\$64,864.4	\$63,570.0	\$63,192.0	(\$378.0)
LUST Prevention				
<i>EPAAct & Related Authorities Implementation</i>	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0
Subtotal, LUST Prevention	\$33,973.8	\$34,430.0	\$34,430.0	\$0.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Subtotal, Underground Storage Tanks (LUST / UST)	\$109,725.3	\$109,613.0	\$109,784.0	\$171.0
Total, Leaking Underground Storage Tanks	\$113,264.0	\$113,101.0	\$113,219.0	\$118.0
Oil Spill Response				
Compliance				
Compliance Assistance and Centers	\$293.5	\$269.0	\$0.0	(\$269.0)
Compliance Monitoring	\$0.0	\$0.0	\$139.0	\$139.0
Subtotal, Compliance	\$293.5	\$269.0	\$139.0	(\$130.0)
Enforcement				
Civil Enforcement	\$2,060.5	\$1,998.0	\$2,559.0	\$561.0
IT / Data Management / Security				
IT / Data Management	\$36.3	\$24.0	\$0.0	(\$24.0)
Oil				
Oil Spill: Prevention, Preparedness and Response	\$14,445.6	\$14,944.0	\$14,547.0	(\$397.0)
Operations and Administration				
Facilities Infrastructure and Operations				
<i>Rent</i>	\$538.0	\$438.0	\$438.0	\$0.0
<i>Facilities Infrastructure and Operations (other activities)</i>	\$38.1	\$67.0	\$96.0	\$29.0
Subtotal, Facilities Infrastructure and Operations	\$576.1	\$505.0	\$534.0	\$29.0
Subtotal, Operations and Administration	\$576.1	\$505.0	\$534.0	\$29.0
Research: Land Protection				
Research: Land Protection and Restoration	\$382.8	\$639.0	\$689.0	\$50.0
Total, Oil Spill Response	\$17,794.8	\$18,379.0	\$18,468.0	\$89.0
State and Tribal Assistance Grants				
State and Tribal Assistance Grants (STAG)				
Infrastructure Assistance: Clean Water SRF	\$706,139.0	\$2,100,000.0	\$2,000,000.0	(\$100,000.0)
Infrastructure Assistance: Drinking Water SRF	\$865,448.7	\$1,387,000.0	\$1,287,000.0	(\$100,000.0)
Congressionally Mandated Projects	\$124,409.3	\$164,777.0	\$0.0	(\$164,777.0)
Infrastructure Assistance: Alaska Native Villages	\$18,438.4	\$13,000.0	\$10,000.0	(\$3,000.0)
Brownfields Projects	\$101,918.0	\$100,000.0	\$138,254.0	\$38,254.0
Clean School Bus Initiative	\$45.3	\$0.0	\$0.0	\$0.0
Diesel Emissions Reduction Grant Program				

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
<i>EPA Act & Related Authorities Implementation</i>	\$0.0	\$60,000.0	\$60,000.0	\$0.0
<i>CA Emission Reduction Project Grants</i>	\$15,000.0	\$0.0	\$0.0	\$0.0
<i>Diesel Emissions Reduction Grant Program (other activities)</i>	\$29,367.3	\$0.0	\$0.0	\$0.0
Subtotal, Diesel Emissions Reduction Grant Program	\$44,367.3	\$60,000.0	\$60,000.0	\$0.0
Targeted Airshed Grants	\$0.0	\$20,000.0	\$0.0	(\$20,000.0)
Infrastructure Assistance: Mexico Border	\$12,911.8	\$17,000.0	\$10,000.0	(\$7,000.0)
Infrastructure Assistance: Puerto Rico	\$3,849.0	\$0.0	\$0.0	\$0.0
Subtotal, State and Tribal Assistance Grants (STAG)	\$1,877,526.8	\$3,861,777.0	\$3,505,254.0	(\$356,523.0)
Categorical Grants				
Categorical Grant: Beaches Protection	\$9,905.2	\$9,900.0	\$9,900.0	\$0.0
Categorical Grant: Brownfields	\$50,586.9	\$49,495.0	\$49,495.0	\$0.0
Categorical Grant: Environmental Information	\$12,628.5	\$10,000.0	\$10,200.0	\$200.0
Categorical Grant: Hazardous Waste Financial Assistance	\$102,332.3	\$103,346.0	\$105,412.0	\$2,066.0
Categorical Grant: Homeland Security	\$5,916.9	\$0.0	\$0.0	\$0.0
Categorical Grant: Lead	\$14,295.1	\$14,564.0	\$14,855.0	\$291.0
Categorical Grant: Local Govt Climate Change	\$0.0	\$10,000.0	\$0.0	(\$10,000.0)
Categorical Grant: Nonpoint Source (Sec. 319)	\$214,498.2	\$200,857.0	\$200,857.0	\$0.0
Categorical Grants: Multi-Media Tribal Implementation	\$0.0	\$0.0	\$30,000.0	\$30,000.0
Categorical Grant: Pesticides Enforcement	\$19,208.7	\$18,711.0	\$19,085.0	\$374.0
Categorical Grant: Pesticides Program Implementation	\$12,772.0	\$13,520.0	\$13,690.0	\$170.0
Categorical Grant: Pollution Control (Sec. 106)				
<i>Monitoring Grants</i>	\$12,975.8	\$18,500.0	\$23,500.0	\$5,000.0
<i>Categorical Grant: Pollution Control (Sec. 106) (other activities)</i>	\$203,860.5	\$210,764.0	\$250,764.0	\$40,000.0
Subtotal, Categorical Grant: Pollution Control (Sec. 106)	\$216,836.3	\$229,264.0	\$274,264.0	\$45,000.0
Categorical Grant: Pollution Prevention	\$4,932.3	\$4,940.0	\$5,039.0	\$99.0
Categorical Grant: Public Water System Supervision (PWSS)	\$99,440.1	\$105,700.0	\$105,700.0	\$0.0
Categorical Grant: Radon	\$8,370.4	\$8,074.0	\$8,074.0	\$0.0
Categorical Grant: Sector Program	\$2,717.7	\$0.0	\$0.0	\$0.0
Categorical Grant: State and Local Air Quality Management	\$223,541.5	\$226,580.0	\$309,080.0	\$82,500.0
Categorical Grant: Targeted Watersheds	\$8,946.4	\$0.0	\$0.0	\$0.0
Categorical Grant: Toxics Substances Compliance	\$5,276.9	\$5,099.0	\$5,201.0	\$102.0
Categorical Grant: Tribal Air Quality Management	\$13,962.5	\$13,300.0	\$13,566.0	\$266.0
Categorical Grant: Tribal General Assistance Program	\$61,681.1	\$62,875.0	\$71,375.0	\$8,500.0
Categorical Grant: Underground Injection Control (UIC)	\$11,332.4	\$10,891.0	\$11,109.0	\$218.0

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	Pres Bud vs. Enacted
Categorical Grant: Underground Storage Tanks	\$4,549.5	\$2,500.0	\$2,550.0	\$50.0
Categorical Grant: Wastewater Operator Training	\$23.3	\$0.0	\$0.0	\$0.0
Categorical Grant: Water Quality Cooperative Agreements	\$14.0	\$0.0	\$0.0	\$0.0
Categorical Grant: Wetlands Program Development	\$15,345.1	\$16,830.0	\$17,167.0	\$337.0
Subtotal, Categorical Grants	\$1,119,113.3	\$1,116,446.0	\$1,276,619.0	\$160,173.0
Total, State and Tribal Assistance Grants	\$2,996,640.1	\$4,978,223.0	\$4,781,873.0	(\$196,350.0)
Rescission of Prior Year Funds				
(no Program Area specified)				
Not Specified	\$0.0	(\$40,000.0)	(\$10,000.0)	\$30,000.0
Total, Rescission of Prior Year Funds	\$0.0	(\$40,000.0)	(\$10,000.0)	\$30,000.0
SUB-TOTAL, EPA	\$7,794,420.7	\$10,297,864.0	\$10,020,000.0	(\$277,864.0)
Recovery Act Resources	\$7,100,098.3	\$0.0	\$0.0	\$0.0
TOTAL, EPA	\$14,894,519.0	\$10,297,864.0	\$10,020,000.0	(\$277,864.0)

\$10M rescission implemented in FY2009 against PY funds. No impact to actuals.

Discontinued Programs

Categorical Grant: Homeland Security

Program Area: Categorical Grants

Goal: Clean and Safe Water

Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$5,916.9</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>(\$0.0)</i>
Total Budget Authority / Obligations	\$5,916.9	\$0.0	\$0.0	(\$0.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

The Homeland Security Grant program focused on supporting states with coordination activities for critical water infrastructure security efforts, including coordinating and providing technical assistance, training, and education within the state or territory on homeland security issues.

FY 2011 Activities and Performance Plan:

There is no request for this program in FY 2011. There are no performance measures for this program (previously under EPA's Protect Water Quality objective).

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

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

Categorical Grant: Puerto Rico
 Program Area: Infrastructure Assistance
 Goal: Clean and Safe Water
 Objective(s): Protect Human Health

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$3,849.0</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>(\$0.0)</i>
Total Budget Authority / Obligations	\$3,849.0	\$0.0	\$0.0	(\$0.0)
Total Workyears	0.0	0.0	0.0	0.0

Program Project Description:

This program was created to contribute to the design for an upgrade of Metropolitan’s Sergio Cuervas drinking water treatment plant in San Juan, Puerto Rico. EPA contributed funds based on a FY 2004 design cost estimate for bringing the plant into compliance with current regulatory requirements.

FY 2011 Activities and Performance Plan:

EPA is not requesting funding for this program project in FY 2011.

Performance Targets:

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

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

SDWA.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$2,717.7	\$0.0	\$0.0	\$0.0
Total Budget Authority / Obligations	\$2,717.7	\$0.0	\$0.0	(\$0.0)
Total Workyears	0.0	0.0	0.0	(0.0)

Program Project Description:

Sector program grants built 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 supported state and Tribal agencies that are responsible for implementing authorized, delegated, or approved environmental programs.¹⁴

EPA has used this grant to support states and tribes in their efforts to build, implement, or improve compliance capacity for authorized, delegated, or approved environmental programs. Specific activities have included: 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.

FY 2011 Activities and Performance Plan:

Program was discontinued in FY 2010. There is no request for this program in FY 2011.

Performance Targets:

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

FY 2011 Change from FY 2010 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.

¹⁴ For more information, refer to: www.epa.gov/compliance/state/grants/stag/index.html

Categorical Grant: Targeted Watersheds

Program Area: Categorical Grants

Goal: Healthy Communities and Ecosystems

Objective(s): Restore and Protect Critical Ecosystems

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$8,946.4</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>(\$0.0)</i>
Total Budget Authority / Obligations	\$8,946.4	\$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 2011 Activities and Performance Plan:

There is no request for this program in FY 2011. There are no current performance measures for this program (previously under EPA's Protect Water Quality objective).

FY 2011 Change from FY 2010 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: Wastewater Operator Training

Program Area: Categorical Grant

Goal: Clean and Safe Water

Objective(s): Protect Water Quality

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	\$23.3	\$0.0	\$0.0	(\$0.0)
Total Budget Authority / Obligations	\$23.3	\$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 2011 Activities and Performance Plan:

There is no request for this program in FY 2011. There are no current performance measures for this program (previously under EPA's Protect Water Quality Objective).

FY 2011 Change from FY 2010 Enacted (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CWA.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>State and Tribal Assistance Grants</i>	<i>\$14.0</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>(\$0.0)</i>
Total Budget Authority / Obligations	\$14.0	\$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 2011 Activities and Performance Plan:

There is no request for this program in FY 2011. There are no current performance measures for this program (previously under EPA's Protect Water Quality objective).

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

CWA.

Compliance Assistance and Centers

Program Area: Compliance

Goal: Compliance and Environmental Stewardship

Objective(s): Achieve Environmental Protection through Improved Compliance

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$24,996.0	\$25,622.0	\$0.0	(\$25,622.0)
Leaking Underground Storage Tanks	\$802.4	\$797.0	\$0.0	(\$797.0)
Oil Spill Response	\$293.5	\$269.0	\$0.0	(\$269.0)
<i>Hazardous Substance Superfund</i>	<i>\$22.0</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$26,113.9	\$26,688.0	\$0.0	(\$26,688.0)
Total Workyears	179.8	173.7	\$0.0	(173.7)

Program Project Description:

EPA's Compliance Assistance program provides information to millions of regulated entities and Federal agencies 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 Web sites, compliance guides, emission calculators, and training materials aimed at specific business communities or industry sectors. Additionally, onsite compliance assistance and information is sometimes provided by EPA inspectors during an inspection.

FY 2011 Activities and Performance Plan:

The activities previously funded from the Superfund appropriation for the Compliance Assistance program for supporting Integrated Compliance Information System (ICIS) have been consolidated with the rest of the Agency's ICIS Superfund budget in the Compliance Monitoring program. No new activities or funding is planned for this program in FY 2011.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

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 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
Environmental Program & Management	\$8,710.0	\$9,560.0	\$0.0	(\$9,560.0)
<i>Hazardous Substance Superfund</i>	<i>\$129.3</i>	<i>\$0.0</i>	<i>\$0.0</i>	<i>\$0.0</i>
Total Budget Authority / Obligations	\$8,839.3	\$9,560.0	\$0.0	(\$9,560.0)
Total Workyears	58.7	62.5	0.0	(62.5)

Program Project Description:

EPA's Compliance Incentives program encouraged 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.

FY 2011 Activities and Performance Plan:

The activities previously funded from the Superfund appropriation for the Compliance Incentives program for supporting Integrated Compliance Information System (ICIS) have been consolidated with the rest of the Agency's ICIS Superfund budget in the Compliance Monitoring program in FY 2011.

FY 2011 Change from FY 2010 Enacted Budget (Dollars in Thousands):

- No change in program funding.

Statutory Authority:

RCRA; CWA; SDWA; CAA; TSCA; EPCRA; RLBPHRA; FIFRA; ODA; NEPA; NAAEC; LPA-US/MX-BR.

Regional Geographic Initiatives

Program Area: Geographic Programs

Goal: Healthy Communities and Ecosystems

Objective(s): Communities

(Dollars in Thousands)

	FY 2009 Actuals	FY 2010 Enacted	FY 2011 Pres Bud	FY 2011 Pres Bud v. FY 2010 Enacted
<i>Environmental Program Management</i>	\$32.5	\$0.0	\$0.0	(\$0.0)
Total Budget Authority / Obligations	\$32.5	\$0.0	\$0.0	(\$0.0)
Total Workyears	0.00	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 2011 Activities and Performance Plan

There is no request for this program in FY 2011. There are no current performance measures for this program (previously under EPA's Objective 4.2: Communities).

FY 2011 Change from FY 2010 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.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2010	020-00-04-00-04-0160-24	\$486.450
2011	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)
2010	020-00-01-16-04-0230-24	\$124.454
2011	020-00-01-16-04-0230-24	\$108.139

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)
2010	020-00-01-16-02-4300-24	\$17.134
2011	020-00-01-16-02-4300-24	\$8.808

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 has completed migration to the federal eOPF system. 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)
2010	020-00-01-16-03-1219-24	\$372.870
2011	020-00-01-16-03-1219-24	\$387.666

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)
2010	020-00-01-16-04-1218-24	\$110.544
2011	020-00-01-16-04-1218-24	\$110.544

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)
2010	020-00-01-16-03-1217-24	*
2011	020-00-01-16-03-1217-24	*

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)
2010	020-00-01-16-04-1200-24	\$65.217
2011	020-00-01-16-04-1200-24	\$65.217

* The FY 2010 allocation of the Agency's contribution is still pending. The Agency has assumed the same level as FY 2010.

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)
2010	020-00-04-00-04-1300-24	\$59.316
2011	020-00-04-00-04-1300-24	\$59.316

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. 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. In addition, with the launch of the Business.gov Community, small business users are able to interact on-line where they can discuss, share and ask questions of other business owners as well as industry and government experts. 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.

Beginning in FY2009 the Business Gateway program has been fully funded by the Small Business Administration (SBA), the managing partner. EPA plans to continue its partnership with Business Gateway program, however there will be no transfer of funds in FY2010 and FY2011.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2010		\$0
2011		\$0

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 2010 and FY 2011 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 2008-2009, EPA has played a key leadership role in a GeoLoB Workgroup to explore opportunities for Federal-wide acquisition of key geospatial software and data. In early FY 2010, the first of these acquisitions became available to the Federal community through the Smartbuy Program managed by our GeoLoB partners at GSA. It is anticipated that this year, at least 2-3 additional Federal-wide common services will be made available in addition to Smartbuy.

EPA benefits from Geospatial LoB in FY 2011 are anticipated to be the same as those described for FY 2010.

Fiscal Year	Account Code	EPA Contribution (in thousands)
2010	020-00-01-16-04-3100-24	\$42.000
2011	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) currently supports 165 federal entities including all Cabinet-level Departments and independent rulemaking agencies which collectively promulgate over 90 percent of all 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 approximately 1,600 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. For calendar year 2009, EPA posted 735 rules and proposed rules, 1,409 *Federal Register* notices, and 96,544 public submissions in *Regulations.gov*. EPA also posted over 18,000 documents that were supporting and related materials associated with other postings. Overall, EPA provides public access to more than 481,000 documents in *Regulations.gov*.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2010	020-00-01-16-01-0060-24	\$1,057.931
2011	020-00-01-16-01-0060-24	\$613.000

E-Travel

E-Travel provides EPA with 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.

Fiscal Year	Account Code	EPA Service Fee (in thousands)
2010	020-00-01-01-03-0220-24	\$1,099.540
2011	020-00-01-01-03-0220-24	\$1,105.486

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, 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)
2010	020-00-01-01-04-1100-24	\$44.444
2011	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)
2010	010-00-01-01-04-3200-24	\$95.000
2011	010-00-01-01-04-3200-24	\$105.000

IT Dashboard:

The IT Dashboard provides the public with an online window into the details of Federal information technology investments and provides users with the ability to track the progress of investments over time. For more information, please visit: <http://it.usaspending.gov>.

SUPERFUND SPECIAL ACCOUNTS¹⁵

Section 122(b)(3) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) authorizes EPA to retain and use funds received pursuant to an agreement with a Potentially Responsible Party (PRP) to carry out the purpose of that agreement. EPA retains such funds in special accounts, which are sub-accounts in EPA's Superfund Trust Fund. Pursuant to the specific agreements, which typically take the form of an Administrative Order on Consent or Consent Decree, EPA uses special account funds to finance site-specific CERCLA response actions at the site for which the account was established. Through the use of special accounts, EPA pursues its "enforcement first" policy – ensuring responsible parties pay for cleanup – so that appropriated resources from the Superfund Trust Fund are conserved for sites where no viable or liable PRPs can be identified. Both special account resources and appropriated resources are critical to the Superfund program.

Special account funds are used to conduct many different site-specific CERCLA response actions, including, but not limited to, investigations to determine the extent of contamination and appropriate remedy needed, construction and implementation of the remedy, enforcement activities, and post-construction activities. EPA may also provide special account funds to a PRP who agrees to perform work under an agreement, as an incentive (in the form of a reimbursement) to perform additional work beyond the PRP's fair share at the site, which EPA might otherwise have to conduct using appropriated resources. Because response actions may take many years, the full use of special account funds may also take many years. Per the terms of the agreement, once site-specific work is complete and site risks are addressed, EPA may use special account funds to reimburse EPA for site-specific costs incurred using appropriated resources (*e.g.*, reclassification), allowing the latter resources to be allocated to other sites. Any remaining special account funds are generally transferred to the Superfund Trust Fund, where they are available for future appropriation by Congress to further support cleanup at other sites.

Since the inception of special accounts through the end of FY 2009, EPA has collected approximately \$2.59 billion from PRPs and earned \$372.3 million in interest. EPA has also transferred a cumulative \$11.6 million to the Superfund Trust Fund. As of the end of FY 2009, \$1.43 billion has been disbursed to finance site response actions and \$184.3 million has been obligated but not yet disbursed. EPA is carefully managing the \$1.34 billion that was available as of October 1, 2009 and has developed multi-year plans to use these funds as expeditiously as possible. The majority of accounts (68%) have an available balance of less than \$500,000, while 2% of accounts have an available balance of \$10 million or more. The following table illustrates the cumulative status of open and closed accounts, FY 2009 program activity, and planned multi-year uses of the available balance.

¹⁵ House Report 111-180 of the FY 2010 Department of Interior, Environment and Related Agencies Appropriation Bill directs the Agency to include in its annual budget justification a plan for using special account funds expeditiously. This information is being provided in response to this request.

**SPECIAL ACCOUNTS:
FY 2009 Program Actuals and Future Multi-Year Program Resource Plan**

Account Status ¹		Number of Accounts
Cumulative Open		905
Cumulative Closed		43
FY 2009 Inputs and Outputs to 2008 End of Fiscal Year (EOFY) Available Balance ¹		\$ in Thousands
	2008 EOFY Available Balance	\$1,323,594.5
	FY 2009 Activities	
	+ Receipts	\$237,089.4
	- Transfers to Superfund Trust Fund (Receipt Adjustment)	(\$9,541.4)
	+ Interest Earned	\$25,466.4
	- Net Change in Unliquidated Obligations	(\$37,520.8)
	- Disbursements for EPA Incurred Costs	(\$167,643.5)
	- Disbursements for Work Party Reimbursements under Final Settlements	(\$14,339.1)
	- Reclassifications	(\$14,391.9)
	2009 EOFY Available Balance ²	\$1,342,713.7
Multi-Year Plans for EOFY 2009 Available Balance		\$ in Thousands
	2009 EOFY Available Balance ²	\$1,342,713.7
	• Estimates for Future EPA Site Activities ³	\$1,181,142.7
	• Estimates for Potential Disbursements to Work Parties Identified in Final Settlements ⁴	\$39,173.8
	• Estimates for Reclassifications for FYs 2010-2012 ⁵	\$58,348.4
	• Estimates for Transfers to Trust Fund for FYs 2010-2012 ⁵	\$4,954.9
	• Available Balance To Be Assigned ⁶	\$59,093.8
¹ FY 2009 data is as of 10/01/2009. The 2008 End of Fiscal Year (EOFY) Available Balance is as of 10/01/2008.		
² Numbers may not add due to rounding.		
³ “Estimates for Future EPA Site Activities” includes all response actions that EPA may conduct or oversee in the future, such as removal, remedial, enforcement, post-construction activities as well as allocation of funds for settlement incentives to encourage PRPs to perform the cleanup. Planning data are multi-year and cannot be used for annual comparisons.		
⁴ “Estimates for Potential Disbursements to Work Parties Identified in Final Settlements” includes those funds that have already been designated in a settlement document, such as a Consent Decree or Administrative Order on Consent, to be available to a PRP for reimbursements but that have not yet been obligated.		
⁵ “Reclassifications” and “Transfers to the Trust Fund” are estimated for three FYs only.		
⁶ Planning data were recorded in the Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) as of 10/16/2009 in reference to special account available balances as of 10/01/2009. Receipts collected in the last quarter of the fiscal year may not have been fully planned for use in CERCLIS at the time of data entry and are reflected in “Available Balance To Be Assigned.”		

Environmental Protection Agency
HIGH PRIORITY PERFORMANCE GOALS (HPPGS)

The Environmental Protection Agency develops a 5-year strategic plan, as well as an annual performance plan and annual reports on our progress. As part of developing the FY 2011 Budget and Performance Plan, the Environmental Protection Agency has also identified a limited number of high priority performance goals that will be a particular focus over the next two years. These goals are a subset of those used to regularly monitor and report performance. To view the full set of performance information please visit www.epa.gov/ocfo/par/2009par/.

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

EPA's High Priority Performance Goals:

I. EPA will improve the country's ability to measure and control Green House Gas (GHG) emissions. Building a foundation for action is essential.

- By June 15, 2011, EPA will make publically available 100% of facility-level GHG emissions data submitted to EPA in compliance with the GHG Reporting Rule.
- In 2011, EPA, working with US DOT, will begin implementation of regulations designed to reduce the GHG emissions from light duty vehicles sold in the US starting with model year 2012.

II. Clean water is essential for our quality of life and the health of our communities. EPA will take actions over the next two years to improve water quality.

- All Chesapeake Bay watershed States (including the District of Columbia) will develop and submit approvable Phase I watershed implementation plans by the end of CY 2010 and Phase II plans by the end of CY 2011 in support of EPA's final Chesapeake Bay Total Maximum Daily Load (TMDL).
- By the end of fiscal year 2011, increase the percent of federal CWA discharge permit enforcement actions that reduce pollutant discharges into impaired waterways from 20% (FY 2009 baseline) to 25% and promote transparency and right-to-know by posting results and analysis on the web.
- EPA will initiate over the next two years, at least four drinking water standard reviews to strengthen public health protection.

III. EPA will ensure that environmental health and protection is delivered to our communities.

- By 2012, EPA will have initiated 20 enhanced Brownfields community level projects that will include a new area-wide planning effort to benefit under-served and economically disadvantaged communities. This will allow those communities to assess and address multiple Brownfields sites within their boundaries, thereby advancing area-wide planning and cleanups and enabling redevelopment of Brownfields properties on a broader scale than on individual sites. EPA will provide technical assistance, coordinate its enforcement, water, and air quality programs, and work with other federal agencies, states, tribes and local governments to implement associated targeted environmental improvements identified in each community's area-wide plan.

2009 AMERICAN RECOVERY AND REINVESTMENT ACT
Summary of EPA Programs

Introduction: The American Recovery and Reinvestment Act of 2009 (ARRA or Recovery Act) provided EPA with \$7.22 billion 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 (CWSRFs), Drinking Water State Revolving Fund (DWSRFs), Superfund Hazardous Waste Fund (SF), Diesel Emissions Reduction (DERA), Leaking Underground Storage Tanks (LUST) and Brownfields programs.

EPA’s Recovery Act website (<http://www.epa.gov/recovery/>) contains links and further details including more up-to-date performance, financial and recipient reporting data. Tab 11 in this Congressional Justification contains performance data of the regular appropriated “base” programs as well as those of the 2009 Recovery Act.

EPA 2009 Recovery Act Funding Summary
(Dollars in Millions)

EPA Program	Total Appropriated	Current M&O Budgets (1)	Program Budgets (2)
Clean Water State Revolving Fund (CWSRF)	\$4,000.0	\$31.0	\$3,969.0
Drinking Water State Revolving Fund (DWSRF)	\$2,000.0	\$20.0	\$1,980.0
Superfund Remedial	\$600.0	\$18.0	\$582.0
Leaking Underground Storage Tanks (LUST)	\$200.0	\$3.0	\$197.0
Brownfields	\$100.0	\$3.5	\$96.5
Diesel Emission Grants (DERA)	\$300.0	\$6.0	\$294.0
Inspector General (IG)	\$20.0	NA	NA
Totals	\$7,220.0	\$81.5	\$7,118.5

Chart Notes:

- 1) ARRA authorized EPA to move a certain level of funding to the Environmental Programs and Management (EPM) account for M&O activities, which are described in Program Project Fact Sheet in the EPM Section of the Congressional Justification.
- 2) States are allowed to switch funding between the SRF programs, so the final SRF program budget totals may change.

Overall Program Descriptions.

- **CWSRFs** - \$4 Billion for capitalization grants awarded by the Clean Water State Revolving Fund (CWSRF) authorized by Title VI of the Federal Water Pollution Control

Act; and grants awarded to carry out planning under Clean Water Act Sections 205(j) and 303(e), pursuant to the reservation of CWSRF funds under Section 604(b);

- **DWSRFs** - \$2 Billion for capitalization grants awarded by the Drinking Water State Revolving Fund (DWSRF) authorized by Section 1452 of the Safe Drinking Water Act;
- **Superfund Remedial** - \$600 million for Superfund remedial program activities authorized under Section 104 of the Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA);
- **Diesel Emission Grants** - \$300 million for grants awarded by the Diesel Emissions Reductions Program authorized by Title VII, Subtitle G of the Energy Policy Act of 2005. The \$300 million is distributed among 4 DERA programs: the State Clean Diesel Grant Program (\$88 million), the National Clean Diesel Program (\$156 million), the Emerging Technology Program (\$20 million), and the SmartWay Clean Diesel Finance Program (\$30 million) as well as \$6 million for M&O.
- **LUST (Tank) Cleanups** - \$200 million for Leaking Underground Storage Tanks (LUST) cleanup activities authorized under Section 9003(h) of the Solid Waste Disposal Act; and
- **Brownfields** - \$100 million for grants, cooperative agreements, and other activities conducted by the Brownfields Program authorized by Section 104(k) of Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA).

Program Overviews of EPA ARRA Programs. Below are program descriptions for each of EPA's Recovery Act programs, including overall program descriptions, project examples, performance measures, funding sources, major process steps and description of particular Recovery Act requirements if applicable.

1. Clean Water State Revolving Funds (CWSRFs)

Program Description:

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. For the District of Columbia and the territories, funds are used for direct grants for similar purposes. 1.5 percent of the funds are set-aside for wastewater infrastructure improvements on tribal lands. 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. CWSRF projects are selected based on statutory principles (i.e., public health and water quality goals) carried out through state-established priority systems.

ARRA created numerous requirements that did not apply previously to the Agency's SRF programs (i.e., Buy American, Green Project Reserve, and Davis-Bacon). These requirements created a challenge for EPA, states and tribes. However, the states are now proceeding toward the goal of having all projects under contract or under construction by February 17, 2010, as required by law.

Examples:

- Gorst, Washington Sewage Treatment Plant Project will protect Puget Sound. Construction of two sewer pump stations is scheduled for the summer of 2010. Sewer lines will be buried in the ground to serve nearly 100 Gorst residents and nearly all the businesses throughout the area. Much of the project's \$5 million cost will be paid by the federal economic stimulus program. Kitsap County health officials have been monitoring failing septic systems in Gorst for years.
- EPA awarded the Navajo Nation \$9.8 million for 30 wastewater projects benefiting the Navajo Nation ranging from septic tank and drainfield upgrades and renovations to restoration and repairs at several wastewater treatment facilities located within the Nation to serve 4,577 homes. Funds will also be used to launch the first phase of a drinking water line extension project. Over 20 percent of the Navajo ARRA will fund "green" decentralized wastewater systems.

Strategic Plan and Performance Goals: 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*.

More detailed information on CWSRF Recovery Act performance measures and results can be found in the program plans at www.Recovery.gov. Annual performance measures impacted by Recovery Act funding are annotated in the Congressional Justification.

Funding Source: 68-0102 - State and Tribal Assistance Grants (STAG).

Funding Process Steps. (Please note that these steps are similar to, but not exactly the same as, those of the DWSRF program)

1. Federal Funding Steps

- a. **Appropriation** – Congress passes and the President signs into law a bill giving money to the agency for certain program
- b. **Apportionment** – OMB distributed the funds to the appropriate accounts making the funds available
- c. **Allotment** – EPA allots funds to the State according to CWA formula or SDWA needs survey
- d. **Application** – State applies to EPA for grant award, including an Intended Use Plan that includes:
 - i. How use of the fund will support the goals of SRF
 - ii. List of Projects including type and amount of assistance
 - iii. List of non-point and national estuary protection activities expect to be funded (unique to CWSRF)
 - iv. Criteria and method for distribution of funds
 - v. Description of method used to select treatment projects (not a point based selection system like DWSRF, but the logic does need to be explained)
- e. **Award and Obligation** – EPA awards grants to States, obligating the funds to the States. Please note dollars are obligated but no dollars are disbursed to states until Step 4.

2. State Project Evaluation and Awards

- a. **State Evaluation** - States evaluate and prioritize potential projects.
- b. **Assistance Agreements Approval** – States award funds to projects in the form of loans, and in the case of ARRA funds, potentially in the form of grants. (Note: States often refer to this as their obligation – as with the above no funds are disbursed by the State.)

3. Recipients' Project Construction and Management

- a. **Contracts Awarded** – Assistance recipient signs contracts in an amount equal to the assistance received – allows construction to commence
- b. **Construction** - Heavy construction normally take 18-36 months. Time varies by size, location and complexity of the project, as well as by the affect of seasons.
- c. **Funds Outlay** – As construction is completed, recipients incurs costs. (Note funds are outlaid as construction is completed ending after construction is complete.)

4. Cost Reimbursement and Billing

- a. **Costs Incurred** - Recipients incur costs and invoice State SRF program,
- b. **Recipients bill States.** Recipients invoice State SRF programs
- c. **State review and reimbursement.** State SRF programs evaluate claims and reimburses costs
- d. **States submit claims to EPA** - State submits reimbursement for incurred costs by drawing down funds from EPA.
- e. **Federal Outlay** – EPA evaluates draw-downs and either approves draw-downs or requests adjustments (if needed)

Major Recovery Act SRF Additional Requirements and Process Changes. (Please note that these also apply to the DWSRF program).

In implementing the \$6 billion Recovery Act SRF program, EPA is on course to provide 5 times as much funding in half the time than the program has in recent years – while complying with significant additional legal and reporting requirements. Below are some of the major challenges and additional requirements.

Accelerated Schedule. Previously SRF funds were appropriated with a two-year deadline to contract the funds. The Recovery Act included a deadline that all funds had to be under contract within one year - by February 17, 2010. All project funds that are not placed under contract must be re-allotted to states that completely met their under-contract deadline and provided a list of additional eligible projects to the Agency.

Additional Conditions. The Recovery Act included additional provisions and set asides.

- Davis-Bacon requires recipients to pay at prevailing wage rates and document their compliance.
- “Buy American” provisions required the use of U.S.-made supplies in many cases where previous suppliers had been foreign.

- "Green projects" included a requirement that 20% of projects would meet specific "green criteria, to the extent there were sufficient applications . This new concept required additional guidance and training from EPA.
- Matching Funds. ARRA funds could also be provided as grants, with no matching requirements.
- Shovel-ready. ARRA projects had to be "shovel-ready" in order to meet the tight requirements for project initiation.
- Reporting Requirements. ARRA also required all funding recipients to report on their use of funds, including estimates jobs, project descriptions, etc.

State Actions.

- State Rules. States had in place legislation, policies and regulations to manage the SRF funds and projects under the former rules. States had to change these in order to meet the new ARRA schedule and requirements.
- Special Solicitations. Many States had to do a special solicitation for projects that would meet ARRA's "shovel-ready" requirements.
- Amending State Rules. Some States had to amend underlying program statutes, regulations, and policies to provide additional subsidies or otherwise obtain all necessary authorities to prepare a complete capitalization grant application for ARRA.

Water Utilities and Contractor Actions.

- Adjusted Solicitations. For many utilities receiving assistance agreements, the "Buy American" and Davis-Bacon requirements were unfamiliar. They had to adjust bid solicitation and contract award processes accordingly.
- Contractor Compliance. Construction contractors and equipment suppliers, in many cases, were likewise unfamiliar with these provisions and, together with the utilities, required guidance and training from EPA.
- Reporting Requirements. Like the States, many utilities and contractors also had to meet additional reporting requirements.

2. Drinking Water State Revolving Funds (DWSRFs)

Program Description

The Safe Drinking Water Act, as amended in 1996, established the Drinking Water State Revolving Fund (DWSRF) to make funds available to drinking water systems to finance infrastructure improvements. The program also encourages providing funds to small and disadvantaged communities and as a tool for ensuring safe drinking water. The 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 (includes Puerto Rico) which are run in accordance with the federal statute and regulations.

Recovery Act funds will increase the amount of money that is available through state revolving funds to provide assistance to drinking water facilities for planning, design, and construction of drinking water treatment facilities and distribution systems. ARRA will also increase the percent

of total funds available for DC and the territories through direct grants from EPA, and to Tribes through an interagency agreement with the Indian Health Service (IHS). The objectives established for the DWSRF Recovery Act funding will ensure program focus on beneficial, cost-effective project development and implementation that creates jobs.

Examples:

- Central Shoshone County Water District received a \$12.27 million low-interest drinking water construction loan to construct a membrane micro-filtration water treatment plant for the system's well in Enaville, Idaho (serves 5,838 connections). The project also includes associated piping filtration and pumping upgrades. Because of the area's modest median household income, the Central Shoshone County Water District is able to qualify for a special loan program which carries very favorable repayment terms. The District's new filtration plant is scheduled to be completed and online in February 2010.
- Buckeye Lake, Ohio remains one of the largest villages in the state without a public drinking water system. Thanks in part to \$5 million from the Recovery Act; the village should have treated water by July 2010. In addition to Recovery Act money, the project will receive \$1.6 million from Ohio's Water Supply Revolving Loan Account. There are a number of public health concerns surrounding the current wells and small public water systems on which the village relies. Construction is already underway on the system which will serve nearly 1,200 households when it is completed in July 2010. The median household income for the village is below the state's average of \$36,250.

Strategic Plan Link and Performance Goals 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*. More detailed information on DWSRF Recovery Act performance measures can be found in the program plans at www.Recovery.gov. Annual performance measures impacted by Recovery Act funding are annotated in the Congressional Justification.

Funding Source: 68-0102 - State and Tribal Assistance Grants. DWSRFs are distributed through states and tribes.

Funding Process Summary (Note similar to, but not exactly the same as CWSRF)

1. Federal Funding Process

- a. **Appropriation** – Congress passes and the President signs into law a bill giving money to the agency for certain program
- b. **Apportionment** – OMB distributed the funds to the appropriate EPA accounts making the funds available
- c. **Allotment** – EPA allots funds to the State according to SDWA needs survey
- d. **Application** – State applies to EPA for grant award, including an Intended Use Plan that includes:
 - i. A comprehensive list of projects, and second list of projects that will be funded that year.
 - ii. The type of assistance provided, including information on rates and terms.

- iii. All sources of funds for that year, including the grant, and the uses they will be put to.
- iv. Fund to go to loans and to set-aside activities
- v. Description of any disadvantaged assistance program
- e. **Award and Obligation** – EPA awards grants to States, obligating the funds to the States. Please note dollars are obligated but no dollars are disbursed to states until Step 4.

2. State Project Evaluation and Awards

- a. **State Evaluation** - States evaluate and prioritize potential projects.
- b. **Assistance Agreements Approval** – States award funds to projects in the form of loans, and in the case of ARRA funds, potentially in the form of grants. (Note: States often refer to this as their obligation – as with the above no funds are disbursed by the State at the time of obligation.)

3. Recipients' Project Construction and Management

- a. **Contracts Awarded** – Assistance recipient signs contracts in an amount equal to the assistance received – allows construction to commence
- b. **Construction** – Heavy construction normally take 18-36 months. Time varies by size, location and complexity of the project, as well as by the affect of seasons.
- c. **Funds Outlay** – As construction is completed, recipients incur costs. (Note funds are outlayed as construction is completed ending after construction is complete.)

4. Cost Reimbursement and Billing

- a. **Costs Incurred** - Recipients incur costs and invoice State SRF program,
- b. **Recipients bill States.** Recipients invoice State SRF programs
- c. **State review and reimbursement.** State SRF programs evaluate claims and reimburses costs,
- d. **States submit claims to EPA** - State submits reimbursement for incurred costs by drawing down funds from EPA.
- e. **Federal Outlay** – EPA evaluates draw-downs and either approves draw-downs or requests adjustments (if needed)

Summary of Major Process Challenges in Obligating and Outlaying ARRA SRF funding.

(Please refer to those listed for the CWSRF above).

3. Hazardous Substance Superfund

Program Description:

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, accelerating 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. Cleanup 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. Job sectors that will likely benefit from the Superfund Recovery Act funding include, but are not limited to: cleanup operation and management companies, laboratory sampling and analysis companies, hazardous waste disposal and management companies, construction and monitoring equipment rental companies, water/soil treatment companies, and environmental engineering and management companies.

Examples:

- In July, EPA awarded \$15 million in Federal stimulus money to the Idaho Department of Environmental Quality (IDEQ) to support the Superfund Basin Property Remediation Program. The Program has already cleaned up approximately 2.5 million square feet of contaminated soil in each of the last four years. With the new funds, IDEQ plans to clean up three million square feet in each of the next three years. This means the property remediation will be done sooner. Currently, there are over 240 people employed by DEQ and its contractors working on the accelerated program. There are 106 properties where cleanup is in progress.
- About \$12 million in ARRA funds are being used to restore a South Minneapolis Soil Contamination Site known as the Phillips neighborhood. The project requires remediation of arsenic soil, which causes health problems ranging from cancer to cardiovascular and nerve problems. The contamination was a result of operations from a pesticide company in mid 1900s. The work includes restoration of lawns and yards. This project includes work on 487 affected residential properties.
- The Richmond Mine, a source of the toxic stew that has polluted the Sacramento River and its tributaries for more than a century, has killed thousands of fish and turned a once-majestic mountain into a breeding ground for bacterial slime that helps create what geologists say is the "world's worst water." Over the past two decades, the EPA has made great progress toward stopping 98 percent of the historic discharge into the Sacramento River, and now can address the threats to the important salmon spawning grounds downstream.
- The EPA recently awarded \$20.7 million in federal ARRA funds to clean up the heavy metals that have flowed into and accumulated at the bottom of the Keswick Reservoir for decades, threatening fish and potentially people. The ARRA funding, combined with \$10 million already budgeted for the project, will pay for construction of three pumping stations, piping, and the hydraulic dredging, treatment and disposal of the 170,000 cubic yards of fine toxic metals that to this day coat the bottom of the Spring Creek arm of the reservoir. Removing these contaminated sediments will also allow the Central Valley Project to produce \$3 to \$6 million of additional peak power by removing operational constraints that are currently needed on its hydropower facilities at

Shasta Dam and the Spring Creek Power House to prevent contaminated sediment releases.

Strategic Plan Link and Performance Goals Superfund ARRA funded 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. More detailed information on Superfund Recovery Act performance measures can be found in the program plans at www.Recovery.gov. Annual performance measures impacted by Recovery Act funding are annotated in the Congressional Justification.

Financial Source: 68-8195 - Hazardous Substance Superfund. (Please note that projected obligations and outlays are contained in the attached spreadsheet.)

The majority of Superfund's ARRA dollars are direct Federal spending including contracts and Funds-Out interagency agreements. EPA is working with the Army Corps of Engineers at sites involving about \$248 million worth of work. EPA is reporting this financial data on Recovery.gov because although the Army Corps of Engineers (the Corps) manages the site work, EPA manages the financial obligations and outlays. Some funding is also being directed through state government and one cooperative agreement. The Superfund program has 99% of its funding obligated, including funding at 51 sites, for a total of 61 projects.

Financial Process Steps / Funding Mechanisms. EPA used several processes and mechanisms to deliver project funding quickly:

- **Multi-Site Contracts:** Prime contractor prepares a work plan for EPA approval. Once approved the prime Remedial Action Contractor (RAC) prepares the subcontracting paperwork for the remedial construction activities. The subcontract must be approved by EPA before the subcontractor can begin work.
- **Site-Specific Contracts:** The full acquisition process is performed to award a contract for the ARRA work.
- **Interagency Assisted Acquisitions:** The Agreement must be developed and approved and then sent to the other agency for approval. Once the other agency has signed the agreement, they must prepare the tasking documents to place the project under contract.
- **Cooperative Agreements:** The State submits a grant application for the Cooperative Agreement. Once awarded the state or local entity may need to prepare contracting materials to acquire the services of a contractor to perform the remediation.

Summary of Major Process Challenges in Obligating and Outlaying ARRA Superfund funding.

The Recovery Act included additional provisions and reporting requirements for grantees and contractors receiving EPA ARRA funds.

- **Davis-Bacon** requires recipients to pay at prevailing wage rates and document compliance.
- **"Buy American"** provisions required the use of U.S.-made supplies. In many cases previous suppliers had been foreign.
- **Shovel-ready.** ARRA projects had to be "shovel-ready" in order to meet the tight requirements for project initiation.

- **Recipient Reporting Requirements.** ARRA also required all funding recipients to report on their use of funds, including jobs estimates, project descriptions, spending rates, etc. Grantees and contractors required extensive guidance from EPA on how to fulfill reporting requirements, particularly on reporting on estimated jobs.
- **Contractor and Grantee Compliance.** Many grantees, construction contractors and equipment suppliers were unfamiliar with ARRA requirements and required EPA guidance and training. EPA developed detailed guidance for grantees and contractors on how to comply with additional requirements and conditions, including grant and contract templates and modified Terms and Conditions.

4. Diesel Emissions (DERA) Grants Summary

Program Description

The Diesel Emissions Reduction Act (DERA), which was authorized in the Energy Policy Act of 2005 (EPAAct), provides funding to achieve significant reductions in diesel emissions from the 20 million engines in the existing fleet. These reductions in pollution improve air quality and protect public health. The Recovery Act provided \$300 million for grants for clean diesel projects across the nation. These projects will create jobs and stimulate the economy through purchases of equipment and vehicles which lower diesel emissions, such as pollution control equipment, new clean engines, replacement vehicles, cleaner fuels and other products. The grants may only go to eligible entities, per the statute: State, local, regional or tribal governments, or certain non-profits. The program is divided into four sub-programs: a National Regional Clean Diesel program; State Clean Diesel program; SmartWay Finance Clean Diesel program; and Emerging Technologies Clean Diesel program.

Examples:

- EPA awarded a State Clean Diesel program grant to Utah Department of Environmental Quality of \$1.7 million to fund a project to retrofit approximately 300 school buses with Diesel Oxidation Catalysts (DOCs) and Crankcase Ventilation (CCV) systems. In addition, funding from this grant will also replace 20 existing school buses from 14 school districts with cleaner school buses.
- EPA awarded a National Clean Diesel Funding Assistance program grant to the Port Authority of New York and New Jersey of \$7 million to fund a Regional Truck Replacement Program targeting replacement of 600 pre-1994 drayage trucks that regularly service the Port Authority's marine terminals with model year 2004 and newer trucks.
- EPA awarded a National Clean Diesel Funding Assistance program grant to the Kentucky Association of General Contractors of \$2 million to retrofit, repower, or replace 87 pieces of construction equipment from five fleets and pursue the voluntary adoption of reduced idling practices at 100 construction sites throughout the state.

Strategic Plan Link and Performance Goals

The DERA projects support Goal 1: Clean Air and Global Climate Change, Objective 1.1 (Healthier Outdoor Air) of the *2006-2011 Strategic Plan*. More detailed information on DERA Recovery Act performance measures can be found in the program plans at www.Recovery.gov. Annual performance measures impacted by Recovery Act funding are annotated in the Congressional Justification.

Financial Source: Diesel Emissions (DERA) Grants - 68-0102 - State and Tribal Assistance Grants (STAG).

The DERA program provides funding through State, county, city and local Programs - Competition Status. The DERA program awarded 160 grants from March through September, 2009, including 51 State Clean Diesel grants, 90 National Regional Clean Diesel program grants, 5 SmartWay Finance grants and 14 Emerging Technologies grants. The 51 State Clean Diesel grants were awarded in March and April. The National Regional Clean Diesel program grants were awarded from May through September. The SmartWay Finance and Emerging Technologies grants were awarded in August and September, 2009. Work has begun on all grants.

DERA Funding Process Summary Steps (Note that there is a different process for each of the four DERA programs.)

National Competitive Grants

- **Award Grant**
 - **National Competition.** Request for Proposal (RFP) preparation and Competition certification (approval), including 40 Day RFP open period
 - **Review and Select Grantees**
 - Regional review panels (1 per Region) evaluate proposals
 - Each review panel submits its initial funding recommendation to Regional Approving Official
 - Regional Approving Official make final selection
 - Notify recipients
 - Workplan and budget negotiations
 - Project Officers prepare formal Funding Recommendation document in IGMS
 - Final Terms & Conditions (required extensive work to revise to incorporate additional ARRA requirements, including approval from OMB and Department of Labor)
 - Award approval process; Grants Office Award Official signs Funding Recommendation document

Project Partners / Fleet. Find appropriate fleet and finalize fleet information from project partners or sub-grant competition

- **Sub-Grant Competition**

- RFP
- Review and Selection
- Finalize fleet information
- Final Terms and Conditions
- **Finalize partner agreements and/or sub-grant agreements**
- **Select Technology**
 - Bid vendors/technologies
 - Select vendor
 - Data log vehicles and equipment (technical feasibility/compatibility testing for selected technologies) (Projects can be delayed due to testing)
- **Purchase & Install Technology**
 - Orders placed for technology with vendors/ manufacturers (Occasionally shortages of technologies and backlog because of low inventory)
 - Davis-Bacon and/or Buy American Requirements for applicable projects
- **Reimbursement**
 - Grantees typically do not pay vendors and draw down funds until equipment has been delivered/installed. Funds expended only after recipients draw down funding.

State Grants

- **Award Grant**
 - Notice of Intent to Apply
 - Allocation to State
 - Workplan and budget negotiations
 - Project Officers prepare formal Funding Recommendation document in IGMS
 - Final Terms & Conditions (required extensive work to revise to incorporate additional ARRA requirements, including approval from OMB and Department of Labor)
 - Award approval process; Grants Office Award Official signs Funding Recommendation document
- **Project Partners / Fleets** Find appropriate fleet and finalize fleet information from project partners or sub-grant competition
- **Sub-Grant Competition**
 - RFP
 - Review and Selection
 - Finalize fleet information
 - Final Terms and Conditions
- **Finalize partner agreements and/or sub-grant agreements**
- **Select Technology**
 - Bid vendors/technologies
 - Select vendor
 - Data log vehicles and equipment (technical feasibility/compatibility testing for selected technologies) (Projects can be delayed due to testing)
- **Purchase & Install Technology**
 - Orders placed for technology with vendors/ manufacturers (Occasionally shortages of technologies and backlogs due to low inventory)

- Davis-Bacon and/or Buy American Requirements for applicable projects
- **Reimbursement**
 - Grantees typically do not pay vendors and draw down funds until equipment has been delivered / installed. Funds expended only after recipients draw down funding.

Emerging Technology Grants

- **National Competition.** Request for Proposal (RFP) preparation and Competition certification (approval), includes 40 Day RFP open period
- **Review and Selection of Grantees**
 - Emerging Tech review panel to evaluates Emerging Tech proposals
 - Review panel submits its initial funding recommendation to Approving Official
 - Approving Official makes selection
 - Notify recipients
 - Workplan and budget negotiations
 - Project Officer prepares formal Funding Recommendation document in IGMS
 - Final Terms & Conditions (required extensive work to revise to incorporate additional ARRA requirements, including approval from OMB and Dept of Labor.).
 - Award approval process; Grants Office Award Official signs Funding Recommendation document
- **Finalize partner agreements and/or contracts and/or sub-grant agreements**
- **Order/Purchase & Install Technology**
 - Emerging Technology grant recipients have already partnered with an Emerging Technology manufacturer and can sole-source the purchase of the Emerging Technology.
 - Data log vehicles and equipment (technical feasibility/compatibility testing for selected technologies) (Can be delays due to testing)
- **Emissions Testing**
 - The Emerging Technologies program supports the implementation of new, unverified technologies. Many grantees include emissions testing as part of their workplan.
 - Bid Labs/Consultants for emissions testing
 - Select Lab/Consultant
- **Evaluation of Technology**
 - The Emerging Technologies are operated and tested under a variety of conditions to evaluate their performance.

SmartWay Grants

- **Award Grant**
 - National Competition. Request for Proposal (RFP) preparation and Competition certification (approval), including 40 Day RFP open period
 - Review and Selection of Grantees
 - Organize SmartWay review panel which reviews and evaluates SmartWay proposals

- Review panel submits its initial funding recommendation to Approving Official
- Approving Official make final selection
- Notify recipients
- Workplan and budget negotiations
- Program Officer prepares formal Funding Recommendation document in IGMS
- Final Terms & Conditions (required extensive work to revise to incorporate additional ARRA requirements, including approval from OMB and Dept of Labor.).
- Award approval process; Grants Office Award Official signs Funding Recommendation document
- **Set-Up Finance Program.** Grant recipient works with project partners / subgrantees to finalize any partnership agreements.
- **Issue Loans and/or Order/Purchase Technologies for Lease**
 - Grantees draw down funds as needed to cover program expenses
- **Technologies Leased and Installed**
- **Reimbursement**

Summary of Major Process Challenges in Obligating and Outlaying ARRA DERA funding. (Please refer to those listed for Superfund above).

5. Leaking Underground Storage Tank (LUST) Trust Fund

Program Description: The overall purpose for the Leaking Underground Storage Tank (LUST) Recovery Act funding is to clean up contaminated LUST sites effectively, while maximizing job creation and retention and providing economic and environmental benefits (such as protecting groundwater and cleaning up and reusing contaminated land) to the citizens of the United States. These objectives will be achieved by overseeing assessments and cleanups at shovel-ready sites or directly paying for cleanup activities at sites where the responsible party is unknown, unwilling or unable to finance cleanup, or the cleanup requires an emergency response.

Because the national Underground Storage Tank (UST) program is primarily implemented by states and territories, the vast majority of Recovery Act money for this program will go to state and territorial UST programs through cooperative agreements. Additionally, EPA implements the UST program in Indian country, so money to clean up eligible tank leaks in Indian country will be distributed and managed by EPA's regional UST programs through existing federal contracts. The state and territorial cooperative agreements and EPA contracts will pay for activities at shovel-ready sites to assess and clean up UST petroleum leaks, as well as staff management and oversight activities that will leverage additional cleanups. 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*.

Examples:

- Ashland Youth Center Complex, CA. is a petroleum-contaminated cleanup at a former bulk fuel storage site in Alameda County, California. Over \$15 million was distributed to California and this is the first cleanup success in the state at a shovel-ready site. For the Leaking Underground Storage Tank Program (LUST), federal funding can be used for clean up where there is no financially responsible party to protect important groundwater supplies. This former bulk oil storage site was left vacant for years due to the contamination. The site will be developed into a Youth Center, 2 acre park and a school gymnasium.
- EPA Region 5 and Illinois EPA are collectively providing \$1.7 million in funding to cleanup a contaminated East St. Louis, Illinois site that was once a car dealership. Work began last summer at the site and once remedial action is complete, a local non-profit organization intends to the land as a Farmer's Market, providing additional jobs in the community.

Strategic Plan Link and Performance Goals ARRA LUST funds support Goal 3: Land Preservation and Restoration, Objective 3.2: Restore Land of the *2006-2011 EPA Strategic Plan*. More detailed information on LUST Recovery Act performance measures and results can be found in the program plans at www.Recovery.gov. Annual performance measures impacted by Recovery Act funding are annotated in the Congressional Justification.

Funding Source: 68-8196 - Leaking Underground Storage Tank (LUST) Trust Fund:

Over 90% of the funding is through state governments, with some direct Federal spending. The program largely used existing contract mechanisms to expedite funding. Funding is provided through state grants and contracts. State grants are used to assess and clean up leaking underground storage tank sites. Contracts are used to assess and clean up leaking underground storage tank sites in Indian Country.

LUST Process Summary

The LUST program obligated 97% of available funds by the end of FY 2009.

1. Federal Funding Process

- a. **Appropriation** – Congress passes and the President signs into law a bill giving money to the agency for certain program
- b. **Apportionment** – OMB distributed the funds to the appropriate accounts making the funds available
- c. **Allocation** – EPA allocates funds to the State according to CWA formula or SDWA needs survey
- d. **Obligation.** EPA obligates funds as outlined below.

2. EPA Grant Process.

Grants are awarded and obligated pursuant to Agency standards and practice. This process involves the following steps:

- a. Developed allocation formula, based on state needs and eligible uses

- b. Developed grant guidelines (included extensive negotiation with Department of Labor and OMB regarding Davis-Bacon requirements)
 - c. Negotiated work plans with states
 - d. Performed necessary administrative steps to ensure grants meet various requirements (contained the necessary Terms and Conditions, etc.)
 - e. Obtained White House approval and conducted Congressional notification.
- 3. State Project Evaluation and Awards** After receiving a grant from EPA, states need to take the following actions before expending funds and ultimately completing sites:
- a. Determine/confirm LUST eligibility of sites
 - b. Determine applicability and assure adherence to Davis-Bacon, Buy American, and Infrastructure requirements
 - c. Obtain contract assistance to conduct site work; often including competing a contract, developing task orders, and negotiating work plans.
 - d. After site work begins, states must await invoices from contractors
 - e. Finally, many LUST cleanups take multiple years to complete, leading to a delay in expending all funds devoted to a particular site.
- 4. Site Work** – Site work time varies by size, location and complexity of the project, as well as by the affect of seasons. Recipient incur costs as work is completed .
- 5. Cost Reimbursement and Billing**
- a. **Costs Incurred** - Recipients incur costs and invoice,
 - b. **Submit claims to EPA** - Reimbursement for incurred costs submitted to EPA.
 - c. **Federal Outlay** – EPA requests for reimbursement and either approves draw-downs, authorizes payments or requests adjustments (if needed)

Summary of Major Process Challenges in Obligating and Outlaying ARRA LUST funding.
(Please refer to process challenges listed for Superfund above.)

6. Brownfields - State and Tribal Assistance Grants (STAG)

Program Description: A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. 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 cleanup and reuse. The EPA Brownfields Program has been instrumental in furthering the Agency's land revitalization goals. Specifically, Brownfields funds awarded to communities, states, tribes, and other stakeholders 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 reuse brownfields.

Example:

- The Town of Sanford, Maine received a \$200,000 brownfields cleanup grant for the Sanford Mill site. On August 3, 2009, there was a groundbreaking event for the Sanford Mill cleanup. This mill is located in the downtown area of Sanford, and the redevelopment will be a mix of commercial and housing.

Strategic Plan Link and Performance Goals 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. More detailed information on Brownfields Recovery Act performance measures can be found in the program plans at www.Recovery.gov. Annual performance measures impacted by Recovery Act funding are annotated in the Congressional Justification.

Funding Sources and Steps: 68-0102 - State and Tribal Assistance Grants- Brownfields

Major Funding Recipients include states, counties, tribes, local governments as well as non-profits and councils of governments with some monies outlayed through direct Federal spending. Brownfields used the existing FY09 Assessment, RLF and Cleanup Grant competition to award a portion of ARRA funds, so a separate RFP was not issued for these awards.

Brownfields projects are typically approved when a cooperative agreement work plan has been approved by EPA and the Agency has awarded the cooperative agreement. Targeted Brownfields Assessment (TBA) projects are typically approved when funding has been obligated to a contract to perform the TBA. The Brownfields Program defines “work started” as any cooperative agreements awarded. The Brownfields Program defines “projects completed” as those cooperative agreements and contracts that have drawn down 100% of funds and/or has closed out the cooperative agreement or contract task order.

Process Steps:

The Process Steps for the Brownfields Program vary by the type of project agreement (assessment cooperative agreement, clean up cooperative agreement or revolving loan funds).

The first steps of the Federal Funding were the same as with any appropriations:

1. **Appropriation** – Congress passes and the President signs into law a bill giving money to the agency for certain program
2. **Apportionment** – OMB distributed the funds to the appropriate EPA accounts making the funds available
3. **Allocation** – EPA allocates funds to the particular programs
4. **Obligation** – EPA programs obligate funds. To set up Brownfields Program targets EPA depends on two main factors: 1) maturity of the projects and 2) the data entry from the recipient into our reporting system (ACRES).

Brownfield Specific Processes. The “maturity” process of the different type of cooperative agreements can be described as:

For Assessment Cooperative Agreements:

- Recipient received and accepted cooperative agreement.
- Recipient has to prepare and publish a Request for Proposals to perform environmental work.
- Recipient has to follow its own procurement process to select contractor and award contract.
- Recipient requires site approval from EPA. (For petroleum sites, EPA or state has to make a site determination.) Start entering data into the reporting database (ACRES) – Creation of a work package.
- Environmental Assessment started.
- Environmental Assessment completed in accordance with program requirements.
- Regional approval of the work package with completion date of the environmental assessment to be counted as accomplishment.

Based on past experiences this process can take between 6 to 12 months, assuming that the recipient has an existing inventory of Brownfields properties available. If the recipient does not have an inventory then the process can take longer than a year. The performance period of this type of cooperative agreement is three years.

For Cleanup Cooperative Agreements:

- Site has been approved during competition.
- Recipient received and accepted cooperative agreement.
- Recipient has to prepare and publish a Request for Proposals to perform environmental work.
- Recipient has to follow its own procurement process to select contractor and award contract.
- Environmental cleanup activities starts. Start enter data into the reporting database (ACRES) – Creation of a work package.
- Environmental cleanup completed in accordance with program requirements (meet target definition). This action may take more than three years.
- Regional approval of the work package with completion date of the environmental assessment to be counted as accomplishment.

Based on past experiences the cleanup process can take more than three years to be completed, depending on the circumstances. The performance period of this type of cooperative agreement is three years.

For Revolving Loan Funds (Cleanup):

- Recipient received and accepted cooperative agreement.
- Recipient notifies the availability of funds in the program.
- Recipient evaluates the loan and/or sub-grant applications, which includes site approval from EPA. For petroleum sites, EPA or state has to make a site determination.
- Recipient awards loans or sub-grant. Start entering data into the reporting database (ACRES) – Creation of a work package for each loan and/or sub-grant.
- Clean up starts.

- Environmental cleanup completed in accordance with program requirements. This action can take years to be completed.
- Regional approval of the work package with completion date of the environmental cleanup to be counted as accomplishment.

Based on past experiences the loan process can take between 1 to 3 months (depending of the complexity of the case). The cleanup completion will depend on the complexity of the property. The performance period of this type of cooperative agreement is five years.

One vehicle that the program has to demonstrate progress under the ARRA is using the Targeted Brownfields Assessments (TBA). We have a limited set-aside amount of ARRA funds to conduct environmental assessments at specific properties using EPA regional and national contractors. Typically, an environmental assessment conducted under a TBA will take one or two months to be completed. Cleanups cannot be done under TBA.

Summary of Major Process Challenges in Obligating and Outlaying ARRA Brownfields funding. (Please refer to process challenges listed for Superfund above.)

7. Management and Oversight (M&O)

Program Description: The ARRA granted EPA granted the authority to move monies into the Environmental Programs and Management Appropriations for Recovery Act Management and Oversight (M&O). To date, EPA has budgeted to use \$81.5 million in the EPM account for M&O activities. (Please refer to the Program Project J8 for a fuller description of each programs planned use of M&O funding.)

EPA is coordinating its management and oversight activities through extensive work of senior level coordinating committees. The Agency has linked these activities through an overall EPA Recovery Act Stewardship Plan. EPA published this plan on July 8, 2009 to identify areas of potential risk and assure that the Agency had proper administrative and programmatic procedures in place to address these risks. The Plan covers all programs funded with Recovery Act funds. The plan details EPA plans and procedures in seven functional areas: 1) Grants, 2) Interagency Agreements, 3) Contracts, 4) Payroll/Human Capital, 5) Budget Execution, 6) Performance Reporting, and 7) Financial Reporting.

EPA's Recovery Act Stewardship Plan addresses all Recovery Act programs. EPA identified risk assessments within each functional area and assigned a low, medium, or high level of risk. These risk assessments cover all program areas serviced by the functional area risk assessment.

Development of the EPA Recovery Act Stewardship Plan was a collaborative effort that included administrative, program, financial regional and headquarters staff and also included EPA's OIG staff in an advisory role.

8. The Inspector General (IG)

The Recovery Act also provided "for an additional amount for the Office of Inspector General" \$20,000,000 to remain available until September 30, 2012."



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC -9 2009

OFFICE OF
INSPECTOR GENERAL

The Honorable Peter R. Orszag
Director, Office of Management and Budget
Executive Office of the President
725 17th Street, NW
Washington, D.C. 20503

Dear Mr. Orszag:

As you are aware, The Inspector General Act of 1978, as amended, 5 U.S.C. app. 3, § 6(f)(3)(E) provides that:

"The President shall include in each budget of the United States Government submitted to Congress-- any comments of the affected Inspector General with respect to the proposal if the Inspector General concludes that the budget submitted by the President would substantially inhibit the Inspector General from performing the duties of the office."

Based on the proposed funding level for FY 2011 that was provided in the passback for the Environmental Protection Agency's (EPA) Office of Inspector General (OIG), I am providing the following comments for inclusion in the President's FY 2011 Budget.

"The OIG requested an FY 2011 increase of \$10 million above the target level provided by EPA for the following reasons:

In the FY 2010 President's Budget, EPA requested: 1) \$1.7 billion increase for the CleanWater State Revolving Fund; 2) \$671 million increase in the Drinking Water State Revolving Fund; and 3) \$475 million for the Great Lakes Restoration Initiative. The State Revolving funds will provide grants to states for water infrastructure projects. The Great Lakes Restoration Initiative will use funds to support projects targeting the most significant problems of the Great Lakes.

Grants funds have been long identified as areas of high risk and management challenges in their potential for: misapplication from the intended environmental purpose, lack of accountability, and potential for fraud. To help ensure essential transparency and the greatest public environmental benefit, the OIG should provide oversight of how these funds are used and whether desired results are achieved through financial, forensic, and performance audits of EPA's State Revolving Fund programs, grants, interagency agreements, and cooperative agreements. The OIG will also conduct assistance agreement investigations of these same areas.

As Acting Inspector General, I have concluded that this specific increase in EPA's FY 2010 budget for grants, without a specific corresponding increase in OIG audits and investigations, substantially inhibits the OIG from performing its duties and renders the grant funds vulnerable to fraud, waste and abuse."

If you or your staff have any questions, or would like to meet to discuss this matter you may reach me at (202) 566-2212, or roderick.bill@epa.gov.

Sincerely,



Bill A. Roderick
Acting Inspector General

cc: The Honorable Jeffrey Zients
The Honorable Scott Fulton
The Honorable Phyllis Fong

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VERIFICATION AND VALIDATION

GOAL 1 OBJECTIVE 1

FY 2011 Performance Measures:

- **Tons of SO₂ emissions from electric power generation sources (tons/yr from 1980 baseline) (program assessment measure)**

Performance Databases:

Emissions Tracking System (ETS) - SO₂ 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 SO₂, NO_x, volumetric flow, CO₂, 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. 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 20037 Annual Quality Assurance Report may be found at http://www.epa.gov/castnet/docs/annual_report_2007.pdf

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/business/report-emissions.html> 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.

References: For additional information about CASTNET, see <http://www.epa.gov/castnet> and for NADP, see <http://nadp.sws.uiuc.edu/>.

For a description of EPA's Acid Rain program, see <http://www.epa.gov/acidrain/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 2011 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 2011 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.

FY 2011 Performance Measures:

- **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 2011 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 2011 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) 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 2011 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 MOBILE6 and Nonroad 2002. (Available on the Internet at <http://www.epa.gov/otaq/models.htm>.) The inputs to these and other models will be reviewed and updated, sometimes on an annual basis for some parameters. Unless the model inputs are updated and recalculations done for the performance measures to obtain updated numbers, the actual numbers will be the same as the projected numbers.

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 2011 Performance Measures:

- **Cumulative percentage reduction in tons of toxicity-weighted (for cancer risk) emissions of air toxics from 1993 baseline (program assessment measure)**
- **Cumulative percentage reduction in tons of toxicity-weighted (for noncancer risk) emissions of air toxics from 1993 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 <http://www.epa.gov/ttn/atw/toxsource/summary.html>)

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 incorporated an automated AAQA content tool into its data submission process. Information on emission inventory reporting (including a QA check) can be found at: <http://www.epa.gov/ttn/chief/net/neip/index.html>

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/risk/guidance.htm>.

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

Audience: README file
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://www.epa.gov/scram001/userg/other/emshapv3ug.pdf>
<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 2011 Performance Measure:

- **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 an internal database of fan sales.

Data Sources: The data for new homes is from a survey, which 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 with radon-reducing features. The percentage built with radon-reducing features from the sample is then used to estimate what percent of all homes built nationwide include these features, and of a subset built in high radon potential areas (Zone 1 on EPA's Radon Zone Map) which are radon resistant.

The data source for existing homes is the radon fan manufacturers who report fan sales to the Agency. EPA makes a number of assumptions about how the fans are used, e.g., assumes one fan per radon mitigated home, and a fan life of (10 years), and then calculates the assumed estimated number of homes that have been mitigated that year, and the cumulative total adjusted for fan life.

Methods, Assumptions, and Suitability: EPA collects data annually on the number of new homes built with radon-resistant reducing 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 average 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 the data are obtained from an external organization, their, 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 organizations and EPA reviews the data to ascertain their derivation and reliability, and resolves 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, while relatively low, is the response rate for the entire survey. The radon-reducing features, new construction questions are only a very small portion of the overall survey. 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 nationally. There are other non-fan methods not captured by the fan sales data to mitigate radon including: (1) passive mitigation techniques of sealing holes and cracks in floors and foundation walls; (2) installing sealed covers over sump pits; (3) installing one-way drain valves in untrapped drains; and (4) 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 three 3 radon vent fan manufacturers of any significance; one of these accounts for an estimated the majority (about 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 used 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 Resistant Construction Practices in New US Homes 2007." in New Construction 2003,"Annual Builder and Consumer Practices Surveys by the NAHB Research Center, Inc., September 2008. 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 2011 Performance Measures:

- **Expressed as a percentage, the cumulative number of existing homes with an operating mitigation system (HOMS)) compared to the estimated number of homes at or above EPA's 4pCi/L* action level**
- **Total number of all new single family homes (SFH) built in high radon potential areas (zone 1) compared to new homes in zone 1 built with mitigation-ready systems (radon-reducing features)**

Performance Database: Data are stored in an internal spreadsheet

Data Source: EPA compares the number of existing homes that have been mitigated to all homes anywhere in the country requiring mitigation because they exceed the EPA action level of 4pCi/L.

Methods, Assumptions and Suitability:

EPA annually calculates the estimated number of existing homes mitigated for an elevated radon level based on radon mitigation vent 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, the data from fan manufacturers is adjusted based on an assumption that previously-installed radon mitigation systems will require a fan replacement every ten years. Historically, about 60% of the new homes built with radon-reducing features in the U.S. are built in Zone 1 areas, the highest risk areas (classified as Zone 1 by EPA).

The calculation of the number of homes across the country at or above EPA's 4pCi/L action level is based on methodology in the 1992 technical support document for radon (internal document available upon request) and current census data.

QA/QC Procedures: EPA relies on the radon fan manufacturers annual reporting on sales data for radon venting (vent) fans that are used for mitigation.

Data Quality Review: Data are obtained from an external organization. EPA reviews the data to ascertain their reliability and discusses any irregularities with the relevant manufacturer.

Data Limitations: Reporting by radon fan manufacturers is voluntary and may underestimate the number of radon fans sold. Nevertheless, these are the best available data to determine the number of homes mitigated. There are other methods to mitigate radon including: passive mitigation techniques of sealing holes and cracks in floors and foundation walls, installing sealed covers over sump pits, installing one-way drain valves in untrapped drains, and installing static venting and ground covers in areas like crawl spaces. Because there are no data on the occurrence of these methods, 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: N/A.

New/Improved Data or Systems: None

References: See <http://www.epa.gov/iaq/radon/pubs/index.html> last accessed 12/15/2009 for National performance/progress reporting (National Radon Results: 1985 to 2003*) on radon, measurement, mitigation and radon-resistant new construction. Data through 2004 are available from the Indoor Environments Division of the Office of Air and Radiation.

FY 2011 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 2011 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 2011 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 2011 Performance Measure:

- **Remaining US consumption of Class II ODS, 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/ozone/title6/index.html>. 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 that 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.epa.gov/ozone/intpol/index.html> 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 2011 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.

[http://yosemite.epa.gov/sab/sabproduct.nsf/C263E39FF10FEA11852573090068BD72/\\$File/sab-07-010.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/C263E39FF10FEA11852573090068BD72/$File/sab-07-010.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 2011 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)

FY 2011 Performance Measure:

- **Level of readiness of national environmental radiological laboratory capacity (measured as percentage of laboratories adhering to EPA quality criteria for emergency response and recovery decisions). (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)

FY 2011 Performance Measure:

- **Average time before 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 3 dated June 1, 2009).

Data Quality Review: The database will screen all incoming data from the monitoring systems for abnormalities as an indicator of either a contamination event or an instrument malfunction. Data will be held in a secure portion of the database until verified by trained personnel. Copies of quality assurance and quality control testing will also be maintained to assure the quality of the data.

Data Limitations: None known

Error Estimate: N/A

New/Improved Data or Systems: This measure will use data from the enhanced RadNet ambient air radiation monitoring system.

FY 2011 Performance Measure:

- **Time to approve site changes affecting waste characterization at DOE waste generator sites to ensure safe disposal of transuranic radioactive waste at WIPP (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

7/20/2009) contains information on the volumes of waste that are received at the DOE WIPP.

FY 2011 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 2011 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-CO₂ 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 (CO₂) 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 2007 Annual Report. <http://www.energystar.gov/ia/partners/publications/pubdocs/2007%20CPPD%204pg.pdf>

GOAL 1 OBJECTIVE 6

FY 2011 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/myr/airtox.pdf> (last accessed July 20, 2007)
Particulate Matter Multi-Year Plan, available at: <http://www.epa.gov/osp/myr/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 2011 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 spend), 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 2011 Performance Measures:

- **Percentage of Clean Air program publications rated as highly cited papers (program assessment measure).**
- **Percentage of Clean Air program 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 available at:
<http://www.epa.gov/ncer/publications/bibliometrics/index.html>

GOAL 2 OBJECTIVE 1

FY 2011 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)**
- **People receiving drinking water that meets all applicable health-based standards per million dollars spent to manage the drinking water program**

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 plan¹ (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

¹2006 Drinking Water Data Reliability Analysis and Action Plan, EPA-816-R-07-010 March 2008

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 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,

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

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

- 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 2011 Performance Measure:

- **Percent of data for violations of health-based standards at public water systems that are accurate and complete.**

Performance Database: The Safe Drinking Water Information System/Federal Version (SDWIS/FED) is the Environmental Protection Agency's (EPA) principal database for the national drinking water program. EPA routinely conducts program reviews, which evaluate the management of state drinking water programs and provide the data on discrepancies in compliance determinations. During the program reviews, EPA examines state compliance decisions, data on system compliance and violations in the state files, and the data required to be reported to SDWIS/FED. Violation data are evaluated by comparing the following: 1) EPA's evaluation of the state's compliance decision on the violations; 2) the assigned violations in the state files; and 3) the violations reported to SDWIS/FED. EPA reviews data submitted by public water systems (PWSs), state files and databases, and SDWIS/FED, and compiles the results on the discrepancies among the data.

Data Source: After each program review, the program review staff information and enter it into the Error Code Tracking Tool (ECTT). The ECTT includes violation determinations and discrepancies, as well as the inventory information, including PWSID, system type, source, and population served.

Methods, Assumptions and Suitability: The program reviews involve the evaluation of the states' compliance decisions and the agreement between the data in the state files and SDWIS/Fed. EPA uses a statistically random sample of systems that is drawn from the total number of systems in the state for the program reviews. The sample size for each system type within a state is calculated based on the acceptable precision level for the estimates within 5% margin of error with a confidence level of 90 or 95 percent. EPA evaluates violation compliance results from the probability sample of systems for each state. Then, EPA estimates proportions related to completeness and accuracy among state files, the state database, and SDWIS/FED for violation data.

QA/QC Procedures: EPA is responsible for compiling and querying the data and, as needed, for assuring data validity. Also, EPA provides the states with the compiled data from ECTT to verify the validity of data and work with the states to correct any invalid data.

Data Quality Reviews: States have several opportunities to respond to findings while the program review personnel are on site and provide additional clarifying information if available. States also review the program review draft report before the final report is produced and their comments are incorporated into the report. EPA responds to every state comment, to explain in detail whether or not the state's additional information changed the finding.

Data Limitations: Because the overwhelming majority of systems are small systems, the group of systems selected for data verification may not always include larger systems.

Error Estimate: EPA analyzes data, derived from a recently improved data audit protocol, with a robust statistical basis from which to extrapolate national results. There are different systems and types reflected in the data. Error estimates are based on a 95 percent confidence interval.

New/Improved Data or Systems: EPA is currently testing and evaluating Electronic Data Verification (eDV) tool which would collect and evaluate compliance sample results of regulated contaminants and determine the completeness of the violations electronically for all PWSs. The eDV can be used to supplement the Program Review data in evaluating the completeness and accuracy of SDWIS/FED.

References:

U.S. EPA, Office of Ground Water and Drinking Water. *2006 Drinking Water Data Reliability Analysis and Action Plan*. EPA 816-R-07-010 (Washington: US EPA, August 2008). Available on the Internet at <<http://www.epa.gov/safewater/databases/sdwis/datareliability.html>>

FY 2011 Performance Measure:

- **Percentage of community water systems for which minimized risk to public health through source water protection is achieved.**

Performance Database: The source water assessment and protection programs are authorized under Sections 1453, 1428, and relevant subsections of 1452 of the Safe Drinking Water Act (SDWA).³ EPA issued guidance to implement these programs in 1997, *State Source Water Assessment and Protection Programs Guidance*.⁴ In March 2005, EPA issued supplemental reporting guidance, “State and Federal Source Water Assessment and Protection Program *Measures: Final Reporting Guidance*.” Starting in FY 2005, and updated annually thereafter, states report to EPA on progress in implementing source water protection (SWP) strategies, and whether such strategy implementation is affecting public health protection. To assess *progress in implementing the SWP strategies*, state reporting includes two elements: (1) whether strategy implementation for a community water system has reached a substantial level, and (2) the related population served by those water systems. To assess *whether the program is affecting public health protection*, states report change in the number of Community Water System source water areas with substantially implemented source water protection strategies. The Agency will develop a national summary of data on the progress of states’ source water protection programs using these data elements.

³ *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>>

⁴ U.S. EPA, Office of Water. *State Source Water Assessment and Protection Programs Guidance*. EPA 816-R-97-009 (Washington: US EPA, August 1997). Available on the Internet at <<http://www.epa.gov/safewater/swp/swappg.html>>

States report summary data for each of these elements in a spreadsheet format. Beginning in FY 2005, states may, at their option, make available to EPA public water system-level data for each of these elements to be maintained in a set of data tables in the drinking water warehouse (for tabular data) and in event tables in the Office of Water's Reach Address Database (RAD)⁵ (GIS data). These data will be compatible with the inventory data States are currently reporting to the Safe Drinking Water Information System (SDWIS).⁶

Data Source: Up to the end of FY 2004, states reported to the EPA Regional Offices the percentage of community water systems implementing source water protection programs. As noted above, states can report to EPA's Regional Offices using a spreadsheet approach. EPA has also developed a new source water data module to collect, store, and use public water system-level data as noted above.

Methods, Assumptions and Suitability: For this measure, the states' reporting of progress in implementing their source water assessment and protection programs will be based on EPA's 2005 guidance, "State and Federal Source Water Assessment and Protection Program *Measures: Final Reporting Guidance*." States will only report state-level summary information directly related to specific community water systems in a state-level database. While state reporting will be based on definitions and procedures found in the "State and Federal Source Water Assessment and Protection Program *Measures: Final Reporting Guidance*," and even with the state flexibilities built into the definitions for substantial implementation strategies, EPA believes that the data will be reliable for use in making management decisions.

QA/QC Procedures: QA/QC procedures are included in the 2005 "State and Federal Source Water Assessment and Protection Program *Measures: Final Reporting Guidance*." Additionally, a series of data checks are built into the spreadsheet data collection procedures given to each Region for their work with states. States will be required to identify whether their reported summary-level data are based on a system-level database. EPA Regional offices also will work with individual states to obtain a description of their methods of collecting and verifying information.

Data Quality Reviews: EPA Regions will conduct data quality reviews of state data using the QA/QC procedures included with the spreadsheet-based data system, and work with states to resolve data issues. 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: Because the reporting provides only state-level summary information, there is no standard protocol for EPA to verify and validate the data against system-level information contained in state databases. In addition, much of the data reported by states is voluntary and based on working agreements with EPA because

⁵ Watershed Assessment, Tracking & Environmental Results (WATERS). Available only on the Internet at <<http://www.epa.gov/waters/>>

⁶ Safe Drinking Water Information System (SDWIS). Information available on the Internet at <http://www.epa.gov/safewater/databases.html>

SDWA only requires states to complete source water assessments. That is, the only source water information that states are required to report to EPA under SDWA is whether the assessments are completed. Although EPA's 2005 "*State and Federal Source Water Assessment and Protection Program Measures: Final Reporting Guidance*" set standard data definitions and procedures, it also provides for considerable flexibility in states' definition for substantial implementation of strategies, data collection protocols and analytical methods to evaluate their data. For example, some states may require each public water system to report data, while others may institute a voluntary process. Because much of the data reporting is voluntary and the individual state protocols may vary, state data may be incomplete and inconsistent across states.

Error Estimate: There is no basis for making an error estimate for this performance measure given the data limitations of state-level summary reporting described above.

New/Improved Data or Systems: The source water reporting module has been developed as a joint initiative between EPA, the Association of State Drinking Water Administrators (ASDWA), and the Ground Water Protection Council (GWPC). It will give EPA the ability to access the data directly from states through a data exchange agreement using an electronic data transfer capability. A state may choose, at its option, to provide EPA more detailed data in lieu of state-level summary reporting. The new source water data module has been integrated into the drinking water data warehouse and is compatible with Safe Drinking Water Information System (SDWIS) data already reported by states. Geospatial data (i.e., the intake and well point locations and the source water area polygons) will be maintained in EPA's Office of Water's Reach Access Database (RAD). The source water assessment and protection indicator data and other attribute data will be maintained in data tables in the drinking water warehouse.

References:

Guidance Manuals

- U.S. EPA, Office of Water. *State Source Water Assessment and Protection Programs Guidance*. EPA 816-R-97-009 (Washington: US EPA, August 1997). Available on the Internet at <<http://www.epa.gov/safewater/swp/swappg.html>>
- *Source Water Assessment and Protection Measures: Initial Guidance, August, 2003*.
- "*State and Federal Source Water Assessment and Protection Program Measures: Final Reporting Guidance*," March 2005.

Web site addresses

- US EPA Office of Ground Water and Drinking Water. <<http://www.epa.gov/safewater>>
- For more detailed information on Source Water topics, US EPA Office of Ground Water and Drinking Water, Source Water site. <<http://www.epa.gov/safewater/protect.html>>

- US EPA Office of Water (OW) Reach Access Database (RAD). Watershed Assessment, Tracking & Environmental Results (WATERS). <<http://www.epa.gov/waters/>>
- Safe Drinking Water Information System (SDWIS). <http://www.epa.gov/safewater/databases.html>

FY 2011 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 2011 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/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**
- **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 through consultation with regions and states. It will give EPA the ability to access the data directly from states through the Exchange Network using the Central Data Exchange (CDX). The data system will not only include the data for the measures but all of the data necessary for EPA to effectively manage the national program.

References:

Guidance, Regulations and Data Forms

- Information to Assist Regions and States to Report on Underground Injection Control Program's National Water Program Guidance Performance Activity Measures (Reporting Assistance Memo)--7/06/06
- Code of Federal Regulations at 40 CFR Parts 144 through 148
- UIC Inventory/Performance Activity Measures 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 2011 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) on public use data files every two years. The latest report is the *Fourth National Report on Human Exposure to Environmental Chemicals*, which presents findings for the years 2003 and 2004, and was published in 2009.¹

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 Fourth Report, which includes the data from the Second and Third Reports, measures 212 chemicals over the period 2003-2004.

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 two-year cycles. (Note, however, that the Fourth Report was issued four years after the Third Report.) 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 *Fourth 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 *Fourth 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 *Fourth National Report on Human Exposure to Environmental Chemicals* provides 95% confidence intervals for all statistics

New/Improved Data or Systems: None.

References:

1. Centers for Disease Control and Prevention. "Fourth National Report on Human Exposure to Environmental Chemicals." July 2005. <http://www.cdc.gov/exposurereport/>. December 2009.

FY 2011 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;

data from 2005-2006 were published in 2008¹. 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. 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 affected 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 years¹. 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 three 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. Third, CDC issues its reports on a variable schedule. Thus, our ability to report current data is hindered.

Another 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 2011 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), This database includes fields

identifying the beaches for which monitoring and notification information are available and the date an 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 2008 swimming season, states and territories monitored for pathogens at 3,740 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 2002³). 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 was 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 receive the implementation grants.

Error Estimate: Not all coastal and Great Lakes beaches are monitored. In 2008, states and territories reported that they monitored at 3,740 of the approximately 6,000 coastal and Great Lakes beaches. This monitoring varies among states. For example, North Carolina monitors all its 240 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: Four years after the passage of the BEACH Act many states and territories were struggling to submit their data in a timely manner, impeding our efforts to produce a timely annual report. The Information Technology (IT) system used to capture beach reporting data was built shortly after the passage of the BEACH Act to make maximum use of existing Agency data systems, especially STORET, at the cost of some compromise in data flow efficiency. A plan was developed by working closely with state data managers to address obstacles to data submittal: focusing contractor support on technical assistance to the states; transmitting letters directly to state program managers regarding the performance of their organizations in either meeting, coming close, or not meeting the data submittal target dates; implementing

systems changes to keep up with the pace of Agency system upgrades; and altering the data architecture to simplify data flows.

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GOAL 2 OBJECTIVE 2

FY 2011 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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FY 2011 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)**
- **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). One of the indicators needs to improve by a full category unit over the eight year period 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 appeared in the NCCRIII representing trends between 1990-2002.

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 receive 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. 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 continued 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) 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.
- (2) Data from ORD's National Coastal Assessment Program (NCA) for 2003-2006 will be presented in the NCCRIV. This report is projected to be available at the end of calendar 2011.
- (3) ORD's National Coastal Assessment Program has ended and the Office of Water is now administering the program as part of the National Aquatic Resource Surveys. The next coastal survey is scheduled for summer 2010.

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.
7. U.S. Environmental Protection Agency 2008. National Coastal Condition Report III. EPA 842-R-08-002.

FY 2011 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 2010 Integrated Report clarification memo (released May 5, 2009 available at <http://www.epa.gov/owow/tmdl/guidance/final52009.html>) which includes suggestions for the use of the rotating basin approach and Category 3, circumstances and expectation for “partial approval/further review pending” determinations, and using and reporting on Statewide Statistical Survey Data in ATTAINS And the National Water Quality Inventory Report to Congress.

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*, (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.

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 recently finished 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. EPA rolled out a web data entry tool called WQXweb for users who have not invested in the node technology.

References:

USEPA, 2008, *EPA's 2008 Report on the Environment (Final Report)*
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USEPA, Office of Water. 2006. Information Concerning 2008 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. Available at http://www.epa.gov/owow/tmdl/2008_ir_memorandum.html,

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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>.

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FY 2011 Performance Measures:

- **Number of TMDLs that are established or approved by EPA [Total TMDLs] on a schedule consistent with national policy (cumulative) (program assessment measure)**
- **Number of TMDLs that are established by States and approved by EPA [State TMDLs] on schedule consistent with national policy (cumulative) (program assessment 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 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 reinstated, 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 continues to improve the database and oversee 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 2011 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/pccsys.htm>

FY 2011 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 2011 any qualifying submissions from May 1, 2008, through April 30, 2011, that were approved by September 30, 2011, 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 2009, could be counted in FYs 2009, FY 2010, and FY 2011 but not in FY 2012.

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. May 1, 2009. *Water Quality Standards Acting Tracking Application: Users Guide*. 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 2011 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 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. In the past, we had to calculate the annual load reduction achieved as an increment from the previous year. 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 would be 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.

In an effort to improve the accuracy of the annual national load reduction amount, we have modified this method of calculating the annual increment. We explicitly instruct the

States to enter their load reduction values within the year they should be reported, and to only enter new (not cumulative) load reduction amounts. Then, because the GRTS can automatically track when the State enters the load reduction in the database, we simply sum the load reductions entered within the reporting timeframes. The user can also make corrections to report the load reductions entered at the wrong time by associating a load reduction date to the value.

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: A significant improvement to the GRTS was the conversion from a Lotus Domino system to an Oracle database in 2005. 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. Reports are easily customized to fit programmatic needs of both State and EPA.

Another focus of improvement has been to simplify the georeferencing process for GRTS users. In 2008, we released a new mapping tool, which makes it much easier for States to geolocate their 319 projects and identify the impacted waterbodies. This tool links to the WATERS database, enabling linkages between 319 projects and other water program features, such as impaired waters. In addition, GRTS users and the public can query for

319 projects using a similar map interface. These improvements in mapping 319 projects have made it easier to answer questions for stakeholders, like “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?”

We are also making efforts to ease the data entry burden on the States by offering them the flexibility of entering their data in different formats. States currently have the option to either enter their data over the web using an online form, or directly upload their information into GRTS as an XML file. Many States have expressed interest in using XML but are unfamiliar with the technology. EPA will provide training on XML at our annual User Group Meeting, and through a series of webinars. Also, since most users are familiar with Microsoft Excel, we will develop an Excel template for XML import.

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.tetrattech-ffx.com/stepl/>).

FY 2011 Performance Measures:

- **Percentage of high priority EPA and State NPDES permits that are issued in**

the fiscal year (program assessment measure)

- **Percentage of high priority state NPDES permits that are issued in the fiscal year (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 a certain number of permits over the next fiscal year. 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 twenty-eight 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 twenty-eight 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 2011 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.⁷

To calculate the program assessment efficiency measure, the annual⁸ cumulative pollutant reductions are divided by the total number of dollars devoted to the EPA Surface Water Program (SWP), grants to States under Clean Water Act (CWA) section 106, plus State ‘match’ dollars, annually. SWP and CWA Section 106 budget is pulled from EPA’s Integrated Financial Management System (IFMS). State ‘match’ dollars are reported to EPA by States.

Data Sources: For industry sectors subject to **effluent guidelines**, estimated loading reductions are taken from reductions estimated in the Technical Development Document (TDD) when the effluent guideline is developed. The common components for such analyses include wastewater sampling, data collection from the regulated industry, and some amount of estimation or modeling. TDDs are available for: Pulp & Paper, Pharmaceuticals, Landfills, Industrial Waste Combustors, Centralized Waste Treatment, Transportation Equipment Cleaning, Pesticide Manufacturing, Offshore Oil & Gas, Coastal Oil & Gas, Synthetic Based Drilling Fluid, Concentrated Animal Feeding Operations, Meat and Poultry, Metal Products and Machinery, Aquaculture. States and EPA’s Regional offices enter data into PCS and ICIS.

⁷ Beginning in 2008, the values for Phase I municipal stormwater and construction stormwater were added and back-filled to 2002. POTW values were updated and back-filled based on the 2004 CWNS.

⁸ The method of calculating the denominator was changed in 2008 to reflect total annual dollars, rather than cumulative dollars.

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 1999.⁹

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.

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.

⁹ 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

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 2011 Performance Measure:

- **Fund utilization rate for the CWSRF (program assessment annual measure)**
- **CWSRF long-term revolving level**

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 minus 2 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 2011 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 2011 Performance Measures:

- **Percent of serviceable rural Alaska homes with access to drinking water supply and wastewater disposal. (program assessment 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)**
- **Percent of homes on tribal lands lacking access to basic sanitation**
- **Percent of homes on tribal lands lacking access to safe drinking water**
- **Percent of Alaska population served by public drinking water systems in compliance with SDWA regulatory requirements**

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 health 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 2011 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 will be tracked on an annual basis as a management tool for the ocean dumping program.

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 input. 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 and FY 2009 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/quality/qmps.html>

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 2011 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/mydp/dw.pdf> (last accessed July 20, 2007).

Water Quality Multi-Year Plan, available at: <http://epa.gov/osp/mydp/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 2011 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 2011 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 spend), 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 2011 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 2011 Performance Measure:

- **Billions of pounds of municipal solid waste reduced, reused, or recycled (program assessment measure)**

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 2011 measure focuses on the total pounds of recycling that EPA influences in the United States. EPA helps to increase the amount of materials recycled through its educational materials, technical support, direct assistance, and through recycling partnership programs.

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 2011 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 2011 measure is partnership attribution. EPA's WasteWise program provides program design assistance, implementation assistance, networking opportunities, helpline and listserv 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 2011 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 Conservation 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 2008," Office of Resource Conservation and Recovery.

<http://www.epa.gov/osw/nonhaz/municipal/pubs/msw2008rpt.pdf> (accessed December 22, 2009).

Waste News. "Municipal Recycling Survey". Crain Communications, Inc. 2009. Available annually from wasterecyclingnews.com. <http://www.wasterecyclingnews.com> (accessed December 22, 2009)..

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-F-99-017, October 1999. <http://www.epa.gov/osw/consERVE/downloads/f99017.pdf> (accessed December 22, 2009).

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 December 22, 2009).

FY 2011 Performance Measure:

- **Number of hazardous waste facilities with new 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 GPRC 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 most recent version of RCRAInfo, 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 made in the December 2008 release (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 were added with V4 of RCRAInfo, deployed 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 Resource Conservation and Recovery. RCRAInfo website with documentation and data
<http://www.epa.gov/enviro/html/rcris/index.html> (accessed December 22, 2009).

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 December 22, 2009).

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 2011 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 measure)**

Performance Database: Designated state agencies individually maintain records for reporting state program accomplishments. A new oracle web-based system is being developed, in conjunction with OSWER's Performance Assessment Tool, for the regions, states and territories to enter their data for these performance measures.

Data Source: The data suppliers are the states and territories who sign Leaking Underground Storage Tank (LUST) prevention assistance agreements and State and Tribal Assistance Grants with EPA. Each EPA regional office manages their own states' assistance agreements. 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: EPA/OUST will oversee the use of the QA/QC checklist, which identifies the QA/QC process that regional program managers should follow for each state's data submission. Regions complete the QA/QC checklist, sign it and submit it to EPA/OUST. The QA/QC checklist will be incorporated into the web-based system.

Data Quality Review: EPA's regional grants project officers and program managers provide first-level data quality reviews and oversight of the recipients' program performance measure results. EPA/OUST provides second-level data quality reviews of all data.

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: *Semi-annual Report of UST Performance Measures, End of Fiscal Year 2009 – as of September 30, 2009, dated December 2009,* http://www.epa.gov/OUST/cat/ca_09_34.pdf. (accessed December 29, 2009)

FY 2011 Performance Measure:

- **Increase in the 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 an annual voluntary survey on coal combustion products (CCP) generation and recycling practices of the utility industry. Responders typically represent approximately 35-50% 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) Form 923 (Formerly 767) and other publicly available trade association data.

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 recycling rate is defined as tons of CCPs recycled divided by tons of CCPs generated nationally by coal-fired electric utilities. The goal is to obtain a consistent historical data series for the generation and use of CCPs. These data are essential to evaluate the effectiveness of beneficial use programs and activities.

QA/QC Procedures: Quality assurance and quality control for production numbers reported on EIA 923 are provided by the Department of Energy's internal procedures and systems. Data on utilization are reviewed by EPA and CCP industry experts for accuracy.

Data Quality Reviews: N/A

Data Limitations: The ACAA annual survey data are considered to be of good to excellent quality on the national level. While the ACAA survey is voluntary and covers only a portion of the industry, the DOE data enable accurate extrapolation based on well characterized electricity generating capacity. Data limitations are associated with some States and regions which may be under-represented in the survey.

Error Estimate: N/A. Currently, the Office of Resource Conservation and Recovery (ORCR) does not collect data on estimated error rates.

New/Improved Data or Systems: The current DOE Form 923 replaced the Form 767 in 2007, which necessitated adjustments in completing the ACAA survey. The ACAA survey data are now considered consistent with past years. No new data sources or collection practices are contemplated at this time.

References: American Coal Ash Association. “ACAA 2008 CCP Survey 2009.” <http://www.aaa-usa.org/> (accessed December 22, 2009).

FY 2011 Performance Measure:

- **Number of facilities with new or updated controls per million dollars of program cost (program assessment efficiency measure)**

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 Conservation 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. 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 which impact program expenditures

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 and Tribal Assistance 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 BAS 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 December 22, 2009).

U.S. Environmental Protection Agency. Office of the Chief Financial Officer. Budget Automation System. Internal agency operating system on EPA intranet, (accessed December 22, 2009).

FY 2011 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 October 2009, a nationwide total of 94 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 2011, 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](http://yosemite.epa.gov/osw/rcra.nsf/0c994248c239947e85256d090071175f/E7661F353791AD71852573780050876E/$file/14776.pdf) (accessed December 14, 2009).

FY 2011 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 Conservation 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. The initial data collection was completed in December 2009. During the past several years, IHS, in collaboration with EPA, customized the w/STARS database to better meet EPA needs and requirements. This effort 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 December 14, 2009).

GOAL 3 OBJECTIVE 2

FY 2011 Performance Measures:

- **Percent of all SPCC facilities found to be non-compliant which will be brought into compliance (program assessment measure)**
- **Percent of all FRP facilities found to be non-compliant which will be brought into compliance (program assessment measure)**

- **Gallons of oil spilled to navigable waters per million program dollars spent annually on prevention and preparedness at Facility Response Plan (FRP) facilities (program efficiency 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

FY 2011 Performance Measure:

- **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) measures EPA's readiness for multiple significant events. Data are collected through detailed surveys of all Regional programs, EPA special teams and 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 has developed 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 measures the Agency's readiness to respond to multiple, nationally significant events. EPA Headquarters, Regions, and Special Teams are evaluated during this process. The evaluation team consists 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 2011 Performance Measures:

- **Number of Superfund final assessment decisions completed (program assessment measure)**
- **Number of Superfund sites with human exposures under control (program assessment measure)**
- **Number of Superfund sites with groundwater migration under control (program assessment measure)**
- **Annual number of Superfund sites with remedy construction completed (program assessment measure)**
- **Number of Superfund sites Ready for Anticipated Use Site-Wide.**
- **Human exposures under control per million dollars (program assessment efficiency measure)**
- **Annual program dollars expended per Operable Unit (OU) completing cleanup activities (Federal Facilities program assessment efficiency measure)**
- **PRP removal completions (including voluntary, AOC and UAO actions) overseen by EPA. (program assessment measure)**
- **Superfund-lead removal actions completed annually (program assessment measure)**
- **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)**
- **Number of Remedial Action Project Completions at Superfund NPL Sites**

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.

“Projects” represent discrete actions taken to implement a site cleanup remedy as described in the Record of Decision. They are typically defined to address discrete problems, such as specific media (e.g., ground water contamination), areas of a site (e.g., discrete areas of contamination), or particular technologies (e.g., soil vapor extraction). A given remedy may contain multiple actions or projects depending on the nature of the remedy selected

Suitability: The Superfund Program's performance measures for FY 2011 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; 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.

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, and is reviewed annually. EPA Headquarters has developed data quality audit reports and SOPs, 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 2012.

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. During FY 2009, CERCLIS data fields are being reviewed with the development of SEMS in mind. The enforcement module will be trimmed during FY 2010 to facilitate the data conversion which will be necessary to fully implement SEMS.

References: U.S. Environmental Protection Agency, EPA Performance and Accountability Reports, <http://www.epa.gov/ocfo/par/index.htm> (accessed December 30, 2009).

U.S. Environmental Protection Agency, Superfund Accomplishment and Performance Measures, <http://www.epa.gov/superfund/accomplishments.htm> (accessed December 30, 2009).

U.S. Environmental Protection Agency, Federal Facilities Restoration and Reuse Office – Performance measures, <http://www.epa.gov/fedfac/documents/measures.htm> (accessed December 30, 2009)

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 December 30, 2009).

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 December 30, 2009).

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 December 30, 2009).

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, 2009).

U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response, “OSWER Quality Management Plan”, http://www.epa.gov/swerffrr/pdf/oswer_qmp.pdf (accessed December 30, 2009).

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 December 30, 2009).

U.S. Environmental Protection Agency, Office of Environmental Information, EPA IT Standards, <http://basin.rtpnc.epa.gov/ntsd/itroadmap.nsf> (accessed December 30, 2009).

U.S. Environmental Protection Agency, Office of Environmental Information, EPA’s Information Quality Guidelines, <http://www.epa.gov/quality/informationguidelines> (accessed December 30, 2009).

U.S. Environmental Protection Agency, Office of Environmental Information, EPA IM/IT Policies, <http://intranet.epa.gov/oeiintra/imitpolicy/policies.htm> (accessed July 30, 2009).

FY 2011 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 and 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 latest version of RCRAInfo, Version 4 (V4), was released in December 2008 and 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 Conservation 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 December 22, 2009).

FY 2011 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.**

Performance Database: Designated state agencies individually maintain records for reporting state program accomplishments. A new oracle web-based system is being developed, in conjunction with OSWER’s Performance Assessment Tool, for the regions, states and territories to enter their data for these performance measures.

Data Source: The data suppliers are the states and territories who sign Leaking Underground Storage Tank (LUST) Corrective Action assistance agreements with EPA and the regions who provide assistance to the Tribes. Each EPA regional office manages their own states’ assistance agreements. For the program assessment efficiency measure, OUST will estimate the value of this efficiency measure based on data that EPA and state agencies currently collect and maintain. Cleanup dollars are estimated from available information reported to states and this total is recognized as incomplete given the lack of publicly available information on private cleanup expenditures

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/OUST will oversee the use of the QA/QC checklist, which identifies the QA/QC process regional program managers should follow for each state’s data submission. Regions complete the QA/QC checklist, sign it and submit it to EPA/OUST. The QA/QC checklist will be incorporated into the web-based system.

Data Quality Review: EPA's regional grants project officers and regional program managers provide first-level data quality reviews and oversight of their recipients' program performance measure results. EPA/OUST provides second-level data quality reviews of all data.

Data Limitations: Data quality depends on the accuracy and completeness of state records.

Error Estimate: N/A

New/Improved Data or Systems: Web-based Oracle system accessed through EPA's portal.

References: *Semi-annual Report of UST Performance Measures, End of Fiscal Year 2009 – as of September 30, 2009, dated December 2009;*
http://www.epa.gov/OUST/cat/ca_09_34.pdf (accessed on December 29, 2009)

FY 2011 Performance Measures:

- **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**
- **Percentage of Superfund sites at which settlement or enforcement action taken before the start of RA.**

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

FY 2011 Performance Measures:

- **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/myc/csites.pdf> (last accessed on July 20, 2007)
Resource Conservation and Recovery Act (RCRA) Multi-Year Plan, available at:
<http://www.epa.gov/osp/myc/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)

FY 2011 Performance Measure:

- **Average time (in days) for technical support centers to process and respond to requests for technical document review, statistical analysis and evaluation of characterization and treatability study plans. (Efficiency Measure)**

Performance Database: No internal tracking system.

Data Source: Data are generated based on technical support centers' tracking of timeliness in meeting customer needs.

Methods, Assumptions and Suitability: The dates of requests, due dates, response time, and customer outcome feedback are tabulated for the Engineering, Ground Water, and Site Characterization Technical Support Centers.

QA/QC Procedures: N/A

Data Quality Reviews: N/A

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: N/A

References: Land Protection and Restoration Research Program Assessment, available at: <http://www.whitehouse.gov/omb/expectmore/summary/10004305.2006.html> (last accessed August 16, 2007)

FY 2011 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 2011 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. OPPTS'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 2011 Performance Measure:

- **Annual number of hazard characterizations completed for HPV chemicals**

Performance Database: EPA uses a reporting spreadsheet called “HPV_HC_tracking_date.xls” to track the number of completed Screening Level Hazard Characterization Reports. The spreadsheet is located on the OPPT secure “T” share drive. This information is supplemented and aligned twice a year with an international database of chemicals sponsored internationally through Screening Information Data Sets (SIDs) Initial Assessment Meetings. Hazard characterizations are made publicly available through OPPT’s High Production Volume Information System (HPVIS).

Data Source: The Screening Level Hazard Characterization Reports are completed by EPA staff based on submissions from chemical sponsors, and are completed for both U.S. HPVs and international SIDS chemicals. Each screening level hazard characterization document represents a thorough review by qualified EPA personnel of the information provided by the submitter. Once a report is completed, as determined by senior scientist and management review, the spreadsheet is updated with the chemical name and date of completion.

Methods and Assumptions: This measure analyzes and supplements data received through HPV challenge. An assessment of adequacy is made for HPV chemicals defined as approximately 2,450 chemicals (1400 US Sponsored chemicals, 850 International sponsored chemicals, and 200 Original Organization for Economic Cooperation and Development (OECD) SIDS Initial Assessment Report (SIARs)). The measure is a count of completed reports which are then posted on EPA’s website. Note, some hazard

characterizations may update older documents. In these cases, credit is given for most recent update, while reducing previous year count.

Suitability: This output measure supports the overall goal of reducing risk from HPV chemicals and is suitable for year to year as well as quarter to quarter comparisons. Hazard screening is an important step in reducing risk and represents a key priority for the existing chemicals program. The data collected in support of this measure are suitable for use in performance measurement because they supply critical information used by EPA in setting targets and conducting measurements under the measure.

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,” November 2008).

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 more aggressive efforts to collect data, continued efforts to assess data through hazard characterizations, and increased emphasis on risk management activities for chemicals of concern.

Data Limitations: None.

Error Estimate: Not applicable. No models, assumptions or statistical methods are applied.

New/Improved Data or Systems:

References:

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

GAO-09-271: High Risk Series- An update. Transforming EPA’s Processes for Assessing and Controlling Toxic Chemicals January 2009.

FY 2011 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>

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http://www.lsuagcenter.com/en/environment/insects/Termites/formosan_termites/Termite+Facts+and+Figures.htm

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<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 dwellings in 11 Southern States. U.S. Department of Agriculture Forest Service, Research paper SO-145.

FY 2011 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 is 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 billion¹ 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

¹ The value received by farmers was \$239 billion in 2006

New/Improved Data or Systems: This measure will utilize existing data and data systems.

References:

USDA data sources include: United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). Agricultural Chemical Usage.

<http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1001>

United States Department of Agriculture (USDA), National Agricultural Statistics Service (NASS). Agricultural Statistics. <http://www.usda.gov/nass/pubs/agstats.htm>

FY 2011 Performance Measure:

- **Percent of urban watersheds that do not exceed the National Pesticide Program aquatic life benchmarks for three key pesticides of concern (diazinon, chlorpyrifos and malathion) (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 cycle (cycle II) from 2002-2012, Data are available to the public on USGS-NAWQA website from the (<http://water.usge.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 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 pyrethroids 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. USGS has not published their sampling plan. There will be a USGS report in the 2011 timeframe.

FY 2011 Performance Measure:

- **Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate (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 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 categorized 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.²

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 implementation of worker protection enforcement and training.

² 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.

QA/QC Procedures: PCCs must be certified by the American Association of Poison Control Centers (AAPCC). To be certified a PPC must have a board certified physician on call at all times, have AAPCC certified specialists available to handle all calls, have a comprehensive file of toxicology information readily available, maintain Standard Operating Procedures (SOPs), keep records on all cases and have an ongoing quality assurance program. In addition, EPA staff screen each case before analyzing the data set.

Data Quality Review: EPA conducts regular case reviews and audits to assure quality assurance of data collected. Also, as mentioned above, EPA staff reviews each case before entering into its database.

Data Limitations: Because PCC participation is voluntary and the available resources vary from year to year, the data contains uncertainty.

Error Estimate: Because the incidents are self-reported, there is a potential bias in the data. However, there is no reason to believe that the bias will change from year to year

New/Improved Data or Systems: Not known at this time.

References: Poison Control Centers TESS (Toxic Exposure Surveillance System)
<http://www.aapcc.org/poison1.htm>

FY 2011 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.³

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.

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

³ 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.

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 Description:

For the numerator :

Universe of Occupationally Exposed Individuals:

- 1. Certified Applicators = 1,100,000
- 2. "Under the Supervision" Applicators (Assume 4 X CA) = 4,000,000
- 3. Other Occupational Pesticide Users = 2,500,000*

* = Bureau of Labor Statistics calculates there are 50,000,000 employees in non-agricultural fields that we believe utilize pesticides as part of their business (e.g., healthcare support; food preparation; building & grounds cleaning & maintenance; production; etc.). We assume that 5% of those employees apply pesticides.

- 4. Agricultural Farmworkers = 1,800,000

Potential Pesticide Risk Events:

For occupational users (Groups #1 - 3 above), we assume every pesticide application has the potential to create a pesticide incident with adverse health effects. We conservatively estimate each individual in those groups makes 4 pesticide applications per year. Therefore,

$$7,600,000 \text{ occupational users} \times 4 \text{ applications/year} = 30,400,000 \text{ Potential Pesticide Risk Events/Year}$$

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,

$$105 \text{ days per/year} \times 5\% = 5.25 \text{ Potential Pesticide Risk Events/Year/Farmworker}$$

$$5.25 \times 1,800,000 \text{ Ag Farmworkers} = 9,450,000 \text{ Potential Pesticide Risk Events/Year}$$

$$30,400,000 + 9,450,000 = 39,850,000 \text{ Total Potential Pesticide Risk Events/Year}$$

Occupational Pesticide Incidents:

The Poison Control Centers' Toxic Exposure Surveillance System recorded there were an average of 1388 occupational pesticide incidents with adverse health impacts in 2001 – 2003, the most recent data available.

RATE OF INCIDENTS PER POTENTIAL PESTICIDE RISK EVENTS PER YEAR

$$\frac{1388 \text{ occupational pesticide incidents per}}{39,850,000 \text{ potential pesticide risk events/year}} = 3.5 \text{ incidents per } 100,000 \text{ potential pesticide risk events/year}$$

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, maintain 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 2011 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. It does not include headquarters resources for worker protection in the Registration/Re-Registration/Registration Review programs, because would result in double-counting. Regional resources for field programs are in the form of FTEs, which are parsed differently into worker protection, water quality, and strategic agricultural initiatives by the Regions depending on their priority objectives. These data are not currently available. An additional complication is the fact that states provide substantial funding for these programs as well, and their contribution is not included here.

For recent years, annual STAG funds for worker safety (C&T and WP) total \$6.6M. The President's Budget has remained relatively constant at \$2.7M for Agricultural Worker Protection and \$2.7M for Pesticide Applicator per year, for an average of \$12M as the numerator in the baseline calculation.

Pesticide Occupational Incidents Avoided = Using pesticide incident data from Poison Control Centers' Toxic Exposure Surveillance System, OPP established a baseline for average incidents per year. Use of an average of three years is appropriate to account for inconsequential fluctuations in the counts.

This measure will be tracked as follows: we will review annual occupational incident data and compare it with the rolling average for the baseline. If the average number of incidents from the most recent three years is below the baseline, the difference will be the incidents avoided for use in the calculation.

QA/QC Procedures: Most cases in TESS are submitted by certified PCC. Certification of the PCC requires that there be board certified physicians with expertise in toxicology on-call at all times, poison information specialists available to handle calls, access to a major medical library, guidelines for follow-up of each case to determine the patient's final disposition or medical outcome. Taken together these criteria help to assure the quality of the data.

Each Poison Control Center uses standard format for data collection. Standard data elements include location of victim at the time of exposure, substance exposed to, route of exposure, initial symptom assessment, and evaluation of medical outcome after case follow up. Cases with symptoms are categorized by severity as minor, moderate, or major.

Data Quality Review: Trained PCC specialists review the case data and, based on the information provided and their knowledge of toxicology, doses, and timing of exposure, ascertain whether the incident was caused by pesticides.

Data Limitations: Experts believe pesticide poisonings are under-reported to surveillance sources, for reasons, including the symptoms of pesticide poisoning generally are difficult to identify; there are few biomarkers for pesticides; and because the exposed individual may not seek medical care or report their illness. Additionally, not all states require mandatory physician reporting, and those that do may have difficulty enforcing that requirement.

Error Estimate: As mentioned above, under-reporting is believed to be a problem in all pesticide incident data sets. There are a number of widely-ranging estimates for the amount of under-reporting, ranging from 25% to as much as a factor of a thousand.

New/Improved Data or Systems: OPP collects pesticide incident data under FIFRA section 6(a)2. FIFRA is the Federal Insecticide, Fungicide and Rodenticide Act; the statute which governs the program functions. Section 6(a)2 is mandatory reporting required of the registrants (registrants are those who have or seek registration of their pesticide products). However, details important to this measure are not routinely captured in this data set. We hope to improve the internal data systems that capture incidents reported by the regulated community. Currently, data are difficult to use and may not have needed detail. If these data were available, they could potentially be used to complement or replace the PCC/TESS data, depending on their quality.

References: none

FY 2011 Performance Measure:

- **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 non-statistical 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 2011 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:

$100 - \left[\frac{\text{Sum of the costs to produce or update Endangered Species Bulletins in current 12 month period}}{\text{number of bulletins produced or updated in the same 12 month period}} \div \frac{\text{Sum of the costs to produce or update Endangered Species Bulletins in previous 12 month period}}{\text{number of bulletins produced or updated in the previous 12 month period}} \times 100 \right]$ This is intended to be a measure that captures improvements in current year cost per bulletin vs. previous year cost per bulletin.

$100 - \left[\frac{\text{Sum of the time in hours to produce or update Endangered Species Bulletins in current 12 month period}}{\text{number of bulletins produced or updated in the same 12 month period}} \div \frac{\text{Sum of the time in hours to produce or update Endangered Species Bulletins in previous 12 month period}}{\text{number of bulletins produced or updated in the previous 12 month period}} \times 100 \right]$

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 2011 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 was funded as 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 versus 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 2011 Performance Measures:

- **Percent of decisions completed on time (on or before PRIA or negotiated due date)**
- **Maintain timeliness of Section 18 Emergency Exemption 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 (PRIA 2), 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 PRIA 2 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 or 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); FFDCFA Sec 408(a)(2); Food Quality Protection Act (FQPA) 1996; Pesticide Registration Improvement Act (PRIA) 2003; Pesticide Registration Improvement Renewal Act (PRIA 2) 2007

FY 2011 Performance Measure:

- **Number of Product Reregistration Decisions**
- **Number of pesticide registration review dockets opened**
- **Number of pesticide registration review final work plans completed**

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 2011 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 2011 Performance Measure:

- **Percent of agricultural watersheds that do not exceed 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 pyrethroids 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 2011 Performance Measure:

- **Percent reduction of children’s exposure to rodenticides**

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, initial symptom assessment, treatment received and an evaluation of the medical outcome.

Data Sources:

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.⁴

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 and 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. The information recorded by SPIs is managed by each PCC and then uploaded to NPDS every one to sixty minutes, creating a real-time national exposure surveillance system. For this measure, all confirmed exposures involving children less than six-years old are included, regardless of medical outcome or severity.

Methods, Assumptions and Suitability: OPP assumes 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 exposures is expected to result from mitigation measures made as part of OPP’s re-evaluation programs, from greater availability of lower risk alternative products resulting from the Agency’s reduce risk registration process, from the continued implementation 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.

⁴ 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.

Data Quality Review: EPA conducts regular case reviews and audits to assure quality assurance of data collected. Also, as mentioned above, EPA staff reviews each case before entering into its database.

Data Limitations: Because PCC participation is voluntary and the available resources vary from year to year, the data contains uncertainty.

Error Estimate: Because the incidents are self-reported, there is a potential bias in the data. However, there is no reason to believe that the bias will change from year to year

New/Improved Data or Systems: Not known at this time.

References: Poison Control Centers National Poisoning Data System (NPDS)
<http://www.aapcc.org/poison1.htm>

FY 2011 Performance Measure:

- **Annual number of chemicals with final Acute Exposure Guideline Levels (AEGLs) values (program assessment)**

Performance Database: Performance is measured by the annual number of chemicals with Final AEGL values as recorded in the AEGL Chemical Status sans Structure Access 2000 database containing the approval dates for final 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 has shifting to a competed contract. 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 Academies (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 final values because EPA has completed work in developing proposal AEGL values. EPA's contract gives us more control over finalizing AEGL values. In FY2009 and almost exclusively in FY2011, 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 "final" by the NAC/AEGL FACA Committee represents the measure of performance. The data meet the standards in the QMP and the outcomes are reviewed by senior management.

Suitability: This output measure supports the long term goal of assigning proposed Acute Exposure Guideline Levels for all priority chemicals by 2011.

QA/QC Procedures: OPPT has in place a signed Quality Management Plan ("Quality Management Plan for the Office of Pollution Prevention and Toxics; Office of Prevention, Pesticides and Toxic Substances," November 2008) 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 2011 Performance Measures:

- **Percent 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)**
- **Percent of children (aged 1-5 years) with elevated blood lead levels (> 5 ug/dL)**

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/>. More recent performance results were published in a March 2009 Pediatrics journal article. <http://pediatrics.aappublications.org/cgi/content/abstract/123/3/e376> Performance results will be updated as new peer reviewed NHANES data is published either in the official CDC report on human exposure to environmental chemicals or other journal articles as the data 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 (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 and continuing to maintain the elimination of childhood lead poisoning over time. 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 2011 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 measure)**
- **Cumulative number of certified Renovation, Repair and Painting (RRP) Firms**

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. Records are maintained for both the abatement and Renovation Repair and Painting programs in States where the program is directly implemented by EPA.

Processing abatement applications: The FLPP electronic database contains applications for certification by individuals and firms and applications for accreditation by training providers in states and tribal lands administered by the Federal lead abatement 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.

RRP Firms: The FLPP database was recently expanded to also track the certification of firms for Renovation Repair and Painting where EPA directly implements the program. EPA uses an Oracle Discoverer application to query the database to collect measurable performance data.

Data Source:

Processing Abatement applications: 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.

RRP firms: As of October, 2009 firms apply for certification through EPA. However, as States become authorized to administer their own RRP programs, States will be responsible for the authorization of firms in their state. EPA will collect data on the numbers of firms certified in each authorized state as part of the Agency's oversight of authorized programs through semi-annual reports from grantees.

Methods and Assumptions:

Processing abatement applications- 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.

RRP firms: 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 2011, EPA will be reviewing and adjusting performance measures for both the abatement program and the RRP program as appropriate.

Suitability:

Processing abatement applications: 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.

RRP firms: This measure tracks total impact of the RRP regulation via establishment of a cadre of certified firms available for Remodeling work throughout the country. 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.

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,” November 2008). 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: Processing abatement applications: 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.

RRP firms: Data are estimates from firm certification applications received either directly by EPA or through EPA authorized State programs and reported to EPA Regional offices.

Error Estimate: Processing abatement applications: There is little or no sampling error in this performance measure, because it is based on a census of all applicable records.

RRP firms: Statistical approaches are generally not used across the program and therefore error estimates are not available.

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.

As additional states report RRP firms data to EPA Regional offices, we will consider automating this process through the addition of the Regional Annual Commitment System (ACS) measure. This may not be needed until 2012 or future years.

References: 1) Quality Management Plan for National Program Chemicals Division, June 2008; 2) FLPP database documentation; 3) URL for Applications and Instructions, <http://www.epa.gov/lead/pubs/traincert.htm>.

FY 2011 Performance Measures:

- **Annual reduction in the production-adjusted risk-based score of releases and transfers of Inventory Update Reporting (IUR) chemicals from manufacturing facilities (program assessment measure)**

Performance Database: The Risk Screening Environmental Indicators (RSEI) Model feeds this 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 2007 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.

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 IUR-related efforts will be effective. Currently, there are close to 650 chemicals found in the TRI, however, only about a third of those (approximately 237) are IUR chemicals of concern in RSEI. In order to generate a RSEI score the chemicals need toxicity data. Therefore, of the approximate 237 TRI chemicals in RESI, some were excluded that did not have toxicity weights, reducing the number of chemicals included in the measure to just below 200.

Suitability: This RESI measure supports the long term goal to reduce the RSEI index for IUR chemicals of concern 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 IUR chemicals. The year to year comparison can reveal trends in the risk from IUR chemicals over time. Despite a two year lag in TRI data, annual comparisons of RSEI IUR results 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,” November 2008) and a specific Plan for the model (“Quality Assurance Project Plan Risk Screening Environmental Indicators Model Version 2.1.6”, which applies to the 2.2.0 version of RSEI) will ensure that those standards and procedures are applied to this effort. The 2008 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 2.2.0 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 2011 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), (Management Information Tracking System) MITS, (Pre-manufacture Notice) PMN Lotus Notes, (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;
- MITS: Captures NCP regulatory dispositions and maintains NCP workflow for new chemicals;

PMN Lotus Notes: Records PMN review and decision, assessment reports on chemicals submitted for review. New workflow system for new chemicals submitted since August 2008.

- PMN CBI LAN: Records documenting PMN review and decision, assessment reports on chemicals submitted for review before August 2008. 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,” November 2008. 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 2011 Performance Measures:

- **Percent reduction from baseline year in cost of managing PMN submissions through the Focus meeting as a percentage of baseline year cost (program assessment efficiency measure)**

Performance Databases: EPA will rely on several principal databases to facilitate implementation of the TSCA Section 8(e) and new chemical submission efficiency measures:

- **Confidential Business Information Tracking System (CBITS):** CBITS allows users to access basic identifying and status information on each hard copy 8(e) notification and new chemical submission to EPA, track receipt of each hard copy

submission as well as requests for copies of submissions or information therein, and to obtain data on number of hard copy submissions and requests for copies per fiscal year. CBITS is a paper system which will eventually be phased out in favor of MTS database (see below).

- **Manage Toxic Substances (MTS) database:** This is a new system that, when applied to 8(e) notifications and new chemical submissions in FY 2008, will enable users to receive, process, and store electronic submissions of 8(e) notifications and new chemical submissions information, and accommodate subsequent searches and retrievals performed by EPA or contractor staff. The system will provide data on the number of electronic submissions per fiscal year and the number of searches and retrievals conducted electronically by accessing scanned documents.

Data Sources: The sources of data for this performance measure are the 8(e) notifications and new chemical submissions and the information summarized in the databases described above. No external data sources play a direct role in the calculation of measurement results, although the 8(e) notifications often make reference to external data sources in which the reported 8(e) information originally appeared.

Methods and Assumptions: The efficiency measure “Average cost of TSCA Section 8(e) processing and searches” is calculated by: (1) defining the baseline year (FY 2007) and developing baseline information expressed as the average time required to conduct 8(e) processing and searches in the baseline year; (2) converting average time to average cost measurements; (3) setting appropriate targets for outyears, reflecting increasing levels of efficiency; and (4) conducting actual measurements for fiscal years beginning with FY 2009, after electronic submissions, processing and searches begin. These steps can be summarized individually as follows:

(1) Obtain baseline data: FY 2008 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," November 2008. 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/>

FY 2011 Performance Measure:

- **Conduct 400 Risk Management Plan audits and inspections**

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 2011 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 currently is 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. The Partnership has recently added the capacity to provide summary data from a commercially available fuel quality database to verify lead and sulfur levels in fuels. The database has limited country coverage. The samples are taken using internationally-acceptable quality control and assurance procedures. The data will be used to verify the PCFV database.

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. The fuel quality database used to verify lead and sulfur levels in fuels uses internationally-acceptable quality control and assurance procedures.

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. . The fuel quality database has limited country coverage and represents spot-sampling of fuels, not a statistically valid average of fuel quality in a country. The data will be used in conjunction with other available information to update the PCFV database and verify progress under the Partnership.

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 2011 Performance Measures:

- **Brownfields properties assessed (program assessment 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 assessment measure)**
- **Acres of Brownfields made ready for reuse (program assessment measure)**
- **Acres of Brownfields made ready for reuse per million dollars (program assessment efficiency measure)**

Performance Database: The Assessment Cleanup and Redevelopment Exchange System (ACRES) tracks the performance information for the above measures.

Key fields related to performance measures include, but are not limited to:

Property Acreage
Assessment Completion Date
Cleanup Required
Cleanup Completion Date
Institutional Controls Required
Institutional Controls in Place/Date
Engineering Controls Required
Engineering 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 has updated, launched and phased-in an online reporting form in FY 2009 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, 2009).

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, 2009).

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, 2009).

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, 2009).

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, 2009).

FY 2011 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)**
- **Loading of Biochemical Oxygen Demand removed (million pounds/year) from the US-Mexico border area since 2003**
- **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 Estadística, Geografía y Informática, 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 2011 Performance Measures:

- **Acres of habitat protected or restored in National Estuary Program (NEP) study areas (program assessment measure)**
- **Program dollars per acre of habitat protected or restored (program assessment efficiency measure)**
- **Number of acres restored and improved under the 5-star, NEP, 319 and great waterbody programs (cumulative)**

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 and State of the Bay reports, and

implementation tracking materials are used to document the number of acres of habitat restored and protected. Each year, the NEPs and Regions validate the data. Then the NEPs input them into a database NEPORT which is managed by EPA. EPA annually aggregates the data provided by each NEP to arrive at a national total for the entire Program. EPA is confident that the annually-reported data are as accurate as possible. In addition, every three years EPA conducts a program evaluation of each NEPs progress implementing its management plan; the teams conducting those evaluations review the three-year habitat data as part of the comprehensive evaluation process.

Methods, Assumptions and Suitability:

The term "restored and protected" is a general term that describes a range of activities and is interpreted broadly to include: creation of habitat, acquisition of sites for the purpose of protection, conservation easements and deed restrictions, increasing submerged aquatic vegetation coverage, increasing the number of permanent shellfish bed openings, and increasing the amount of anadromous fish habitat. There is not necessarily a direct correlation between the number of habitat acres restored and protected and ecosystem health, nor is habitat quantity or quality the only indicator 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.)

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 and Puget 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 partner agencies/organizations that directly engage in habitat protection and restoration. EPA requests that the NEPs follow EPA guidance to prepare their reports. The EPA Regions and Headquarters then confirms the individual NEP and national totals. EPA actions are consistent with data quality and management policies.

Data Quality Review: No audits or quality reviews have been conducted.

Data Limitations: Current data limitations include: (1) information that may be reported inconsistently across the NEPs because they may interpret the meaning of "protection and restoration" differently; (2) acreage amounts may be miscalculated or incorrectly reported, and (3) acreage may be double-counted i.e., the same parcel may also be counted more than one partner, or the same parcel may be counted more than once because it has been restored several times over a period of years. Also habitat restored

and protected may not directly correlate to overall improvements in the health of that habitat (particularly in the year of reporting); rather, habitat acreage protected and restored is only one indicator of habitat health and of on-the-ground progress made by the NEPs.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: EPA developed an on-line reporting system--NEPORT—that makes it possible for NEPs and EPA to track habitat projects. Also, NEPs provide latitude and longitude data (where possible) for each protection and restoration project. These data are then mapped to highlight where projects are located in each NEP study area. Not only does this help each NEP and EPA precisely identify project sites, but it also makes it possible for NEPs and EPA to validate NEPORT data, and highlights where different partners may be double counting acreage.

References: Aggregate national and regional data for this measurement, as well as data submitted by each NEP, 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 2011 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 have been 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 has developed a new data system to report and track habitat restoration data from the LISS. This database is publicly available on the LISS website at <http://www.longislandsoundstudy.net/habitarestoration/projects/Search.aspx>. The database provides information about completed and potential habitat restoration projects: Site Name, Project Title, Town, Project Description, Water Body, Habitat Type, Targeted Fish Species, Cause of Degradation, HRI Goal, Restoration Technique, Acres, Miles, Map Images, Other Embedded Documents, Project Status, Funding Sources, Project

Partners, Project Completed, Completion Date. The site locations are also mapped to highlight where these projects are located in the LISS study area.

An on-line reporting system—NEPORT-- has been developed for the NEPs' use that assists 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 EPA's wetlands net gain goal.

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>. The database of habitat restoration projects is publicly available on the LISS website at <http://www.longislandsoundstudy.net/habitrestoration/projects/Search.aspx>

FY 2011 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.

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.

Error Estimate: There may be errors of omission, in classification, documentation 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/pccsys.htm>

FY 2011 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: The LISS has developed a new data system to report and track habitat restoration data from the LISS. The database is publically available on the LISS website at <http://www.longislandsoundstudy.net/habitatrestoration/projects/Search.aspx>. The database provides information about completed and potential habitat restoration projects: Site Name, Project Title, town, Project Description, Water Body, Habitat Type, Targeted Fish Species, Cause of Degradation, HRI Goal, Restoration Technique, Acres, Miles, Map Images, Other Embedded Documents, Project Status, Funding Sources, Project Partners, Project Completed, Completion Date. The site locations are also mapped to highlight where these projects are located in the LISS study area.

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.

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 additional miles of riverine migratory corridor. 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. Each fish passage project is field verified.

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: As discussed in the performance database section, the LISS has developed a new data system to report and track habitat restoration data from the LISS. The database is publically available on the LISS website at <http://www.longislandsoundstudy.net/habitatrestoration/projects/Search.aspx>

The database provides information about completed and potential habitat restoration projects: Site Name, Project Title, Town, Project Description, Water Body, Habitat Type, Targeted Fish Species, Cause of Degradation, HRI Goal, Restoration Technique Acres, Miles, Map Images, Other Embedded Documents, Project Status, Funding Sources, Project Partners, Project Completed Date. The site locations are also mapped to highlight where these projects are located in the LISS study area.

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 2011 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 collected limited data on wetlands losses and gains in its Regulatory Analysis and Management System (RAMS) permit tracking database. RAMS was designed to be an administrative aid in tracking permits, this it lacked 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 was also proprietary making it difficult to retrofit without utilizing its original developers. These and other 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. To improve tracking of wetland gains and losses in the Section 404 permit program, in 2007 with support from EPA, the Corps deployed a new standardized nationwide permit tracking system known as ORM2 (Operation and maintenance business information link, Regulatory Module)

Data Source: ORM2 is the data source for this performance measure. Data input is conducted by Corps Regulatory Program staff.

Methods, Assumptions and Suitability: ORM2 is the definitive source of data regarding wetland and other aquatic resource impacts authorized pursuant to the Section 404 permit program. ORM2 was designed to provide improved tracking regarding:

- Type, quantity and location of aquatic resources impacted
- Type, quantity and location of aquatic resource mitigation
- Type and quantity of mitigation by method (i.e., restoration, creation, enhancement, or preservation)
- Type and quantity of mitigation by mechanism (i.e., mitigation bank, in-lieu fee mitigation, or permittee-responsible mitigation)
- Differentiating stream mitigation (in linear feet) from wetlands mitigation (in acres)
- Spatial 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 deployed in approximately 18 Corps Districts.

QA/QC Procedures: After the close of the fiscal year, the Corps begins compiling national impact and mitigation data. As part of the compilation process the Corps carries out a detailed review of the data. Any data anomalies are investigated with the subject Corps District Office responsible for the source data. Following this review and vetting process, national summaries of impact and mitigation data are shared with EPA.

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. These critical reviews helped create the impetus of the development of ORM2.

Data Limitations: FY 08 was the first full year in which the Corps' 38 District offices used ORM2 to track activities in the Section 404 Permit Program, thus there was a great deal of system debugging, training, and trouble-shooting. Also, while ORM2 has a great deal of functionality, the Corps is phasing in the requirements to utilize all of the ORM2 data entry fields. Overtime, as the system is completely debugged, users become more proficient, and data entry requirements expand, ORM2 will provide increasingly more accurate and robust data regarding wetland gains and losses in the Section 404 Permit program. In addition to these general data limitations, the Corps is currently evaluating solutions to a key mitigation data reporting challenge. Wetland Impacts are tracked in acres. Similarly all the mitigation provided by permittee-responsible mitigation and some of the mitigation provided by in lieu fee programs and mitigation banks tracks is tracked in acres. However, some mitigation banks and in-lieu fee programs may track their mitigation as "credits" which are usually based on a function or condition assessment protocol and there may not be a one to one relationship between a credit and an acre. For reporting purposes, it would be more efficient if all impacts and mitigation could be reported in acres. The Corps and EPA are exploring ways to convert these "credits" to "acres" to facilitate this reporting. However, in light of the large number of different function/condition assessment protocols used nationwide at mitigation banks and in-lieu fee programs, identifying a simple solution is proving challenging.

Error Estimate: Not applicable

References:

Information regarding ORM2 (Operation and maintenance business information link, Regulatory Module) can be found at:

<http://www.usace.army.mil/CECW/Documents/cecwo/reg/aqua/vol3-1.pdf>

Regional Internet-based Bank Information Tracking System (RIBITS) website:

http://www.erdcpub.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 2011 Performance Measure:

- **Cumulative percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples (program assessment measure)**

Performance Database: Great Lakes National Program Office (GLNPO) Great Lakes Fish Monitoring Program (GLFMP) ¹(see reference #1 below). This 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. It began with the collection of data in Lake Michigan in 1972 and the additional lakes were added in 1976. In FY2011, the database will contain quality reviewed field data from fish collected in 2009 and all quality reviewed analytical data for fish collected between 1972 and 2009. Samples collected in 2009 are expected to be able to be available for reporting in 2011. Data are reported on a calendar year basis.

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 monitors the potential exposure to contaminant concentrations for wildlife.

The GLFMP 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. It 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 has unique environments with distinct growth rates, food webs, and chemical integrity. For this reason, a direct comparison of annual concentrations between each lake and sub-basin is not appropriate. However, a cumulative basin-wide percent long-term trend can be determined on all years data using an exponential decrease function, starting with 1990 data as the baseline. The variability in the data caused by the intra-lake uniqueness of each lake trout (and walleye) community confounds trend analyses on shorter timeframes. 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 long-term cumulative percent decrease is calculated using the rate constant of the best exponential fit line and the total number of years elapsed since 2000. Cumulative percent decline equals $1 - e^{-(\text{rate constant})(\# \text{ of years elapsed since 2000})}$

2000)]. The year 2000 is selected as the baseline for this measure in the Action Plan to illustrate a more relevant measurable change on an annual basis in the long-term cumulative percent decline. The year 2000 is also more representative of the current environmental condition in the Great Lakes, but does not provide enough statistical significance to determine long-term trends from. The calculated cumulative percent decrease can then be compared to the reduction target to determine if it has been met. GLNPO rounds the calculated value to the nearest whole percentage for reporting and comparison purposes

QA/QC Procedures: GLNPO has an approved Quality Management System in place² (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 online³ (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 reviews⁴ (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 assisted in providing a data quality objective and a recommendation to consider dropping the game fish fillet element of the program.

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>.

1. “*The Great Lakes Fish Monitoring Program - A Technical and Scientific Model For Interstate Environmental Monitoring.*” September, 1990. EPA503/4-90-004.
2. “Quality Management Plan for the Great Lakes National Program Office.” EPA905-R-02-009. Revised and approved May 2008. <http://www.epa.gov/glnpo/qmp/>
3. “*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/fishtoxtics/GLFMP_QAPP_082504.pdf
4. “*GLNPO Management Systems Review of 2006.*” Available at <http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf>.

FY 2011 Performance Measure:

- **Number of Beneficial Use Impairments removed within Areas of Concern. (program 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 2011 will be reported in 2011.

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 identified universe of 261 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. By 2009, all of the Areas of Concern had developed their delisting targets and they are now being used to measure progress in delisting 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 maintains tracking for de-listed U.S. or binational Beneficial Use Impairments in office files.

2. *“Quality Management Plan for the Great Lakes National Program Office.”* EPA905-R-02-009. Revised and approved May 2008. <http://www.epa.gov/glnpo/qmp/>.

3. *“GLNPO Management Systems Review of 2006.”* Available at <http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf>.

FY 2011 Performance Measure:

- **Cubic yards of contaminated sediment remediated (cumulative from 1997) in the Great Lakes (program 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 were 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 2010 remediation will be reported in FY 2011.

Data Source: GLNPO collects sediment remediation data from various State and Federal project managers across the Great Lakes region, who conduct and coordinate contaminated sediments work, including appropriately characterizing and managing 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: GLNPO began tracking sediment remediation actions in the Great Lakes Basin in 1997. At that time, GLNPO’s “best guess” of the total number of cubic yards that required remediation in the Great Lakes AOCs was 40 million. In 2004, the U.S. Policy Committee tasked the Great Lakes States with establishing a more comprehensive list of sites requiring remediation in the entire Great Lakes Basin (AOCs and non-AOCs), using best professional judgment to estimate the sediment volumes to be remediated. Using this list of estimated sediment remediation needs created by Great Lakes States in 2004, and sediment remediation estimates reported by Project Managers for calendar years 1997 through 2004, GLNPO estimated the 1997 baseline, or “universe,” for contaminated sediments requiring remediation to be 46.5 million cubic yards.

The data collected to track sediment remediation in the Great Lakes show the amount of sediment remediated (removed, capped, undergoing natural recovery, or 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 qualitative data since a specific error estimate is not able to be calculated.

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>.
6. “Indicator 3: Sediment Contamination.” Unpublished – in Great Lakes National Program Office files.

FY 2011 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 generally 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 an ongoing draft of a 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 2011 Performance Measure:

- **Number of Areas of Concern in the Great Lakes where all management actions necessary for delisting have been implemented (cumulative)**

Performance Database: USEPA’s Great Lakes National Program Office will track the cumulative number of management actions (including sediment remediation and habitat restoration) that take place to achieve beneficial use impairment (BUI) targets at the

Areas of Concern (AOCs) located solely within the United States (25) and the ones shared with Canada (5). Results through September 2011 will be reported in 2011.

Data Source: Internal tracking and communications with Great Lakes States, the relevant community groups at the AOCs, other interested groups, the US Department of State and the International Joint Commission (IJC).

Methods, Assumptions, and Suitability: Restoration of U.S. or Binational AOCs will ultimately be measured by the removal of all BUIs, leading to de-listing of all of the U.S. or Binational AOCs by 2025. There were once a total of 43 Great Lakes AOCs: 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 AOCs; however, with the de-listing of the Oswego River AOC, 30 United States or Binational AOCs remained at the end of Fiscal Year 2006. Remedial Action Plans (RAPs) for each of these AOCs address one or up to 14 BUIs associated with these areas.

This measure tracks the number of reasonable and realistic management actions that could take place in order to show cumulative progress to remove those BUIs. 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 AOCs 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. By 2009, all of the National and Binational AOCs had developed their delisting targets and they are now being used to measure progress in delisting BUIs. Along with these targets, the respective AOCs and the States have developed a Stage 2 RAP or an equivalent document that outlines the reasonable and realistic management actions that could be taken to delist the relevant BUIs and, hence, the AOC. After all BUIs in an AOC are delisted, the entire Area of Concern can be delisted. Reasonable and realistic management actions refer to those set of local, state and federal actions that

could be taken to remove the impairment. These actions may not result in the immediate delisting of a set of BUIs but these actions will remove the contaminant threat that will allow environmental conditions to improve over time which will lead to eventual delisting of the AOC.

QA/QC Procedures: GLNPO has an approved Quality Management System in place (see reference #2 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 maintains tracking for de-listed U.S. or binational Beneficial Use Impairments in office files.
2. "Quality Management Plan for the Great Lakes National Program Office." EPA905-R-02-009. Revised and approved May 2008. <http://www.epa.gov/glnpo/qmp/>
3. "GLNPO Management Systems Review of 2006." Available at <http://www.epa.gov/glnpo/qmp/qualitysystemsassessment.pdf>.
4. Compilation of "Stage 1 and 2 Remedial Action Plans" and "Delisting Targets for Areas of Concern" for 25 National 5 Binational AOCs. Various approval dates and documents are located at the respective local, state and federal offices.

FY 2011 Performance Measure:

- **Number of nonnative species newly detected in the Great Lakes ecosystem**

Performance Database: Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS). GLANSIS functions as a Great Lakes specific node of the USGS Nonindigenous Aquatic Species (NAS) national database. Information entered for GLANSIS automatically appears in NAS. GLANSIS provides targeted access to the information – especially collection records – for established Great Lakes nonindigenous species in the NAS Database.

Data Source: Verified observations of new species by Great Lakes surveillance and researchers agencies and institutions, as subsequently subjected to review as described in QA/QC procedures (below).

Methods, Assumptions, and Suitability: The Great Lakes have a long history of aquatic nonindigenous species (ANS) introductions – both intentional and unintentional. A number of ongoing federal programs are working to reduce the rate of introductions. The increased effort to address invasive species through GLRI funding will reduce the rate of introductions. During the ten-year period prior to the Great Lakes Restoration Initiative (2000-2009), thirteen new invasive species were discovered within the Great Lakes. This is a baseline rate of invasion of 1.3 species per year. Changes in rate will be assessed by extending this cumulative average into the time period of the GLRI (2000-present).

This methodology assumes that the detection of invasive species in the environment correlates with actual invasion rates. It is recognized that there can be lag time in discovery (discussed in more detail under error estimate). This performance measure also assumes that rate of detection is directly reflective of the GLRI effort. Because the Great lakes ecosystem receives the input of a number of vectors that introduce invasive species -- including, live organisms in commerce, canals/waterways, ballast water, and recreational and resource users activities -- the results of the GLRI effort cannot be measured independently from the suite of other ongoing programs at work in the Great Lakes.

This performance measure is suitable for providing a basic pulse toward the long-term goal of establishing a no-tolerance policy for new introductions. Invasive species programs are in a very early stage of development and many regulatory and programmatic gaps still exist.

QA/QC Procedures: The list of aquatic nonindigenous species found via GLANSIS is subject to constant revision. Based on these criteria:

Geographic criterion: Only species which are established in the Great Lakes basin below the ordinary high water mark -- including connecting channels, wetlands and waters ordinarily attached to the Lakes -- are included in the GLANSIS database. Species which have invaded inland lakes within the Great Lakes basin but not meeting the above geographic criterion are not included in the database.

Aquatic criterion: GLANSIS includes only aquatic species. USDA wetland indicator status (see <http://plants.usda.gov/wetland.html>) is used as a guideline for determining whether wetland plants should be included in the list - species that typically require wetlands are included, upland species are not

Nonindigenous criterion: The species included in GLANSIS are those which are considered nonindigenous within the Great Lakes basin according to the following definitions and criteria (based on Ricciardi 2006): the species appeared suddenly and had

not been recorded in the basin previously; it subsequently spreads within the basin; its distribution in the basin is restricted compared with native species; its global distribution is anomalously disjunct (i.e. contains widely scattered and isolated populations); its global distribution is associated with human vectors of dispersal; the basin is isolated from regions possessing the most genetically and morphologically similar species.

Cryptogenic species are those species that cannot be verified as either native or introduced (after Carlton, 1996). Species that have been identified as cryptogenic are generally not listed, but are being considered for inclusion in a separate list or in the main GLANSIS list with an appropriate identifier.

Species which have expanded their ranges within the basin (e.g., those native to Lake Ontario which have invaded Lake Superior) are not systematically included in the main GLANSIS list but are being considered for inclusion in a separate list or in the main GLANSIS list with an appropriate identifier. The only species presently included in GLANSIS that violates the criterion of no previous evolutionary history in the Great Lakes basin is the sea lamprey.

Note: Although widely used, the term 'invasive' is vague and subject to widely inconsistent usage. Biologically it is often related to the relative ability of a species to spread and establish in new areas, while legislatively and politically it is used to characterize a nonindigenous species “whose introduction does or is likely to cause economic or environmental harm or harm to human health” (Executive Order 13112, February 1999). Thus, the term 'invasive' has multiple meanings and requires a subjective judgment. We avoid using the term 'invasive', but may use the word 'invader', in the context that a nonindigenous species that has successfully established a reproducing population is an 'invader'. 'Exotic' is a commonly used synonym for 'nonindigenous'.

Established criterion: A nonindigenous species is considered established if it has a reproducing population within the basin, as inferred from multiple discoveries of adult and juvenile life stages over at least two consecutive years. Given that successful establishment may require multiple introductions, species are excluded if their records of discoveries are based on only one or a few non-reproducing individuals whose occurrence may reflect merely transient species or unsuccessful invasions.

Data Quality Review: Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data Limitations: The number of Great Lakes aquatic nonindigenous species documented in GLANSIS is to be interpreted as a minimum. Identification depends on discovery and verification, which is, in turn, dependent on sampling effort.

Error Estimate: The GLRI effort will increase surveillance of the Great Lakes for invasive species. Enhanced monitoring will potentially result in the discovery of organisms that were established prior to GLRI but were not detected by lower levels of sampling. This problem of lag time is well known in ecology, but limited studies have

been performed in the Great Lakes. Recent publications (Grigorovich 2008, Trebitz 2009) have documented how increased sampling in Duluth Harbor discovered previously undocumented species. It is unknown when they were first introduced and would not have been discovered except for the intense sampling design. They will be reported as "discovered" in 2006. It is expected that similar cases will occur as increase sampling is done in other high-risk harbors in the Great Lakes. The problem of lag time will decrease once comprehensive prevention programs are in place and operating over time. This will reduce the uncertainty due to lag-time and make the "rate of discovery" statistic more likely to reflect the actual rate of invasion.

New/Improved Data or Systems: NA

References:

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4. Mills EL, Leach JH, Carlton JT, Secor CL. 1993. Exotic species in the Great Lakes: a history of biotic crises and anthropogenic introductions. *J. Great Lakes Res.* 19: 1–54.
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6. Ricciardi A. 2006. Patterns of invasion in the Laurentian Great Lakes in relation to changes in vector activity. *Divers. Distrib.* 12, 425–433.
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9. Daniels, R. A. 2001. Untested assumptions: the role of canals in the dispersal of sea lamprey, alewife, and other fishes in the eastern United States. *Env. Biol. of Fishes.* vol:60 pgs:309-329
10. Mandrak, N. E., and E. J. Crossman. 1992. Postglacial dispersal of freshwater fishes into Ontario. *Canadian Journal of Zoology* 70:2247-2259.

11. Smith, S. H. 1995. Early changes in the fish community of Lake Ontario. Great Lakes Fishery Commission Technical Report 60, Ann Arbor.
12. Grigorovich , I.A. 2008. The Quagga Mussel Invades the Lake Superior Basin. Journal of Great Lakes Research. 34:342–350
13. Trebitz A.S. et al (2009) Exploiting habitat and gear patterns for efficient detection of rare and non-native benthos and fish in Great Lakes coastal ecosystems. Aquatic Invasions, Volume 4, Issue 4: 651-667

FY 2011 Performance Measure:

- **Acres managed for populations of invasive species controlled to a target level. (cumulative)**

Performance Database: GLRI Accountability System database.

Data Source: As a condition of GLRI Interagency Agreements, Federal Agencies are required to track performance and submit data to USEPA on this measure including work performed via subsequent contracting and granting arrangements.

Methods, Assumptions, and Suitability: The cumulative total number acres will be calculated by simple summation using the GLRI Accountability System database. This database will be developed pending approval of Information Collection Request (ICR) to the Office of Management and Budget (OMB), currently in public comment phase. [EPA ICR No. 2379.01, OMB Control No. 2005–NEW]

QA/QC Procedures: GLNPO has an approved Quality Management System in place 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: Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data Limitations: None known.

Error Estimate: None.

New/Improved Data or Systems: NA

FY 2011 Performance Measure:

- **Number multi-agency rapid response plans established, mock exercises to practice responses carried out under those plans, and/or actual response actions. (cumulative)**

Performance Database: GLRI Accountability System database.

Data Source: As a condition of GLRI Interagency Agreements, Federal Agencies are required to track performance and submit data to USEPA on this measure including work performed via subsequent contracting and granting arrangements.

Methods, Assumptions, and Suitability: The cumulative total number plans developed and exercises conducted will be calculated by simple summation using the GLRI Accountability System database. This database will be developed pending approval of Information Collection Request (ICR) to the Office of Management and Budget (OMB), currently in public comment phase. [EPA ICR No. 2379.01, OMB Control No. 2005–NEW]

QA/QC Procedures: GLNPO has an approved Quality Management System in place 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: Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data Limitations: None known.

Error Estimate: None.

New/Improved Data or Systems: NA

FY 2011 Performance Measure:

- **Five year average annual loadings of soluble reactive phosphorus (metric tons per year) from tributaries draining targeted watersheds**

Performance Database: Loadings information will be incorporated into the standard USGS database, NWIS.

Data Source: Various State, Federal, and local agencies collect dissolved phosphorus data across the Great Lakes region. Water-quality data are stored in various databases: STORET (EPA data base), NWIS (USGS data base), or those of individual State and local agencies. Note: not all State and local agencies incorporate their data into Federal databases. Note: not all agencies collect soluble reactive phosphorus data, some collect dissolved phosphorus data. Agencies monitoring the rivers of interest collect their data in accordance with approved standard procedures. Streamflow data for the rivers of interest are collected by the USGS. All streamflow data are stored in the standard USGS database, NWIS.

Methods, Assumptions, and Suitability: Water-quality data and streamflow data will be collected in accordance with approved standard procedures of the USEPA and USGS.

These data will then be used to compute annual loads of Soluble Reactive Phosphorus in each river. Loads will be computed by means of one of two different approaches: a rating curve/regression approach method such as Estimate (Cohn, et al. 1989) or Fluxmaster (Schwarz et al. 2006); or the Beale's ratio estimator approach (Beale, 1962). Other general assumptions include:

1. Dissolved phosphorus is similar to soluble reactive phosphorus; if soluble reactive phosphorus is not monitored in each river.
2. The soluble reactive phosphorus concentrations collected represent conditions over the entire ranges of flows experienced in each year.
3. Annual load estimation approaches, with their inherent errors, can be used to describe small changes in 5-year average loads.
4. Loads computed for a five-year period represent the true average of hydrologic conditions that typically have an 11 to 13 year cycle resulting from interannual changes in hydrology.

QA/QC Procedures: Streamflow will be collected by the USGS and will follow all standard QA/QC procedures outlined in U.S. Geological Survey by Rantz (1982) and Mueller and Wagner (2009). Water-quality data will be collected by Federal, State, and local agencies following their specified protocols in accordance with standard USEPA approved protocols. Each agency will follow specified field and laboratory QA/QC procedures consisting of blanks, replicates, and spikes. Additionally, data analyses must be performed by laboratories that have gone through a recognized laboratory evaluation/accreditation process including participation in ongoing blind testing programs to provide performance data. Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data-Quality Review: Annual load data will be reviewed by individual project managers and Published in Annual Reports. Specific data-quality review procedures depend on who is going to compute the loads and how the loads are computed.

Data Limitations: Annual loads represent an integration of current and historical land use practices and climatic conditions during each year. Therefore, changes in the five year average loads may not be caused by changes in practices applied in the watershed.

Error Estimate: Streamflow and water-quality data are incorporated into load computation programs. The load computation program will be used to construct 95% confidence limits on each annual load. It is assumed that these errors incorporate all sampling and estimation errors.

New/Improved Data or Systems: None.

References:

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FY 2011 Performance Measure:

- **Percentage of beaches meeting bacteria standards 95% or more of beach days**

Performance Database: Under the Agency's Beaches Environmental Assessment and Coastal Health (BEACH) Act Grant Program, states (territories and eligible tribes) that receive BEACH Act grants are required to submit their beach monitoring (water quality), notification (advisory and closing), and beach location data to EPA. Beach program managers submit beach advisory data to EPA through CDX. Local beach program and advisory data are stored in EPA's PRAWN (Program tracking, beach advisory water quality standards, and nutrient) database. Beach water quality data is stored in EPA's STORET database.

Historical beach swimming season data can be viewed in EPA's BEACON database (Beach Advisory and Closing Online Notification system) which can be accessed at: http://oaspub.epa.gov/beacon/beacon_data.about_beacon. EPA created BEACON to meet the Agency's BEACH Act requirements. The BEACH Act (section 406(e)) requires EPA to make a national coastal recreation water pollution occurrence database, which contains state reported beach monitoring and notification data available to the public by electronic means. In BEACON, each beach is geographically displayed on a map that links the beach to data. Users select a beach and view the available data for that beach by either first choosing a state and county or typing the beach name.

Data Source: EPA collects coastal beach monitoring and notification data from States that receive BEACH Act grants to implement beach monitoring and notification programs. These data are obtained directly from the Great Lakes beach managers who submit their data to their state beach program managers throughout the beach season. The state beach managers then send the data electronically to EPA by January 31 of each year, as required by the BEACH Act.

Methods, Assumptions, and Suitability: The data collected to track beach advisories and closures in the Great Lakes show the amount of water quality standards exceedances (>235 *E. coli* cfu/100 ml of water) for each beach throughout the beach season (Memorial Day through Labor Day). This format is suitable for year-to-year comparisons for individual beaches; however, it is not useful for *comparing* water quality at other Great Lakes beaches. Monitoring frequencies vary among states and local entities from between once a week to seven days a week, so the minimally monitored beaches appear to have better water quality.

EPA summarizes the previous swimming season's results and reports the information each year (around Memorial Day). The report lists the number of beaches with notification actions, duration of notification actions, and what percentage of days beaches were under a notification action. EPA calculates the total available beach days and the number of beach days with advisories or closures to track trends over time. To calculate the total available beach days, EPA sums the length of each state's beach season multiplied by the number of beaches in the state.

QA/QC Procedures: To comply with 40 CFR 31.45, which states that if a grantee's project involves environmentally related measurements or data generation, states must develop and implement a quality management system that is sufficient to produce data of a quality adequate to meet the beach project objectives, states must submit a quality assurance project plan (QAPP) or equivalent documentation. Each BEACH Act grantee has an approved beach monitoring QAPP in place that is update annually.

Data Quality Review: EPA conducts a quality check of the beach data submitted. EPA has designed quality assurance checks into the information transfer software to ensure the information is secure and that only the appropriate people in state and territorial governments can send the information. EPA then reviews the incoming data to flag potential data errors and works with the state governments to correct any errors.

Data Limitations: As indicated above, tracking beach advisory and closure information is suitable for year-to-year comparisons for individual beaches; however, it is not useful for *comparing* beach water quality with other Great Lakes beaches. Monitoring frequencies vary among states and local entities from between once a week to seven days a week, so the minimally monitored beaches appear to have better water quality. In addition, the measure does not indicate whether a program is effective. Beach water quality exceedances are due to many factors, most of which beach managers do not have any control over (*e.g.*, rainfall amount, duration and intensity, wave action, current).

Error Estimate: Not available.

New/Improved Data or Systems: Existing beach data tracking systems are anticipated to remain in place.

References:

1. U.S. EPA's Beach Monitoring & Notification Data User Corner available at: <http://www.epa.gov/waterscience/beaches/grants/datausers/index.htm>
2. U.S. EPA, *EPA's BEACH Report: 2008 Swimming Season*, May 2009 (EPA 823-F-09-005).
3. U.S. EPA, *National Beach Guidance and Required Performance Criteria for Grants*, June 2002 (EPA-823-B-02-004).

FY 2011 Performance Measure:

- **Acres in Great Lakes watershed with USDA conservation practices implemented to reduce erosion, nutrients and/or pesticide loading**

Performance Database: USDA Natural Resources Conservation Service's National Conservation Planning Database and Performance Results System.

Data Source: The Natural Resources Conservation Service (NRCS) provides financial and technical assistance to private landowners and producers throughout the United States through one-on-one assistance at the farm level. The results of that assistance are documented at the field office level using the NRCS National Conservation Planning Database (NCP). The Performance Results System (PRS) reports performance in various ways based on established performance measure business definitions.

Methods, Assumptions, and Suitability: Natural Resources Conservation Service staff and conservation partners enter geo-located conservation planning and application information into the NCP daily. This data is the result of landowner/producer planning decisions and in-field certification of applied conservation practices. Certification occurs only after an applied practice meets NRCS standards and specifications. Conservation planning is the process through which decision-makers, land owners or producers, voluntarily agree to a recommended series of conservation practices or systems designed to address the natural resource concern, such as sheet and rill or gully erosion, surface or subsurface nutrient loading or animal agriculture. Other concerns, such as wildlife habitat and sustainable agriculture, may also be addressed. Conservation planning and application documentation warehoused in the NCP are date-stamped, geo-referenced and linked to an employee ID, enabling detailed quality-assurance reviews. Periodic in field reviews (spot checks) are conducted to assess the accuracy of reported field data.

QA/QC Procedures: Conservation planning and application is reported through the Performance Results System (PRS) using data stored in the NCP. Numerous data quality mechanisms within PRS ensure the completeness of each performance record entry. Each performance record must adhere to a set of quality assurance requirements during the upload process to be credited towards Agency performance. Conservation planning and application documentation is entered into the NCP by field office personnel. Field staffs are trained and skilled in conservation planning and application suited to the local resource conditions. The information used to develop conservation plans is obtained

from on-site resource evaluation, observation, and measurement. Practices applied according to the conservation plan are certified as meeting NRCS standards and specifications. These standards are specific to the practice and ensure the application will address the identified resource concern. Quality Assurance processes are in place at the field, area, state and national level to ensure data entry into the NCP is accurate. Detailed QA/QC is performed on all data entries quarterly.

Data Quality Review: Beginning FY 2009 quarterly detailed QA/QC based field level queries were performed on all entered data. As a result, confidence in entered data is good. Data entry error checking and automated (real time) QA/QC is in development to improve the QA/QC process, capture potential errors at the point of data entry, and increase staff field time. Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data Limitations: Conservation planning and application performance is year and program specific. A series of integrated conservation practices may be applied to the same land unit using one or more available programs over a series of years. In addition, a land unit or farm operation may be replanned due to a significant change in the operation or change in owner/operator. For these reasons the cumulative acreage planned or applied over multiple years may not reflect unique acres.

Error Estimate: Initial QA/QC data queries at the national level have shown less than a five percent error rate. A specific error estimate is not available.

New/Improved Data or Systems: Data entry error checking and automated (real time) QA/QC is in development to improve the QA/QC process, capture potential errors at the point of data entry, and increase staff field time.

FY 2011 Performance Measure:

- **% of populations of native aquatic non-threatened and endangered species self-sustaining in the wild. (cumulative)**

Performance Database: The U.S. Fish and Wildlife Service (Service) Fisheries Information System (FIS), a component of the Environmental Conservation Online System (ECOS) (see reference below). Data on aquatic taxa are compiled annually to meet performance reporting and budgetary requirements to the Department of the Interior, Office of Management and Budget, and Congress.

Data Source: The Service's Fisheries Program is the principal source of data for the FIS. Cooperating organizations include other federal agencies, states, Tribes, and non-governmental partners that assist with population assessment and monitoring.

Methods, Assumptions, and Suitability: The FIS *Populations Module* provides information on what is known about populations of aquatic species (i.e., status, trend, geographic location, management plans, etc.) and has broad scientific utility. Population

data are updated annually in FIS to reflect most recent population and habitat assessment information, and are reported on an annual basis (September of the fiscal year) to the Department of the Interior, Office of Management and Budget, and Congress in the Service's Operational Plan.

QA/QC Procedures: Population data are collected by sources identified above and entered into the web-based FIS program by Service field office staff. Regional data are compiled and submitted to headquarters program staff for review and approval.

Data Quality Review: The Service has approved data quality management practices in place. Data in FIS are open for examination by internal and external audit. The Fisheries Program received an "Effective" assessment rating as a result of the Program Assessment Rating Tool (PART) in 2006. The Fisheries Program continues to implement recommendations as identified in the PART *Improvement Plan* and complies with agency quality standards. Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data Limitations: Outcome-level performance measures as documented through the FIS Populations Module are critical connections between field-based conservation action and regional and national-level funding and accountability. Completeness and accuracy of information in the module is dependent on Service biologists entering the data.

Error Estimate: None

New/Improved Data or Systems: The FIS modules are continually being reviewed and updated to reflect new scientific information and changing reporting needs. The online system will eventually provide public access to the population information.

References:

Environmental Conservation Online System, U.S. Fish and Wildlife Service, <http://ecos.fws.gov/ecos/indexPublic.do>, <http://ecos.fws.gov/ecos/about.do>

1. *Fisheries Information System*, U.S. Fish and Wildlife Service, Division of Fisheries and Habitat Conservation, Arlington, VA. 2006
<http://www.fws.gov/fisheries/fwco/pdfs/factsheets/FIS.pdf>
2. *U.S. Fish and Wildlife Service Program Assessment Rating Tool Results*, Fisheries Program 2006. <http://www.fws.gov/Planning/Documents/PART/Fisheries.pdf>

FY 2011 Performance Measure:

- **Number of acres of wetlands and wetland-associated uplands protected, restored and enhanced. (cumulative)**

Performance Database: EPA's Great Lakes National Program Office (GLNPO) will track the cumulative total of acres of wetlands and wetland-associated uplands protected, restored and enhanced at the end of each Fiscal Year beginning in Fiscal Year 2010.

Data Source: Internal tracking and communications with the following federal agencies: U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), National Oceanic and Atmospheric Administration (NOAA), U.S. Army Corps of Engineers (USACE), Bureau of Indian Affairs (BIA), National Park Service (NPS), U.S. Geological Service (USGS), Great Lakes Fishery Commission (GLFC), U.S.D.A. Forest Service (FS), Natural Resource Conservation Service (NRCS), and Federal Highways Administration (FHWA).

Methods, Assumptions, and Suitability: Each agency mentioned above will provide information about cumulative wetlands and wetland-associated upland acres protected, restored and enhanced by agency staff, grantees, and contractors. Information will be input to the Great Lakes Restoration Initiative (GLRI) Accountability Database. GLNPO will compile and distill information into a yearly GLRI report.

QA/QC Procedures

GLNPO has an approved Quality Management System in place 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

Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data Limitations: Tracking is dependent on each agency's staff, grant and contract reporting requirements as well as accurate reporting or project accomplishments by project managers.

Error Estimate: None

New/Improved Data or Systems: Great Lakes Restoration Initiative Accountability System

References

1. GLNPO will develop and maintain the appropriate tracking system for cumulative total of acres of wetlands and wetland-associated uplands protected, restored and enhanced.

FY 2011 Performance Measure:

- **Number of acres of coastal, upland, and island habitats protected, restored and enhanced. (cumulative)**

Performance Database: EPA's Great Lakes National Program Office will track the cumulative total of acres of coastal, upland, and island habitats protected, restored and enhanced at the end of each Fiscal Year beginning in Fiscal Year 2010.

Data Source: Internal tracking and communications with the following federal agencies: U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (FWS), National Oceanic and Atmospheric Administration (NOAA), U.S. Army Corps of Engineers (USACE), Bureau of Indian Affairs (BIA), National Park Service (NPS), U.S. Geological Service (USGS), Great Lakes Fishery Commission (GLFC), U.S.D.A. Forest Service (FS), Natural Resource Conservation Service (NRCS), and Federal Highways Administration (FHWA).

Methods, Assumptions, and Suitability

Each agency mentioned above will provide information about cumulative coastal, upland, and island habitats acres protected, restored and enhanced by agency staff, grantees, and contractors. Information will be input to the Great Lakes Restoration Initiative (GLRI) Accountability Database. GLNPO will compile and distill information into a yearly GLRI report.

The definition of coastal is sand beaches and dunes, forests, alvars and other non-wetland habitats.

QA/QC Procedures

GLNPO has an approved Quality Management System in place 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

Quality documentation for this measure has not yet been reviewed and approved through GLNPO's Quality Program.

Data Limitations: Tracking is dependent on each agency's staff, grant and contract reporting requirements as well as accurate reporting or project accomplishments by project managers.

Error Estimate: None

New/Improved Data or Systems: Great Lakes Restoration Initiative Accountability System

References

1. GLNPO will develop and maintain the appropriate tracking system for cumulative total of acres of coastal, upland, and island habitats protected, restored and enhanced.

FY 2011 Performance Measure:

- **Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic systems**

Performance Database: USEPA’s Great Lakes National Program Office (GLNPO) will collect and track the eight (8) components of the index and publish the performance results as part of annual reporting under the Government Performance and Results Act (GPRA) and as online reporting of GLNPO’s monitoring program, <http://epa.gov/glnpo/glindicators/index.html> . Extensive databases for the indicator components are maintained by GLNPO (phosphorus concentrations, contaminated sediments, benthic health, fish tissue contamination), by binational agreement with Environment Canada (air toxics deposition), and by local authorities who provide data to the USEPA (drinking water quality, beach closures). A binational team of scientists and natural resource managers is working to establish a long term monitoring program to determine extent and quality of coastal wetlands.

Data Source: Data for the index components are tracked internally and generally reported through the State of the Lakes Ecosystem Conference (SOLEC) process. The document, “State of the Great Lakes 2009 - A Technical Report” presents detailed indicator reports prepared by primary authors, including listings of data sources. Depending on the indicators, data sources may include U.S. and Canadian federal agencies, state and provincial agencies, municipalities, research reports and published scientific literature. Information from the following indicators is used to evaluate the Index components:

Coastal Wetlands group of indicators:

Coastal Wetland Amphibian Diversity and Abundance

Contaminants in Snapping Turtle Eggs

Coastal Wetland Bird Community Diversity and Abundance

Coastal Wetland Area by Type

Coastal Wetland Plant Community Health

Effects of Water Levels Fluctuations

Phosphorus Concentrations and Loadings

Area of Concern Sediment Contamination (*This component is not included in SOLEC. Information from reports of contaminated sediment remediation is collected by USEPA-GLNPO and is used by GLNPO to evaluate the contaminated sediment index component of this Index.*)

Benthic Health group of indicators:

Hexagenia

Abundances of the Benthic Amphipod Diporeia spp.

Contaminants in Sport Fish

Beach Advisories, Postings and Closures

Drinking Water Quality

Atmospheric Deposition of Toxic Chemicals

Methods, Assumptions, and Suitability: The Index is based on a 40 point scale where the rating uses select Great Lakes State of the Lakes Ecosystem indicators (i.e., coastal wetlands, phosphorus concentrations, benthic health, fish tissue contamination, beach

closures, drinking water quality, and air toxics deposition), and an indicator for Area of Concern (AOC) sediment contamination. Each component of the Index is based on a 1 to 5 rating system, where 1 is poor and 5 is good. Authors use best professional judgment to assess the overall status of the ecosystem component in relation to established endpoints or ecosystem objectives, when available. The SOLEC indicators are also evaluated for Status (good, fair, poor, mixed) and Trend (improving, unchanging, deteriorating, undetermined). To calculate the Index, the data for each indicator are compared to the evaluation criteria for the numeric, 1 to 5, rating system. Each of the index components, other than the AOC sediment contamination component, is included in the broader suite of Great Lakes indicators, which was developed through an extensive multi-agency process to satisfy the overall criteria of necessary, sufficient and feasible. Information on the selection process is in the document, "Selection of Indicators for Great Lakes Basin Ecosystem Health, Version 4."

QA/QC Procedures: GLNPO has an approved Quality Management System in place¹(see reference #1 below) that conforms to the USEPA Quality Management Order and is audited every 3 years in accordance with Federal policy for Quality Management.

The SOLEC process relies on secondary use of data, i.e., data for many of the indicators are collected, maintained and analyzed by agencies and organizations other than USEPA. Participating agencies and organizations follow their own QA/QC procedures to assure high quality data. A Quality Assurance Project Plan (QAPP) was developed to document procedures for data assessment and review for the indicators reports prepared for the State of the Great Lakes 2005 report. See "State of the Lakes Ecosystem Conference 2004 QAPP." Contaminated sediment remediation information is collected in conformance with GLNPO's Great Lakes Sediment Remediation Project Summary Support QAPP² (see reference #2 below).

Data Quality Review: GLNPO's Quality Management System has been given "outstanding" evaluations in previous peer and management reviews² (see reference #2 below). GLNPO has implemented all recommendations from these external audits and complies with Agency Quality standards.

An external Peer Review of SOLEC processes and products was conducted in 2003 by an international panel of experts familiar with large-scale regional or national indicator and reporting systems. Panel findings were generally positive and several recommendations were made to consider for future SOLEC events and reports. Many of the recommendations have been implemented, and others are being considered for feasibility. The final report by the review panel is available online at <http://epa.gov/glnpo/solec/index.html>. See "State of the Lakes Ecosystem Conference Peer Review Report" in the SOLEC 2004 section.

A second review of the suite of Great Lakes indicators was conducted by Great Lakes stakeholders in 2004. As a direct result of the findings and recommendations from the participants, several indicators were revised, combined or dropped, and a few others were added. The indicators were also regrouped to allow the user to more easily identify the

indicators relevant to particular ecosystem components or environmental issues. The final report from the review is available online at <http://epa.gov/glnpo/solec/index.html>. See “State of the Lakes Ecosystem Conference Peer Review Report, Part 2: Stakeholder Review of the Great Lakes Indicators” in the SOLEC 2004 section.

Data Limitations: Data limitations vary among the indicator components of the Index. The data are especially good for phosphorus concentrations, fish tissue contamination, benthic health, and air toxics deposition. The data associated with other components of the index (coastal wetlands, AOC sediment contamination, beach closures, and drinking water quality) are more qualitative. Some data are distributed among several sources, and without an extensive trend line. Limitations for each of the index components are included in the formal indicator descriptions in the document, “The Great Lakes Indicator Suite: Changes and Progress 2004.” 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. 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: Error statistics for the Great Lakes Index have not been quantified. Each unit of the 40 point scale represents 2.5% of the total, so any unit change in the assessment of one of the component indicators would result in a change of the index of that magnitude. The degree of environmental change required to affect an indicator assessment, however, may be significantly large.

New/Improved Data or Systems: Data continue to be collected by various agencies, including GLNPO. Efforts are currently in progress to integrate various Great Lakes monitoring programs to better meet SOLEC objectives and to increase efficiencies in data collection and reporting. Documentation regarding SOLEC is available on the Internet and from GLNPO⁴ (see reference # 4 below).

References:

1. “Quality Management Plan for the Great Lakes National Program Office.” EPA905-R-02-009. Revised and approved May 2008. <http://www.epa.gov/glnpo/qmp/>
2. Quality Assurance Project Plan for “Great Lakes Sediment Remediation Project Summary Support.” Unpublished – in Great Lakes National Program Office files, June 2008.
3. “GLNPO Management Systems Review of 2006.” Unpublished - in USEPA Great Lakes National Program Office files.
4. a. “State of the Lakes Ecosystem Conference 2004 QAPP.” Unpublished. Prepared as part of Cooperative Agreement between USEPA and Environment Canada.

b. Canada and the United States. “State of the Great Lakes 2003.” ISBN 0-662-34798-6, Environment Canada, Burlington, Ontario, Cat. No. En40-11/35-2003E, and

U.S.

c. Environmental Protection Agency, Chicago, EPA 905-R-03-004. 2003. Available on CD and online at <www.binational.net>.

d. Canada and the United States. "Implementing Indicators 2003 - A Technical Report." ISBN 0-662-34797-8 (CD-Rom), Environment Canada, Burlington, Ontario, Cat. No. En164-1/2003E-MRC (CD-Rom), and U.S. Environmental Protection Agency, Chicago, EPA 905-R-03-003. 2003. Available on CD from U.S. EPA/Great Lakes National Program Office, Chicago. Available online at <http://epa.gov/glmpo/solec/index.html>

e. Canada and the United States. "State of the Great Lakes 2005." Environment Canada, Burlington, Ontario (Cat No. En161-3/0-2005E-PDF) and U.S. Environmental Protection Agency, Chicago (EPA 905-R-06-001), 2006 Available online at <<http://epa.gov/glmpo/solec/index.html>>

f. Bertram, Paul and Nancy Stadler-Salt. "Selection of Indicators for Great Lakes Basin Ecosystem Health, Version 4." Environment Canada, Burlington, Ontario, and U.S. EPA, Chicago. 2000. Available online at <www.binational.net>.

g. Forst, Christina, Paul Bertram and Nancy Stadler-Salt. 2004. The Great Lakes Indicator Suite: Changes and Progress at SOLEC 2004. Available online at [http://binational.net/solec/English/SOLEC%202004/Tagged%20PDFs/Changes_and_Progress_Paper_\(FULL\).pdf](http://binational.net/solec/English/SOLEC%202004/Tagged%20PDFs/Changes_and_Progress_Paper_(FULL).pdf)

h. Canada and the United States. "State of the Great Lakes 2007 Highlights," Environment Canada, Burlington, Ontario (Cat. No. En161-3/2007E) and U.S. Environmental Protection Agency, Chicago (EPA 905-R-07-002) 2007. Available online at http://binational.net/solec/English/sogl2007highlights_en.pdf.

i. Canada and the United States. "State of the Great Lakes 2009," Environment Canada, Burlington, Ontario (Cat. No. En161-3/1-2009E-PDF) and U.S. Environmental Protection Agency, Chicago (EPA-905-R-09-031) 2009. Available online at http://binational.net/solec/sogl2009_e.html.

All SOLEC documents, background reports, indicator reports, indicator development processes, conference agenda, proceedings and presentations are available online at <http://epa.gov/glmpo/solec/index.html> . The documents are sorted by SOLEC year and include the State of the Great Lakes reports which are released the following calendar year.

FY 2011 Performance Measures:

- **Percent of goal achieved for implementing nitrogen reduction practices to reduce nitrogen 162.5 million lbs from 1985 levels to achieve a 175 million**

- lb/yr cap load, based on long-term average hydrology simulations (program assessment measure-Chesapeake Bay Program)**
- **Percent of goal achieved for implementing phosphorus reduction practices to reduce phosphorus 14.36 million lbs from 1985 levels to achieve a 12.8 million lb/yr cap load, based on long-term average hydrology simulations (program assessment measure-Chesapeake Bay Program)**
 - **Percent of goal achieved for implementing sediment reduction practices to reduce sediment 1.69 million tons from 1985 levels to achieve a 4.15 million ton/yr cap load, based on long-term average hydrology simulations (program assessment 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 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 FY 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/status08/reducingpollution2008.xls>. Data have been reported for calendar years 1985, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 and are expected on an annual basis after 2008. Data are from Chesapeake Bay watershed portions of NY, MD, PA, VA, WV, DE, and DC.

The FY 2011 Annual Performance Report for these measures will be based on the results of the 2010 data collection. We expect to receive the preliminary results for 2010 in March 2011.

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/status08/reducingpollution2008.doc>.

Data Source: Annual jurisdictional submissions of both monitored and estimated point source effluent concentrations and flows approved by each jurisdiction as well as nonpoint source practice data tracked by jurisdictions and reported to the Chesapeake Bay Program office. For point source data, refer to http://www.chesapeakebay.net/data_pointsource.aspx. Summary nonpoint source practice implementation data with comparisons to Tributary Strategy levels can be found at http://www.chesapeakebay.net/tributarystrategy_tools.aspx. Summary loads and landuse acreage with comparisons to Tributary Strategy goals and cap load allocations can be found at http://www.chesapeakebay.net/tributarystrategy_tools.aspx. For detailed historic and current scenario loads as well as jurisdictional Tributary Strategies, refer to http://www.chesapeakebay.net/data_modeling.aspx.

Custodians of Source Data:

- Wastewater: Ning Zhou, Point Source Data Manager, Virginia Polytechnic Institute and State University, Chesapeake Bay Program Office
- Nonpoint Source practices and Watershed Model information: Jeff Sweeney, Nonpoint Source Data Manager, University of Maryland, Chesapeake Bay Program Office

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". Specific cost information for agricultural practices begins on page 36 and a summary table of unit BMP costs is on page 70 of hard copy document.

Methods, Assumptions and Suitability: 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, which the indicator is based on.

The Phase 4.3 Watershed Model is also employed to integrate the nonpoint source practice implementation data – submitted by jurisdictions for a host of practices and programs – to changes in delivered nutrient and sediment loads as well as to assimilate the impacts of both point and nonpoint source controls and practices for the Reducing Pollution Summary.

A wealth of both general and technical documents about the Chesapeake Bay Program Watershed Model can be found on the Bay Program’s web site. These documents can be accessed through the Modeling Subcommittee’s site http://www.chesapeakebay.net/committee_msc_info.aspx under the links “Current Projects” and “Publications”.

The Phase 4.3 Watershed Model is calibrated to long-term monitoring data at 26 calibration sites throughout the basin with edge-of-stream land use calibrations for 9 land categories. For direct comparisons of monitoring and modeled data for the 1985-1994 simulation period, see “CBP Watershed Model – Phase 4.3 Calibration” at <http://archive.chesapeakebay.net/temporary/mdsc/index.htm>

Of particular significance are the in-stream calibration plots for flows and total nitrogen and total phosphorus loads at the Susquehanna and Potomac fall-lines because of the basins’ considerable impact on dissolved oxygen in the mainstem of the Chesapeake Bay. For an understanding of the Phase 4.3 Watershed Model calibration rules, see http://archive.chesapeakebay.net/temporary/mdsc/calibration_0700.pdf

The Watershed Model allows scientists to simulate changes in physical, chemical, and biological processes in a large and complex ecosystem due to changes in human and animal populations, land uses, or pollution management, so that technically sound environmental decisions can be made. Monitoring data provides observations in the past or the present, at discrete times, and at isolated locations while modeling scenarios can be used to represent the environment under different management regimes in different temporal and spatial scales.

The Tributary Strategy goals for the Reducing Pollution indicators represent this “what-if” management regime, providing comparisons among historic and current watershed conditions and a future condition that would restore water quality and living resources in the Chesapeake Bay. So that the comparisons are relevant, reported nonpoint source loads from the Watershed Model are estimates of what would occur in an average hydrology year with a single year’s watershed conditions (i.e., land uses, animal manure and chemical fertilizer inputs, human population, BMPs, septic, and atmospheric deposition). Point source loads reflect measured discharges from tracked waste treatment and industrial facilities, using the model to account for changes in nutrients as the pollutants move downstream.

For procedures of calculating point source discharges from data received from jurisdictions, refer to the following:

- “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 Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

For data acquisition and management of nonpoint source data received from jurisdictions, refer to:

- Quality Assurance Project Plan (QAPP) “Standard Operating Procedures for Managing Nonpoint Source Data – Chesapeake Bay Program” on file for the EPA grant (contact: Quality Assurance Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

In developing the Reducing Pollution indicators, comparisons are made within relevant source sectors and among relevant years and goals for nutrient and sediment loads delivered to tidal waters – as estimated by the Chesapeake Bay Program Phase 4.3 Watershed Model. The Watershed Model is employed to integrate the nonpoint source practice implementation data – submitted by jurisdictions for a host of practices and programs –with changes in delivered nutrient and sediment loads. The model also assimilates the impacts of both point and nonpoint source controls and practices for the Reducing Pollution Summary.

The current status of a source indicator (e.g. WWTPs) is a comparison between the total load reductions from that source made between 1985 and 2008 and the load reductions that need to be made, starting in 1985, to meet the state tributary strategies. For the summary *Reducing Pollution* indicator, the current status is a comparison of total load reductions made from all sources combined between 1985 and 2008 and the load reductions that need to be made starting in 1985 to meet the Bay Program’s cap load allocations.

1985 is often used as the baseline and 2008 is the most recent annual model assessment of loads to the Bay. Tributary Strategy loads are the model’s assimilation of jurisdictional clean-up plans submitted to the Bay Program office as of 6/22/07, the last date a jurisdictional revision was made. The Tributary Strategies are detailed plans of point and nonpoint source programs, practices and control technologies that, when combined, would meet the cap loads for nitrogen, phosphorus and sediment - as assessed by the Chesapeake Bay Program's Phase 4.3 Watershed Model. The cap load allocations were developed earlier and assigned to each jurisdictions’ portion of the major tributaries of the Chesapeake Bay following a process documented in “Setting and Allocating the Chesapeake Bay Basin Nutrient and Sediment Loads: The Collaborative Process, Technical Tools and Innovative Approaches” at http://www.chesapeakebay.net/content/publications/cbp_19713.pdf There are no caps assigned to sources in the cap load allocations as there is source specificity in the jurisdictional Tributary Strategies.

It is important to note that nonpoint source load estimates depicted by the Watershed Model are based on an average-hydrology year and would not track monitored loads for that particular year. Point source loads reflect measured discharges for each particular year, or the best estimates where data is lacking.

QA/QC Procedures: 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 Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

Procedures for acquiring and managing nonpoint source data at the Chesapeake Bay Program office are documented in the following EPA-approved Quality Assurance Project Plan:

“Standard Operating Procedures for Managing Nonpoint Source Data – Chesapeake Bay Program” on file for the EPA grant (contact: Quality Assurance Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

Data Quality Reviews: The Reducing Pollution indicators have undergone technical and peer review by federal, state and local government and nongovernmental organization partner members of the Bay Program network. Data selection and interpretation and the presentation of the indicator (along with all supporting information and conclusions) are arrived at via consensus of scientists and resource managers of the Bay Program Tributary Strategy Workgroup, Wastewater Treatment Workgroup, and Urban Stormwater Workgroup. Data collection, data analysis and QA/QC is conducted by the custodians of the source data.

Jurisdictions providing point source effluent data and nonpoint source BMP data to the Bay Program office have supplied 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 can be obtained by contacting the Quality Assurance Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

Data and methods used in the Watershed Model as well as the simulation itself and loading outputs are continually under external and internal review. Internal review mostly involves Bay Program subcommittees and their workgroups such as the Nutrient Subcommittee (Tributary Strategy Workgroup, Wastewater Treatment Workgroup, Agricultural Nutrient and Sediment Reduction Workgroup, Urban Stormwater Workgroup, Forestry Workgroup, and Sediment Workgroup); the Modeling Subcommittee; and special task groups established particularly for peer review. Scopes and purposes of these groups and their extensive considerations of the Watershed Model as a planning tool can be found at <http://www.chesapeakebay.net/nsc.htm> (Nutrient

Subcommittee and workgroups) and at <http://www.chesapeakebay.net/modsc.htm> (Modeling Subcommittee).

The most recent review of the Bay Program's watershed modeling effort by an independent panel of experts was completed February, 2008. An external panel assembled by the Scientific and Technical Advisory Committee reviewed the Chesapeake Bay Watershed Model assessing (1) work to date, (2) the model's suitability for making management decisions at the Bay Watershed and local scales, and (3) potential enhancements to improve the predictive ability of the next generation of the Chesapeake Bay Watershed Models. A report of the review, with specific recommendations, can be found at the STAC site <http://www.chesapeake.org/stac/stacpubs.html>

Another review of Bay Program modeling efforts "Modeling in the Chesapeake Bay Program: 2010 and Beyond" completed January, 2006 is published by STAC at <http://www.chesapeake.org/stac/Pubs/ModBay2010Report.pdf>

In June, 2005, another review of the Watershed Model addressed the following broad questions: 1) Does the current phase of the model use the most appropriate protocols for simulation of watershed processes and management impacts, based on the current state of the art in the HSPF model development?, and 2) Looking forward to the future refinement of the model, where should the Bay Program look to increase the utility of the watershed model? Details of this review and responses can be found at http://www.chesapeakebay.net/pubs/subcommittee/mdsc/Watershed_Model_Peer_Review.pdf

Data Limitations: Nonpoint source BMP implementation data were not reported consistently and for all watershed jurisdictions for the period 1986-1999. Therefore, the 1986-1999 nonpoint source levels are a linear progression between the 1985 baseline and the year 2000.

Error Estimate: There may be errors in classification, georeferencing, and documentation, mistakes in the processing of data or data omissions.

New/Improved Data or Systems: The next version of the watershed model is currently under development and will be used for development of the Bay TMDL. The new version (phase 5) has 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

FY 2011 Performance Measures:

- **Percent of point source nitrogen reduction goal of 49.9 million pounds achieved (program assessment measure-Chesapeake Bay Program)**
- **Percent of point source phosphorus reduction goal of 6.16 million pounds achieved (program assessment 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/status08/wastewater2008.xls>. Data have been collected 1985-2008 and are expected on an annual basis after 2008.

The FY 2011 Annual Performance Report for these measures will be based on the results of the 2010 data collection. We expect to receive the preliminary results for 2010 in March 2011.

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/status08/wastewater2008.doc>.

Data Source: Annual jurisdictional submissions of both monitored and estimated point source effluent concentrations and flows approved by each jurisdiction as well as nonpoint source practice data tracked by jurisdictions and reported to the Chesapeake Bay Program office. For point source data, refer to http://www.chesapeakebay.net/data_pointsource.aspx.
Custodian of Source Data: Wastewater: Ning Zhou, Point Source Data Manager, Virginia Polytechnic Institute and State University, Chesapeake Bay Program Office

Methods, Assumptions and Suitability: For procedures of calculating point source discharges from data received from jurisdictions, refer to the following:

- “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 Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

Monitored discharge data were generated from the EPA-approved standard sampling and analysis methods and documented in the Data Monthly Reports from facilities to jurisdictions.

Discharge data back to the earlier years of the record are inadequate for many regions in the Bay watershed; however, the 1985 baseline is consistent throughout the indicator record.

Facilities have been added to the point source database over the years, not necessarily because they physically went 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.

Jurisdictional Tributary Strategies may not be final so the goals could be adjusted in the future as jurisdictions update implementation plans that better reflect projected point source discharges.

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 Wastewater Treatment Workgroup promotes consistency and completeness of calculated end-of-pipe loads among the jurisdictions.

Point source indicator goals are rooted in projected discharge flows for the year 2010 or facility capacity flows as established by individual jurisdictions or under forecasting protocols of the Bay Program Wastewater Treatment Workgroup.

QA/QC Procedures: 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 Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

Data Quality Reviews: The indicators have undergone technical and peer review by federal, state and local government and nongovernmental organization partner members of the Bay Program network. Data selection and interpretation and the presentation of the indicator (along with all supporting information and conclusions) are arrived at via consensus of scientists and resource managers of the Bay Program Wastewater Treatment

Workgroup. Data collection, data analysis and QA/QC are conducted by the custodians of the source data.

Jurisdictions providing point source effluent data and nonpoint source BMP data to the Bay Program office have supplied 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 can be obtained by contacting the Quality Assurance Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

Data Limitations: Peer-reviewed methods are employed to estimate point source discharges where all needed measured data is 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 Coordinator, Mary Ellen Ley, mley@chesapeakebay.net).

Error Estimate: The CBP tries to trace significant variability in the data and limit its impact.

New/Improved Data or Systems: N/A

References:

The Wastewater Pollution Controls indicator is published at http://www.chesapeakebay.net/status_wastewater.aspx?menuitem=19692

FY 2011 Performance Measure:

- **Percent of forest buffer planting goal of 10,000 miles achieved (program assessment 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/status08/forestbuffers2008.xls>. Data have been collected 1996-2008 and are expected on an annual basis after 2008.

The FY 2011 Annual Performance Report for these measures will be based on the results of the 2010 data collection. We expect to receive the preliminary results for 2010 in March 2011.

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/status08/forestbuffers2008.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: 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/status08/forestbuffers2008.doc>.

FY 2011 Performance Measures:

- **Percent of Submerged Aquatic Vegetation goal of 185,000 acres achieved, based on annual monitoring from prior year.**

Performance Database: Acres of Submerged Aquatic Vegetation in Chesapeake Bay is reported as % of goal achieved. The long term goal is 185,000 acres, which represents

approximate historic abundance from the 1930s to present. The data are based on acreage measured in photographs during the annual aerial surveys (after photo-interpretation).

The Bay data files used in the indicator are located at <http://archive.chesapeakebay.net/status/status08/baygrasses2008.xls>. Data have been collected 1984-2009, excluding 1988 when no surveys were conducted, and are expected on an annual basis.

The FY 2011 Annual Performance Report for these measures will be based on the results of the 2010 data collection. We expect to receive the preliminary results for 2010 in March 2011.

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/status08/baygrasses2008.doc>.

Data Source: Virginia Institute of Marine Science via EPA Chesapeake Bay Program Office grant.

Methods, Assumptions and Suitability: Please refer to http://www.vims.edu/bio/sav/sav02/report/reportindex_page.html.

The SAV survey is a general monitoring program, conducted to optimize precision and accuracy in characterizing annually the status and trends of SAV in tidal portions of the Chesapeake Bay. The general plan is to follow fixed flight routes over shallow water areas of the Bay to comprehensively survey all tidal shallow water areas of the Bay and its tidal tributaries. Non-tidal areas are omitted from the survey. SAV beds less than 1 square meter are not included due to the limits of the photography and interpretation. Annual monitoring began in 1984 and is ongoing. See Chesapeake Bay SAV special reports at <http://www.vims.edu/bio/sav/savreports.html> and bibliography at <http://www.vims.edu/bio/sav/savchespub.html>.

Methods developed for this survey are described in "2002 Distribution of submerged aquatic vegetation in the Chesapeake Bay and coastal bays. R. J. Orth, D. J. Wilcox, L. S. Nagey, A. L. Owens, J. R. Whiting, and A. Serio. VIMS Special Scientific Report Number 139. Final report to U.S. EPA, Chesapeake Bay Program, Annapolis, MD. Grant No.CB983649-01-0, 2003." available at <http://www.vims.edu/bio/sav/sav02/> .

Methods are also described in the Quality Assurance Project Plan (QAPP) on file for the EPA grant (contact: EPA grant project officer, Mike Fritz (fritz.mike@epa.gov) and at the VIMS web site (<http://www.vims.edu/bio/sav/>). See Chesapeake Bay SAV special reports at <http://www.vims.edu/bio/sav/savreports.html> and bibliography at <http://www.vims.edu/bio/sav/savchespub.html>. Metadata are included with the data set posted at the VIMS web site (<http://www.vims.edu/bio/sav/metadata/recent.html>).

QA/QC Procedures: Quality assurance project plan for the EPA grant to the Virginia Institute of Marine Sciences describes data collection, analysis, and management methods. This is on file at the U. S. Environmental Protection Agency Chesapeake Bay Program Office (contact: EPA grant project officer, Mike Fritz (fritz.mike@epa.gov)). The VIMS web site at <http://www.vims.edu/bio/sav/> provides this information as well. Metadata are included with the data set posted at the VIMS web site (<http://www.vims.edu/bio/sav/metadata/recent.html>).

Data Quality Reviews: This indicator has undergone extensive technical and peer review by state, Federal and non-government organization partner members of the SAV workgroup and the Living Resources subcommittee. Data collection, data analysis and QA/QC are conducted by the principal investigators/scientists. The data are peer reviewed by scientists on the workgroup. Data selection and interpretation, the presentation of the indicator, along with all supporting information and conclusions, are arrived at via consensus by the scientists in collaboration with the resource manager members of the workgroup. The workgroup presents the indicator to the subcommittee where extensive peer review by Bay Program managers occurs. See Chesapeake Bay SAV special reports at <http://www.vims.edu/bio/sav/savreports.html> and bibliography at <http://www.vims.edu/bio/sav/savchespublish.html>. The SAV distribution data files are located at <http://www.vims.edu/bio/sav/savdata.html>. The SAV indicator is published at www.chesapeakebay.net/status_baygrasses.aspx.

Data Limitations: Due to funding constraints, there were no surveys in 1988. Spatial gaps in 1999 occurred due to hurricane disturbance and subsequent inability to reliably photograph SAV. Spatial gaps in 2001 occurred due to post-nine-eleven flight restrictions near Washington D.C. Spatial gaps in 2003 occurred due to adverse weather in the spring and summer and Hurricane Isabel in the fall. Estimates of acreage in the non-surveyed areas, based on prior year surveys, were developed for those years (1999, 2001, 2003).

Error Estimate: Values used in the analysis are aggregated data, aggregated by Chesapeake Bay segment. Please refer to http://www.vims.edu/bio/sav/sav03/report/calculation_sav_area_page.html and http://www.vims.edu/bio/sav/sav03/report/mapping_process_page.html for methods and tools.

New/Improved Data or Systems: Some technical improvements (e.g., photo-interpretation tools) were made over the 16 years of the annual SAV survey in Chesapeake Bay. Surveyors and analysts have carefully evaluated the effect of methodological changes along the way and made corrections to adjust for any known effects.

References:

- The indicator is published at http://www.chesapeakebay.net/status_baygrasses.aspx.

- See Chesapeake Bay SAV special reports at <http://www.vims.edu/bio/sav/savreports.html> and bibliography at <http://www.vims.edu/bio/sav/savchespub.html>.

FY 2011 Performance Measures:

- **Percent of Dissolved Oxygen goal of 100% standards attainment achieved, based on annual monitoring from the previous calendar year and the preceding 2 years.**

Performance Database: Dissolved oxygen (DO) water quality standards attainment is reported as % of goal achieved. The long term goal is standards attainment in all tidal segments of the Chesapeake Bay.

State water quality standards have been adopted to reflect the dissolved oxygen needs of the Bay's aquatic life. The standards vary with water depth, season and duration of exposure. To meet state regulations, all data gathered within each tidal river and mainstem Bay segment must meet required dissolved oxygen concentrations, based on a combination of interpolation and cumulative frequency distribution (CFD) analyses. These analyses allow for some temporal and spatial exceedences of dissolved oxygen criteria. But if the segment has concentrations that exceed the permitted spatial and temporal allowances, the entire volume of water for that segment is considered out of attainment.

The Bay data files used in the indicator are located at <http://archive.chesapeakebay.net/status/status08/dissolvedoxygen2008.xls>. Data have been collected 1985-2009 and are expected on an annual basis.

The FY 2011 Annual Performance Report for these measures will be based on the assessment of the 2008-2010 data collection. We expect to receive the preliminary results for the 2008-2010 assessment period in March 2011.

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/status08/dissolvedoxygen2008.doc>.

Data Source: DO is measured by the MD Department of Natural Resources (MD mainstem and tributary data), the VA Department of Environmental Quality (VA tributary data and benthic monitoring data), Old Dominion University (VA mainstem data), Virginia Institute of Marine Sciences (VA data), and Alliance for the Chesapeake Bay (volunteer monitoring program in VA).

Data included in standard monitoring programs are located on the CIMS data hub. These data can be downloaded from the Chesapeake Bay Program website

(<http://www.chesapeakebay.net/wquality.htm>) by selecting the “data” tab and subsequently the “CBP Water Quality Database (1984-present)” for dissolved oxygen data. Additional data submitted by the states from non-standard monitoring programs can be obtained by contacting Jeni Keisman (UMCES/CBPO) at JKeisman@chesapeakebay.net.

Methods, Assumptions and Suitability: Standards attainment assessment is based on DO concentrations measured in-situ at surface and depth profiles at fixed stations in the entire Bay. Raw data are processed by the Bay Program’s interpolator program and, subsequently, interpolations are analyzed by a fortran program on a linux platform to determine the volumetric extent of compliance. Methods are described in the Quality Assurance Project Plan (QAPP) on file for the EPA grant. Documentation is available at: <http://www.chesapeakebay.net/qatidal.htm>.

QA/QC Procedures: The Quality Assurance Project Plan (QAPP) is on file for the EPA grant. Documentation is available at: <http://www.chesapeakebay.net/qatidal.htm>.

Data Quality Reviews: This indicator has undergone technical and peer review by state, Federal and non-government organization partner members of the Tidal Monitoring and Analysis Workgroup (TMAW) and the Monitoring and Assessment Subcommittee (MASC). Data collection, data analysis and QA/QC are conducted by the principal investigators/scientists. The data are peer reviewed by scientists in the workgroup. Data selection and interpretation, the presentation of the indicator, along with all supporting information and conclusions, are arrived at via consensus by the scientists in collaboration with the resource manager members of the workgroup. The workgroup presents the indicator to the subcommittee where extensive peer review by Bay Program managers occurs. The dissolved oxygen indicator is published at http://www.chesapeakebay.net/status_dissolvedoxygen.aspx.

Data Limitations: Since 2003, we have included monitoring data provided by the states that were gathered by additional programs beyond the long-term fixed station monitoring program in place since 1985. Similar data did not exist prior to 2003, so it is not included for analyses going back to 1985. Therefore, caution should be exercised when attempting to extrapolate trends from the 1985-2007 results as the sampling regime is not consistent for the entire time period. Specifically, additional data is included in analyses from 2003 to present.

Error Estimate: DO data are aggregated to 78 tidal water segments for the Chesapeake Bay (2003 revised Chesapeake Bay Program (CBP) segmentation and zonation scheme) and then aggregated to the baywide scale. Dissolved oxygen is variable both spatially and temporally. The interpolation program used to determine the spatial variability has inherent errors that add to the uncertainty of estimating DO concentrations in large areas of the Bay. Moreover, the interpolations have inherent errors in that they are a composite of monthly data and the sampling of different parts of the Bay occurs over different times of the month. Therefore, there are limitations to how the data can be applied and

interpreted both spatially and temporally. Documentation is available at:
<http://www.chesapeakebay.net/qatidal.htm>.

New/Improved Data or Systems: There are DO criteria and standards attainment assessment methods for the Chesapeake Bay that have been developed and published for this indicator (refer to references, below). They are under constant review and have been revised and updated on an ongoing basis.

References:

The indicator is published at

http://www.chesapeakebay.net/status_dissolvedoxygen.aspx.

Chesapeake Bay Specific Water Quality Criteria documentation

- U.S. Environmental Protection Agency. 2003. *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries*. EPA 903-R-03-002. Region III Chesapeake Bay Program Office, Annapolis, Maryland.
<http://www.chesapeakebay.net/publication.aspx?publicationid=13142>
- U.S. Environmental Protection Agency. 2004. *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries–2004 Addendum*. EPA 903-R-04-005. Region III Chesapeake Bay Program Office, Annapolis, Maryland.
http://www.chesapeakebay.net/content/publications/cbp_13268.pdf
- U.S. Environmental Protection Agency. 2007. *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries–2007 Addendum*. EPA 903-R-07-003. CBP/TRS 285-07. Region III Chesapeake Bay Program Office, Annapolis, Maryland.
http://www.chesapeakebay.net/content/publications/cbp_27849.pdf
- U.S. Environmental Protection Agency. 2007. *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries–2007 Chlorophyll a Criteria Addendum*. EPA 903-R-07-005. CBP/TRS 288-07. Region III Chesapeake Bay Program Office, Annapolis, Maryland
http://www.chesapeakebay.net/content/publications/cbp_20138.pdf
- U.S. Environmental Protection Agency. 2008. *Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries–2008 Technical Support for Criteria Assessment Protocols Addendum*. EPA 903-R-08-001. CBP/TRS 290-08. Region III Chesapeake Bay Program Office, Annapolis, Maryland.
- U. S. Environmental Protection Agency. 2003. Biological Evaluation for the Issuance of Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity

and Chlorophyll a for the Chesapeake Bay and its Tidal Tributaries. Region III Chesapeake Bay Program Office, Annapolis, Maryland.

http://www.chesapeakebay.net/content/publications/cbp_28935.pdf

- National Marine Fisheries Service. 2003. *National Marine Fisheries Service Endangered Species Act Biological Opinion--Ambient Water Quality Criteria for Dissolved Oxygen, Water Clarity and Chlorophyll a for the Chesapeake Bay and Its Tidal Tributaries--2007 Chlorophyll a Criteria Addendum*. F/NER/2003/00961. National Marine Fisheries Service, Northeast Region, Gloucester, Massachusetts.
- Olson, M. 2009. *Relative Status Indicators: Development and Evolution of a Relative Measure of Condition for Assessing the Status of Water Quality and Biological Parameters Tracked in the US/EPA Chesapeake Bay Program Long Term Monitoring Programs—Final Report*. The Interstate Commission for the Potomac River Basin, Rockville, Maryland.
<http://www.potomacriver.org/cms/publicationspdf/ICPRB09-4.pdf>

Chesapeake Bay Tidal Water Designated Uses/Use Attainability Analyses

- U.S. Environmental Protection Agency. 2003. *Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability*. EPA 903-R-03-004. Region III Chesapeake Bay Program Office, Annapolis, Maryland.
<http://www.chesapeakebay.net/publication.aspx?publicationid=13218>
- U.S. Environmental Protection Agency. 2004. *Technical Support Document for Identification of Chesapeake Bay Designated Uses and Attainability--2004 Addendum*. EPA 903-R-04-006. Region III Chesapeake Bay Program Office, Annapolis, Maryland.
http://www.chesapeakebay.net/content/publications/cbp_13270.pdf
- Chesapeake Bay Program. 2004. *Chesapeake Bay Program Analytical Segmentation Schemes: Revision, decisions and rationales, 1983-2003*. EPA 903-R-04-008. CBP/TRS 268/04. Chesapeake Bay Program Office, Annapolis, Maryland. <http://www.chesapeakebay.net/publication.aspx?publicationid=13272>
- Chesapeake Bay Program. 2005. *Chesapeake Bay Program Analytical Segmentation Schemes: Revision, decisions and rationales, 1983-2003--2005 Addendum*. EPA 903-R-05-004. CBP/TRS 278/06. Chesapeake Bay Program Office, Annapolis, Maryland.
http://www.chesapeakebay.net/content/publications/cbp_13378.pdf
- Moore, K.A., R.J. Orth and D.J. Wilcox. (2009). Assessment of the Abundance of Submersed Aquatic Vegetation (SAV) Communities in the Chesapeake Bay and Its Use in SAV Management. In: Remote Sensing and Geospatial Technologies for Coastal Ecosystems Assessment and Management, Lecture Notes in Geoinformation and Cartography, (Xiaojun Yang, ed). Springer-Verlag Berlin

Heidelberg. pp. 233-357.

<http://www.springer.com/geography/gis+cartography/book/978-3-540-88182-7>

FY 2011 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 report generated. The tales and maps generated for each cycle are uploaded to the “Surf Your Gulf Watershed” website located on the Gulf of Mexico Program home web page. This “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

EPA GMPO’s Surf Your Gulf Watershed” <http://www.epa.gov/gmpo/surfgulf/>

FY 2011 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, groundtruthing, transect growth monitoring and routine site visits of all funded projects. Data are verified by EPA and our Program Partners through site visits and quarterly reports.

Data Limitations: Limitations of use for the data are carefully detailed by the data provider and project manager for each project that yields acreage. Images and topographic data have routinely been used for restoration projects and few to no limitations are expected from these datasets beyond that of image resolution.

Error Estimate: The acreage is documented by the project managers for each project in required EPA Quarterly Reports. Data are subject to a second verification following the completion of the project.

References:

Status and Trends of the Nation's Biological Resources, Volume 1. U.S. Department of the Interior, U.S. Geological Survey, National Wetlands Research Center, 1998

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 2011 Performance Measures:

- At least 75% of the monitored stations in the near shore and coastal waters of the FKNMS will maintain chlorophyll a (CHLA) levels at less than or equal to .35 ug/l and light clarity (Kd) levels at less than or equal to 0.20 m-l
- At least 75% of the monitored stations in the near shore and coastal waters of the FKNMS will maintain dissolved inorganic nitrogen (DIN) levels at less than or equal to .75 uM and total phosphorus (TP) levels at less than or equal to .35 uM

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 (http://ocean.floridamarine.org/fknms_wqpp/)

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 (SCI) 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 SCI 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 $8.28 + 1.47$

(± 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
<http://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 2011 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 and the effluent limits to be established for dischargers from stormwater treatment areas.**

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>

http://my.sfwmd.gov/portal/page?_pageid=2954.19761074&_dad=portal&_schema=PORTAL&navpage=home

<http://www.dep.state.fl.us/labs/assessment/index.htm>

<http://www.dep.state.fl.us/labs/everglades/roundrobin.htm>

<http://www.walker.net/#Selected%20Publications>

FY 2011 Performance Measure:

Percent of the population in each 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 served, 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) potential 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 2011 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 2011 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: The data are stored in PRAWN (Program tracking 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, this 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).

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 sources.

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:

U.S. EPA. Office of Water. "EPA's Beach Report: 2007 Swimming Season." EPA-823-F-08-006. Washington, DC May 2008. Available at

<http://www.epa.gov/waterscience/beaches/seasons/2007/national.html>

U.S. EPA. Office of Water. "National Beach Guidance and Required Performance Criteria for Grants." EPA-823-B-02-004. Washington DC:EPA, June 2002. Available at

<http://www.epa.gov/waterscience/beaches/guidance/all.pdf>

FY 2011 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 2011 Performance Measure:

- **Clean-up acres of known contaminated sediments [Columbia River]**

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 collects 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>
<https://fortress.wa.gov/ecy/tcpwebreporting/Default.aspx>

FY 2011 Performance Measure:

- **Demonstrate a 10 percent reduction in mean concentration of contaminants of concern found in water and fish tissue.**

Performance Database: Reduction in the mean concentration of contaminants of concern will be achieved through a variety of activities implemented by the States of Washington and Oregon, and EPA, specifically:

- Washington will be contributing to the target reduction through the implementation of two Water Quality Improvement Projects/Total Maximum Daily Loads (TMDLs), specifically the Yakima River TMDL and Walla Walla River TMDL. More information on the WA Ecology TMDL program can be found at: http://www.ecy.wa.gov/programs/wq/links/wq_assessments.html
- Oregon will be contributing to the target reduction by the implementation of Pesticide Stewardship Partnership (PSP) in the Walla Walla River basin.

Data Sources:

- Data for the Washington portion of the Walla Walla River can be found in the Washington Ecology Walla Walla TMDL Evaluation (Technical Report) 04-03-032 (page 47) available at <http://www.ecy.wa.gov/biblio/0703036.html>. The Yakima River data is available at <http://www.ecy.wa.gov/biblio/0703036.html>. WA Ecology is seeing a decrease in contaminants from their TMDL work and that data can be found at <http://www.ecy.wa.gov/eim/index.htm>.
- Oregon's Walla Walla pesticide monitoring data can be found in Oregon DEQ's Laboratory Analytical Storage and Retrieval (LASAR) database: <http://deq12.deq.state.or.us/lasar2/>. Oregon Department of Environmental Quality (DEQ) developed a report on the 2005-2007 findings; a report on the 2005-2008 findings is expected soon. 2006 data was used as the baseline year, the year the monitoring locations were developed.

QA/QC Procedures: Oregon DEQ and Washington Ecology will be using standard data collection procedures for data collection and reporting for the Pesticide Stewardship Partnership and TMDL implementation targets.

WA Ecology monitoring work follows the Quality Assurance Project Plan (QAPPs). A major part of the WA Ecology report addresses data quality and collection procedures – pages 21-44 of the Walla Walla report and pages 15-20 of the Yakima report.

The Oregon DEQ Walla Walla pesticide water sampling and laboratory is conducted in accordance with a QAPP for the Pesticide Stewardship Partnership monitoring program and a specific Sampling Analysis Plan (SAP) for the Walla Walla project. Oregon DEQ has QA Officers that review these plans and ensure their sufficiency. The Walla Walla pesticide monitoring is more of a targeted, rather than probabilistic monitoring effort.

Data Quality Review: There have not been any audits of the Oregon work efforts or data. WA Ecology was audited but this data was not a part of that audit.

Data Limitations: The major limitation for this effort is that there is no specific funding to do this work. In 2006, EPA and state partners have identified some ongoing work that might be used to show a 10% reduction in only 5 sites in an immense river basin. These 5 sites are not representative of toxics reduction actions or understanding in the Basin; they only reflect very site specific situations. For Oregon DEQ, sampling and analytical problems do occur with the pesticide monitoring projects, such as an occasional broken lid on a sample jar or problems with the sample recovery rates during extractions. However, these problems are identified and documented in DEQ's sampling reports. If these problems or errors result lower quality data, the data is "graded" lower by DEQ. The grade of the data is then documented in DEQ's LASAR database. Further, if data quality doesn't meet minimum thresholds it's not included in the DEQ database.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: N/A

References:

- To find out more about Washington's Water Quality Improvement Projects (TMDLs), please visit the following site:
http://www.ecy.wa.gov/programs/wq/links/wq_assessments.html.
- To find out more about Oregon Pesticide Stewardship Partnership Program, please visit this site: <http://www.deq.state.or.us/wq/pubs/factsheets/community/pesticide.pdf>

FY 2011 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 2011 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 2011 Performance Measure:

- **Remediate acres of prioritized contaminated sediments [Puget Sound]**

Performance Database: EPA's Regional office will maintain a database of Puget Sound contaminated sediment remediation using the Comprehensive Environmental Response, Compensation & Liability Information System (CERCLIS) used by the Agency's Superfund program. The CERCLIS database contains information on the types of contaminated sediments/ toxics present in selected sites, as well as some baseline data against which remediation results may be derived.

Data Source: The CERCLIS database tracks Superfund sites only. Superfund site information includes remedial designs, feasibility studies and projects at contaminated sediment sites where remedial actions plans have been implemented. The CERCLIS database also tracks Federal completions, e.g., Superfund sites where federal clean-up activities have been completed.

Methods, Assumptions and Suitability: The CERCLIS database documents the remedial actions and Federal completions of projects to clean-up Superfund sites. Within Puget Sound, a Federal completion could correlate to a specific contaminated sediment site and the number of acres that were remediated. Actual data on the number of acres remediated will be in background documents related to the particular remediation project. Activities completed, which include prioritized contaminant remediation (removal, capping, or other remedial strategies), will count in terms of acres, or portions of an acre remediated. Other databases, such as the EPA Brownfields program database and the RCRA-Online database may be useful as additional sources of contaminated sediment remediation data for the Puget Sound sites. These additional databases may be considered in the future.

QA/QC Procedures: Primary data are prepared by the Superfund staff based on site documents related to individual clean-up activities. EPA directly oversees the work at Superfund sites. There are standard operating procedures and data control procedures applied to CERCLIS data. Data are reviewed quarterly and the data control plan is

reviewed annually. There are Quality Assurance Project Plans (QAPPs) for individual sediment clean-up projects.

Data Quality Review: Sediment clean-up projects, such as those included under this measure, are very expensive. Closely managed construction projects are carried out by contractors under strict oversight by EPA. There is close monitoring of sediment data quality, as this is an objective of these clean-up projects too. EPA does periodic audits or quality reviews on Superfund site data and the CERCLIS database.

Data Limitations: At this time, data on contaminated sediment remediation within Puget Sound in the CERCLIS database are limited to sites where an EPA Superfund remediation plan has been developed and implemented. The CERCLIS database only recently began tracking the number of acres cleaned up and the specific sites where contaminated sediment remediation has occurred. A new module for tracking this site-specific data was added to the database in June 2007.

Error Estimate: No error estimate is available for this data.

New/Improved Data or Systems: At present, the EPA Regional office plans to use the existing CERCLIS database to manage data for the performance measure.

References: Link to the Superfund Site Information System at:
<http://cfpub.epa.gov/supercpad/cursites/srchsites.cfm>

GOAL 4 OBJECTIVE 4

FY 2011 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 2011 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)**
- **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 measure).**
- **Percentage of planned outputs delivered in support of the Safe Pesticides, Safe Products program's long term goal one.**
- **Percentage of planned outputs delivered in support of the Safe Pesticides, Safe Products program's long term goal two.**
- **Percentage of planned outputs delivered in support of the Safe Pesticides, Safe Products program's long term goal three.**

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/mypp/hh.pdf> (last accessed July 20, 2007).

Global Change Research Multi-Year Plan, available at: <http://epa.gov/osp/mypp/global.pdf> (last accessed July 20, 2007)

Human Health Risk Assessment Multi-Year Plan, available at: <http://epa.gov/osp/mypp/hhra.pdf> (last accessed July 20, 2007).

Safe Pesticides/Safe Products Multi-Year Plan, available at: <http://epa.gov/osp/mypp/sp2.pdf> (last accessed July 20, 2007)

Ecological Research Multi-Year Plan, available at: <http://epa.gov/osp/mypp/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 2011 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).**
- **Percentage of Ecological Research publications rated as highly-cited publications.**
- **Percentage of Ecological Research publications in “high-impact” journals.**
- **Percentage of Global publications rated as highly cited publications.**
- **Percentage of Global publications in high impact journals.**

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 2011 Performance Measure:

- **Average cost to produce 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 2011 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 2011 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 spend), 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 2011 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/myr/eco.pdf> (last accessed July 20, 2007)

FY 2011 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

FY 2011 Performance Measures:

- **Reduce, treat, or eliminate air pollutants through concluded enforcement actions.**
- **Reduce, treat, or eliminate water pollutants through concluded water enforcement actions.**
- **Reduce, treat, or eliminate toxics and pesticides through concluded enforcement actions.**
- **Reduce, treat, or eliminate hazardous waste through concluded enforcement actions.**

Performance Databases: The Integrated Compliance Information System Federal Enforcement & Compliance (ICIS FE&C) database tracks EPA judicial and administrative civil enforcement actions.

Data Source: The ICIS FE&C database collects essential environmental results data in Case Conclusion Data Sheets (CCDS), which Agency staff prepare after 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. The CCDS form consists of 22 specific questions which, when completed, describe specifics of the case; the facility involved; information on how the case concluded; compliance actions required for defendant(s); the costs involved; information on any Supplemental Environmental Project to be undertaken as part of the settlement; the amount and type of any penalties assessed; and any costs recovered through the action, if applicable.

Methods, Assumptions and Suitability: For enforcement actions resulting in immediate pollutants reduced, treated, or eliminated, staff estimate the amount of reduction at the time the enforcement action concludes. For enforcement actions resulting in pollutants reduced, treated, or eliminated long-term, staff estimate the reduction for an average year. EPA staff use established statute methodologies, e.g. Clean Water Act (CWA), to calculate 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. EPA then converts the difference into standard units of measure.

QA/QC Procedures: The ICIS FE&C data system meets Office of Environmental Information (OEI) 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 data calculation methodology.

Data Quality Review: Each office within the Office of Enforcement and Compliance Assurance (OECA) prepares Quality Management Plans (QMPs) every five years.

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 semiannual executive certification of the overall accuracy of ICIS information. Additionally, OC has a quarterly data review process to ensure timely input, data accuracy, and reliability of EPA's enforcement and compliance information.

Data Limitations: Pollutant reductions or eliminations reported in CCDS project an estimate 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 use information available at the time a case settles or an order is issued. In some instances, EPA develops and enters this information on pollutant reduction estimates after the settlement or during continued discussions over specific plans for compliance. Due to the time required for EPA to negotiate a settlement agreement with a defendant, 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 reduced or eliminated is prudently underestimated based on CCDS information. EPA also bases the pollutant estimates on the expectation that the defendant/respondent implements the negotiated settlement agreement.

Error Estimate: Not available

New & Improved Data or Systems: ICIS FE&C became operational in June 2002. This data system has all of the functionality of the legacy Civil Enforcement Docket system but has an additional feature for tracking EPA enforcement and compliance activities. Additionally, ICIS-NPDES is being phased-in to ICIS FE&C as the database of record for the CWA National Pollutant Discharge Elimination System (NPDES) program. ICIS-NPDES includes all federal and state enforcement, compliance and permitting data. States are currently migrating to ICIS NPDES from the legacy data system, the Permit Compliance System (PCS). States enter data in phases in ICIS-NPDES in accordance with current data and system capabilities. The migration process is projected to be completed in FY2013. As a state's data migrates from PCS to ICIS-NPDES, so too does the state's NPDES federal compliance and enforcement data. As of June 2009, ICIS-NPDES has a new feature that did not exist in the legacy system and that is the capability to accept electronic Discharge Monitoring Report (DMR) data directly from facilities. This new electronic data reporting functionality is expected to increase the quality and timeliness of the DMR data in ICIS-NPDES. To date ICIS-NPDES is the national system of record for 31 states (including DC, VI, PR), 2 tribes, 9 territories and Gulf of Mexico facilities in Region 6.

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, 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 OCS 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.

FY 2011 Performance Measures:

- **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.**
- **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.**
- **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.**

Performance Database: ICIS FE&C and manual reporting by regions.

Data source: ICIS FE&C captures behavioral change information resulting from EPA enforcement settlements, compliance incentive audits, direct EPA compliance assistance, and federal inspections resulting in direct or preventative environmental benefits. EPA collects most of the essential data on the behavioral change information through the Inspection Conclusion Data Sheet (ICDS), the Compliance Assistance Conclusion Data Sheet (CACDS), or the Case Conclusion Data Sheet (CCDS), which Agency staff prepare after the conclusion of each action. Similar to the CCDS form, the ICDS and CACDS forms consist of specific questions which, when completed, describe specific activities taken by the facility operator or the compliance assistance recipient which result in direct environmental improvements or pollution prevention.

Methods, Assumptions and Suitability: The ICDS collects information on key activities and outcomes observed by EPA at facilities during on-site inspections and evaluations. This includes information about identified deficiencies (potential violations) communicated to the facility by the inspector during an on-site inspection/evaluation; whether the facility addressed any deficiencies identified during an on-site inspection/evaluation; and whether the inspector provided compliance assistance during an on-site inspection/evaluation. The information from the completed ICDS form is either entered into ICIS or reported manually (some regions participating in the Underground Injection Control (UIC) database pilot use this method). Also, Expedited Settlement Offer (ESO) data is used when calculating the total number of regulated entities that change behavior from inspections and evaluations that result in direct

environmental benefits, e.g. getting into compliance with appropriate regulations as a result of complying actions.

EPA compliance assistance providers use the Compliance Assistance Conclusion Data Sheet (CACDS) to report information from direct compliance assistance delivered by EPA. The form records EPA on-site observations of entities reducing, treating, or eliminating pollution during on-site direct compliance assistance. The EPA on-site assistance provider uses the CACDS form to record the type of compliance assistance provided, the entity receiving the compliance assistance, and the date compliance assistance occurred. ICIS stores information from the completed CACDS forms.

The CCDS documents whether the defendant/respondent, in response to an order for injunctive relief or otherwise in response to an 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 performance measure is a summation of the enforcement, compliance monitoring, compliance incentives, and direct EPA compliance assistance activities resulting in direct environmental benefits or pollution prevention.

QA/QC: The ICIS FE&C data system meets 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: Each office within the Office of Enforcement and Compliance Assurance (OECA) prepares Quality Management Plans (QMPs) every five years.

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. Additionally, OC has a quarterly data review process to ensure timely input, data accuracy, and reliability of EPA's enforcement and compliance information.

Data Limitations: EPA counts the number of enforcement activities resulting in reduced pollution or improved environmental management practices under the assumption that the defendant will implement the negotiated settlement agreement.

Error Estimate: None

New & Improved Data or Systems: Same information on improvements to ICIS FE&C in the above performance measurement section.

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.

FY 2011 Performance Measures:

- **Percent of recidivism.**
- **Percent of closed cases with criminal enforcement consequences (indictment, conviction, fine or penalty).**

Performance Databases: The Criminal Case Reporting System (CCRS) stores criminal enforcement data in an enforcement-sensitive database which contains historical data on all criminal enforcement prosecutions. The data used for all criminal enforcement performance measures are in the CCRS database.

Data Source: Data entered into the CCRS for the “percent of closed cases with criminal enforcement consequences” come from the Investigative Activity Report (IAR) which tracks a criminal investigation from the time EPA opens a case. The IAR indicates when EPA files a case with the Department of Justice (DOJ) (i.e., an indictment by a grand jury) or when DOJ obtains criminal information (i.e., the defendant will plead guilty). Case closing checklists occur when a case concludes. Data dealing with the fine or penalty from the final Judgment and Commitment Orders (“J&C”) are the formal sentencing documents issued by the U.S. District Court. The J&C also serves as the sentencing data for the performance measure on the “percentage of recidivism”.

Methods, Assumptions and Suitability: The methodology for the “percent of recidivism” measure employs a rolling 12 year baseline (i.e., initial targets and baselines were based on FY 1997-2008 data, while subsequent baselines will be based on FY 1998-2009, FY 1999-2010, etc). The methodology identifies “repeat” violators under *any* of the environmental statutes [e.g. a defendant convicted of a CWA violation in FY 2000 that was subsequently *convicted* (not merely indicted, but subsequently acquitted) of a subsequent RCRA violation in FY 2007 meets the definition of a “recidivist.”] The methodology distinguishes between a “recidivist” (whose second crime occurs after prosecution and sentencing for the initial violation) and defendants who commit multiple environmental crimes that overlap chronologically. The definition of a “recidivist” also covers a defendant who -- after prosecution for an initial environmental crime -- may subsequently commit a *civil* environmental violation. OECA’s ICIS database is the source for data on defendants who meet the definition of a “recidivist.”

QA/QC Procedures: All criminal enforcement special agents receive training on the accurate completion of IAR reports and the entry of criminal case data into the CCRS. Quarterly case management reviews by senior management assure the accuracy of the data contained in the reports. The Criminal Investigations Division (CID) has a process in place for document control and records management.

Each office within the Office of Enforcement and Compliance Assurance (OECA) prepares Quality Management Plans (QMPs). QMPs for the Office of Criminal Enforcement, Forensics and Training (OCEFT) and its Criminal Investigation Division (CID), were submitted to the Office of Environmental Information (OEI) in July 2009 and are under review.

Data Quality Review: OCEFT's Center for Strategic Environmental Enforcement (CSEE) reviews all criminal enforcement data used for compiling performance measures by comparing data entered into the CCRS from the field offices with the final J&C order prepared by the U.S. District Court at the time a defendant is sentenced.

Data Limitations: One possible limitation on the calculation of the "recidivism" measure is the difficulty to identify all appropriate and relevant business relationships among possible repeat violators. It is possible that the information collected during a criminal prosecution may not obviously "tie" subsequent and initial violators together, especially for corporations that have multiple components or for individuals who may try to hide their ownership status of small businesses that violate the law.

The only other possible data limitation for either measure -- likely to occur only very infrequently -- is a successful appeal of convictions (that can take several years to move through the legal system) which requires a recalculation of results for a given fiscal year.

Error Estimate: Not available.

New & Improved Data or Systems: A new feature of the Criminal Case Reporting System includes a new tab that consolidates information from the Case Closing Checklist and the CCRS to incorporate data elements previously gathered through the criminal enforcement Case Conclusion Data Sheets.

References: Internal EPA database; non-enforcement sensitive data available to the public through the Freedom of Information Act (FOIA). J&C Orders available through the U.S. District Courts.

GOAL 5 OBJECTIVE 2

FY 2011 Performance Measures:

- **Quantity of priority chemicals reduced from all phases of the manufacturing lifecycle through source reduction and/or recycling (program assessment measure)**
- **Number of pounds of priority chemicals reduced from the environment per Federal government costs (program assessment efficiency measure)**

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 December 2009.

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/recycling 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 expertise and knowledge of the industry and/or 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 chemical management national experts are trained in industrial or chemical engineering and have significant experience in evaluating industrial processes for chemical management potential and efficiency. Their professional judgment forms the basis for accepting the applicants' chemical management 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 Resource Conservation and Recovery. Chemical Management Branch.

<http://www.epa.gov/osw/partnerships/npep/index.htm> (accessed December 22, 2009)

<http://www.epa.gov/osw/rcc/national/toxics.htm> (accessed December 22, 2009)..

FY 2011 Performance Measures:

- **Pounds of hazardous materials reduced by P2 program participants (program assessment measure)**
- **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 (MTCO_{2e}) reduced, conserved, or offset by P2 program participants (program assessment measure)**

The Agency's Pollution Prevention programs 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 programs operates 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.

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 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 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 a spreadsheet for all of its programs (i.e., Alternatives to Lead Solder in Electronics, Furniture Flame Retardant Alternatives, the Formulator Program, the Safer Detergents Stewardship Initiative (SDSI), and Auto Refinishing. The 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 greenhouse gas emissions, 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 reduced, gallons of water, dollars saved, and metric tons of carbon dioxide (CO₂) emissions eliminated.

Regional Offices: EPA's Regional Offices' P2 results come primarily through the grants they award, and results from direct projects managed by EPA Regional staff. Regional Offices use a standardized spreadsheet to track, manage, and report results 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 user 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.

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.). In FY 2008, EPA's financial relationship with PGH ended, so new results will not be counted. 2004-2007 results will reoccur with 2011 being the last year any results will be counted.

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 collects economic information and environmental metrics 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). In collaboration with the Department of Energy, Department of Commerce, Department of Labor, and the Small Business Administration, we will work to ensure that the economic and environmental benefits are clearly demonstrated.

Environmentally Preferable Products (EPP): Results for Environmentally Preferable Purchasing (EPP) come from the Federal Electronics Challenge (FEC), and the Electronic Product Environmental Assessment Tool (EPEAT). 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. FY 2010 data will be collected for the FEC in January 2011 and for EPEAT in April 2011.

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. 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. For SDSI GHGs, industry partners will provide data on the amount of GHG emissions reduced through partner activities.

GE: Data come from sources and partners including the regions, academia and industry. For example, for the GE activities 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. 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.

Methods and Assumptions: *GC:* The information from the nominations is collected and tracked directly through internal record-keeping systems. The performance data, while collected by individual centers, is acceptable 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. For SDSI GHGs, partner-provided data on GHG emissions reductions will be aggregated to determine the total reduction in GHG emissions achieved through the program.

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: No models, assumptions, or statistical methods are employed with Regional data. 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 which will increase consistency in data collection.

P2Rx: Data reported by state and local technical assistance programs in the National P2 Results system is collected and compiled by the regional centers. 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 National P2 Results system counted in EPA performance measures.

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 original peer review process, and were reviewed and updated during the development of version 2.0 of the EEBC.

In September 2008, the P2 program went to the Science Advisory Board for a consultation on the issue of recurring results¹. Based on their feedback², the P2 program has determined that it is appropriate to count recurring results but only for a pre-defined amount of time (i.e. not indefinitely). Each P2 program has made a determination for an appropriate and reasonable timeframe to count the recurring benefits of program intervention. These timeframes may differ by program, but each program will consistently adhere to the timeframes described below. Every reporting year, each program breaks out new annual results and adds them to recurring results from previous years efforts to report the annual rate of performance for that year. The recurring-results timeframe for each program is described below. These timeframes are inclusive of first year results.

The EPP program derives benefits from the purchase, use, and disposal of green electronics products. Currently, results are counted over a 5 year product life-cycle. As additional electronics products are explored, benefits will be counted according to respective product life-cycles. The Green Chemistry captures benefits from innovative green chemistry technologies and related processes. Because of the relatively slow innovation rate and long life-span of technologies once adopted, the Green Chemistry

¹[http://yosemite.epa.gov/sab/SABPRODUCT.nsf/3F4214C1239651BC852574AD003FC2F0/\\$File/Charge+for+Pollution+Prevention+Program+Measures+9-3-08+Meeting.pdf](http://yosemite.epa.gov/sab/SABPRODUCT.nsf/3F4214C1239651BC852574AD003FC2F0/$File/Charge+for+Pollution+Prevention+Program+Measures+9-3-08+Meeting.pdf)

² [http://yosemite.epa.gov/sab/sabproduct.nsf/F6A39F03493E4EA38525750C0074E448/\\$File/EPA-SAB-09-005-unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/F6A39F03493E4EA38525750C0074E448/$File/EPA-SAB-09-005-unsigned.pdf)

program generally counts results over a 10 year timeframe. However, 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 that quantity is no longer counted. 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. The Green engineering program is promoting implementation of solvent reuse and recovery practices in pharmaceutical companies. These actions result in both environmental and economical benefits and will be recurring as facilities will not revert back to former, less economical practices. These results will be counted for 8 years until these practices become standard operating practice. The Design for the Environment program has many different projects that generate results. The largest of these, the Formulator Program, is set up to recognize safer products through application of the DfE label. Partner companies sign a three-year partnership agreement so these results will be counted over 3 years. The DfE Automotive Refinishing Partnership collaborates with the Regions on training and compliance assistance workshops that help businesses and schools implement best practices to reduce air toxics in the workplace and community. Changes are counted over a 5 year period to account for the time it takes to provide training and equipment, improve performance, and standardize new processes. DfE's Furniture Flame Retardancy Partnership and Lead-Free Solder LCA will count results for 7 years. This period was chosen to be consistent with the Modified Accelerated Cost Recovery System (MACRS) recovery period for similar product types³. DfE's SDSI GHG will count recurring results for three years. The period was chosen because SDSI GHG Champions will also have DfE Formulator Program recognition, where results are counted for three years. Regions count recurring results from grant-based and direct project based P2 technology and practice changes because these changes are expected to endure multiple years. The Program is using an average lifetime of equipment, process, or practice changes as a factor to apply to all results achieved. The Program has conducted preliminary bench-marking to ascertain the range of standard expected lifetimes of the technologies and practices adopted as a result of Regional action. The range is wide, and documentation of results varies depending on the nature of the grant activity. As a result, the Program is using a conservative 4 year period for an average duration of these technology and practice changes. The P2Rx Center is counting recurring results and is also using an average lifetime of equipment, process, or practice changes as a factor to apply to all results achieved. Due to the aggregated nature of results reported in the P2 Results Data System, and the relative lack of transparency concerning the underlying activities reported in this system, the Program is taking the most conservative approach and counting results for 2 years. EPA's financial relationship with Practice Green Health ended in FY 2007 and no new results are being collected beyond FY 2007. 2004 through 2007 data will be counted for 5 years because hospitals are greening their operations and equipment on a facility basis. These improvements result in financial gains and are unlikely to be reversed in future years. The Green Suppliers Network counts recurring results from facility implementation of equipment and process changes that are expected to endure multiple years. GSN is using an average lifetime of equipment or process change as a factor to apply to all results achieved.

³ Couper, J.R., *Process Engineering Economics*. 2003, New York: Marcel Dekker, Inc. 423. (see page 180)

Preliminary bench-marking indicates that a 6-year period is an appropriate average lifetime for GSN technology and process changes. In the future, the Center may be able to access case-specific data efficiently to determine specific depreciation rates for equipment and process changes installed.

Suitability: Hazardous pounds reduced, dollars saved, gallons of water and metric tons of carbon dioxide reduced represent the four Pollution Prevention measures. These annual measures have corresponding long term goals identified in EPA's draft 2009-2014 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," November 2008), and the programs will ensure that those standards and procedures are applied to this effort. The Quality Management Plan is for internal use only.

GC: Data undergo a technical screening review by the Agency before being uploaded to the database to determine if the data adequately support the environmental benefits described in the Green Chemistry Challenge Awards application. Subsequent to Agency screening, nominations are reviewed by an external independent panel of technical experts from academia, industry, government, and nongovernmental organizations (NGOs). Their comments on potential benefits are incorporated into the database. The panel is convened by the Green Chemistry Institute of the American Chemical Society, primarily for judging nominations submitted to the Presidential Green Chemistry Challenge Awards Program and selecting winning technologies. Quantitative benefits are periodically reviewed to be sure they were accurately captured from the nominations.

DfE: Data undergo a technical screening review by DfE before being added to the spreadsheet. DfE determines whether data submitted adequately support the environmental benefits described.

GE: Data will be reviewed by the partners including industry, academia, and the regions. Data will also be reviewed by GE 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 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: 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. SOPs are on this web site: <http://www.p2rx.org/AdminInfo/toc.cfm> 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

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: The EEBC underwent internal and external review during their development phases. The EEBC was also reviewed and beta-tested during the development of version 2.0. 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.

Data Quality Review: OPPT has developed 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 assessment rating and includes recommendations such as developing additional and refining existing measures, establishing more comprehensive QA/QC procedures, and addressing improvement opportunities.

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.

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 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 was developed to 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.

DfE: DfE has implemented 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. SDSI GHGs will be a new set of results for DfE in FY 2011. This program will focus on encouraging products that reduce the release of GHG emissions

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 designed a P2 cost calculator to improve the process of projecting and reporting results related to cost savings.

P2Rx: 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.

GE: The program is utilizing GlaxoSmithKline/North Carolina State University GSK/NCSU models (Jimenez-Gonzalez 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 was revised and version 2.0 was released in March 2009. These revisions were made 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. A complete list of revisions is available in the EEBC and it is currently being converted from an Excel spreadsheet to a Web-based tool, to make it more user friendly.

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>
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 2011 Performance Measure:

- **Annual reductions of Design for the Environment (DfE) chemicals of concern per federal dollar invested in the DfE program (program assessment efficiency measure)**

EPA measures the accomplishments of the Design for the Environment (DfE) Program by comparing reductions in hazardous chemicals achieved to program resources, including FTE, overhead and extramural dollars spent.

Performance Database: The DfE program has an evaluation spreadsheet that is populated for all its programs (i.e., Alternatives to Lead Solder in Electronics, Furniture Flame Retardant Alternatives, the Formulator Program, the Safer Detergents Stewardship Initiative (SDSI), and 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 draft 2009-2014 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. This measure is 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 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.

References:

<http://www.epa.gov/quality/informationguidelines>

The DfE Program Tracking Spreadsheet contains Confidential Business Information.

FY 2011 Performance Measures:

- **Energy savings per dollar invested in the Federal Electronics Challenge (FEC) 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, annually 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 original peer review process, and were reviewed and updated during the development of version 2.0 of the EEBC.

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,” November 2008), 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 OPPTS'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:

The EEBC was revised by EPA and version 2.0 was released in March 2009. 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. A complete list of revisions is available in the EEBC, and it 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>

GOAL 5 OBJECTIVE 3

FY 2011 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)" that are active during the fiscal year. The measure is based on a count of tribes, and a given tribe may have more than one TAS program, and may have DITCAs as well. Because of the tribes with multiple qualifying programs, the total number of TAS designations plus DITCAs in Indian country is higher than the number of tribes with regulatory environmental programs as reported for this measure. The data are reported by the Regions at mid-year and at the end of the year.

The performance measure, "Percent of tribes conducting EPA-approved environmental monitoring and assessment activities in Indian country," reports the number of Quality Assurance Project Plans (QAPPs) for monitoring activities that have been approved by Regional Quality Assurance Officers, and active during the fiscal year. All ongoing environmental monitoring programs are required to have active QAPPs, so QAPPs are used as a surrogate for the monitoring activities that occur in Indian country. However, tribes often have more than one QAPP, so the count of total QAPPs is always higher than the performance measure which counts the tribes that have 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 current fiscal year and that also demonstrate environmental program activities by having completed 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).

The environmental program measure thus requires two steps, the establishment of an environmental office and the completion of an indicator activity. EPA Regional project officers managing tribes with an environmental program, input data, classified by tribe, into the TPMS, to derive a national cumulative total. Data are input at mid-year, and again at the end of the year.

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, all active during the fiscal year, 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: TPMS was reprogrammed in 2010. It now calculates and reports the three tribal measures for PAR, the SMM 5.3TR measure and the GAP Efficiency measure on an ongoing basis. The data are reported per year.

References:

Tribal Program Management System: <https://iaspub.epa.gov/TATS/>
OCFO Information Quality Guidelines:
<http://intranet.epa.gov/ocfo/policies/iqg/index.html>

GOAL 5 OBJECTIVE 4

FY 2011 Performance Measure:

- **Percentage of planned outputs delivered in support of STS's goal that decision makers adopt ORD-developed decision support tools and methodologies (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 innovative technologies developed or verified by ORD (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 Strategy, available at http://www.epa.gov/sustainability/pdfs/EPA-12057_SRS_R4-1.pdf (last accessed August 21, 2008)

FY 2011 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 spend), 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 2011 Performance Measures:

- **Percentage of Science and Technology for Sustainability (STS) publications rated as highly cited publications (program assessment measure).**
- **Percentage of Science and Technology for Sustainability (STS) 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 available at:
<http://www.epa.gov/ncer/publications/bibliometrics/index.html>

ENABLING SUPPORT PROGRAMS

FY 2011 Performance Measure:

- **Percent of GS employees hired within 80 calendar days. (Goal is 60 percent)**

Performance Database: EPA's Human Resources Activity and Communication Tracking System (HRACTS) is an in-house, lotus-notes based system designed to track and monitor HR workload including recruitment actions at the Agency's Shared Service Centers. HRACTS also tracks other HR workload activity including awards, reassignment, etc.; tracks EPA's status towards achieving OPM's original 45-day hiring goal; and provides status reports to customers. The servicing human resources personnel at EPA's 3 Shared Service Center enter data into the system. This data is tracked internally and reported on a fiscal year, quarterly, and as-needed basis.

Data Source: Office of Human Resources (OHR) HRACTS.

Methods, Assumptions and Suitability: OPM's 80-day hiring model is designed only to assess the time to hire new non-federal hires through the delegated examining recruitment actions only, therefore, not all Agency recruitment actions need to be reported as part of this performance measure. HRACTS tracks the time throughout EPA's hiring process from the time a hiring request is initiated until the employee comes on board. HRACTS has multiple date fields for inputting the date for each step in the hiring process. HRACTS is continually undergoing changes and modifications to meet the constant clarification and unique needs of the 80-day end-to-end hiring model. HRACTS has been revised to track the date for each step in hiring process, while meeting the diverse demands for easy access by Agency-wide managers to track the status of hiring actions. The system is being refined to notify applicants of their status of their vacancy application throughout the hiring process and also provide managers with a link to survey their perspective of the overall hiring process. HRACTS reports are being revised to provide organizations with in-depth information on the status of their pending recruitment actions in a secure and controlled environment. HRACTS limitations have prevented clear delineation of the various types of recruitment actions (e.g. merit promotion, delegated examining) as input fields are just now being incorporated into the system and being populated. This distinction is important as the 80-day end-to-end hiring process is designed to track only new non-federal hires whereas current baseline estimates reflect all hiring actions. Other improvements include better reporting templates to track trends and anomalies along the hiring process timeline.

QA/QC Procedures: HRACTS tracks hiring process activity from the time the request for a recruitment action is requested until the selected candidate enters on-board for duty. Agency-wide, Office-level, and SSC reports can be prepared on an annual, quarterly, or selected time period basis. Manager access is being piloted to better enable tracking of the status of their individual recruitment actions.

Data Quality Reviews: SSC / OHR staff review and analyze the reports to determine trends and assess workload. SSC staff review and validate the data, identify anomalies or data-entry errors, make corrections, and provide the updated information so that the system's reports can be

current and accurate. Agency managers can be provided with system access to further enhance data integrity. Questions about the data or resolution of data issues are frequently resolved through discussion and consultation with the SSC and OHR.

Data Limitations: N/A

Error Estimate: N/A

New/Improved Data or Systems: In FY08, EPA implemented HRACTS a new standardized action tracking system across the 3 new HR Shared Service Centers. Changes and modifications are ongoing to further meet the Agency's needs for improved tracking and reporting. This tracking system will facilitate further improvement in EPA's end-to-end time-to-hire process.

References: HRACTS

FY 2011 Performance Measure:

- **Cumulative percentage reduction in energy consumption in EPA's 34 reporting facilities from the FY 2003 baseline**

Performance Database: The Agency's contractor provides energy consumption information quarterly and annually. The Agency keeps the energy consumption data in the "Energy and Water Database," which is a collection of numerous spreadsheets. The contractor is responsible for reviewing and quality assuring/quality checking (QA/QCing) the data.

Data Source: The Agency's contractor requests and collects quarterly energy and water reporting forms, utility invoices, and fuel consumption logs from energy reporters at each of EPA's "reporting" facilities (the facilities for which EPA pays the utility bills directly to the utility company). The reported data are based on metered readings from the laboratory's utility bills for certain utilities (natural gas, electricity, purchased steam, chilled water, high temperature hot water, and potable water) and from on-site consumption logs for other utilities (propane and fuel oil). In instances when data are missing and cannot be retrieved, reported data are based on a proxy or historical average.

Methods, Assumptions, and Suitability: N/A

QA/QC Procedures: EPA's contractor performs an exhaustive review of all invoices and fuel logs to verify that reported consumption and cost data are correct. EPA's Sustainable Facilities Practices Branch compares reported and verified energy use at each reporting facility against previous years' verified data to see if there are any significant and unexplainable increases or decreases in energy consumption and costs.

Data Quality Reviews: N/A

Data Limitations: EPA does not currently 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 2011 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].

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 2011 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 2011 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 over a period of 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 General¹, 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.

¹Government 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/June 2009.

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 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 20102011 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.²

² U.S. EPA, Office of Inspector General, Audits, Evaluations, and Other Publications; Available on the Internet at www.epa.gov/oig , last updated February June 2009.