

**Environmental Protection Agency
2009 Annual Performance Plan and Congressional Justification**

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**Environmental Protection Agency
FY 2009 Annual Performance Plan and Congressional Justification**

GOAL, APPROPRIATION SUMMARY

Budget Authority
(Dollars in Thousands)

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

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

**Environmental Protection Agency
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Clean Air and Global Climate Change

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

STRATEGIC OBJECTIVES:

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

GOAL, OBJECTIVE SUMMARY

Budget Authority
Full-time Equivalents
(Dollars in Thousands)

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

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

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

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

Clean Air Rules

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

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

Energy

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

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

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

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

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

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

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

Reduce Risks to Indoor Air and Radon Programs

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

Climate Protection

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

Stratospheric Ozone – Domestic and Montreal Protocol

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

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

Radiation Monitoring

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

Research

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

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

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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 2011, conduct leading-edge, sound scientific research to support the protection of human health through the reduction of human exposure to contaminants in drinking water, fish and shellfish, and recreational waters and to support the protection of aquatic ecosystems-specifically, the quality of rivers, lakes, and streams, and coastal and ocean waters.

GOAL, OBJECTIVE SUMMARY

Budget Authority
Full-time Equivalent
(Dollars in Thousands)

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

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

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

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

Drinking Water

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

Clean Water

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

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

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

Homeland Security

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

Research

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

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

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

(CO₂) storage on drinking water quality; 2) revising aquatic life guidelines, recreational water criteria, the effects of emerging contaminants, nutrients, biocriteria and multiple stressor effects on stream biota; 3) watershed management work that supports diagnoses of impairment, mitigation and pollutant load reduction from headwater streams and isolated wetlands; and 4) improving the control of microbial releases from publicly owned treatment works (POTWs) during periods of significant wet weather events.

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

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Land Preservation and Restoration

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

STRATEGIC OBJECTIVES:

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

GOAL, OBJECTIVE SUMMARY

Budget Authority
Full-time Equivalents
(Dollars in Thousands)

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

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

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

Prevention, Protection, and Response Activities

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

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

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

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

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

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

¹ Additional information on these programs can be found at: www.epa.gov/superfund, <http://www.epa.gov/superfund/programs/er/index.htm>, <http://www.epa.gov/epaoswer/hazwaste/ca/>, <http://www.epa.gov/brownfields/>, <http://www.epa.gov/swrust1/>, <http://www.epa.gov/swerffrr/> and <http://www.epa.gov/swerrims/landrevitalization>.

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

- Recycling, Waste Minimization and Energy Recovery: EPA is requesting \$10.8 million in FY 2009 to support EPA's strategy for reducing waste generation and increasing recycling. EPA's strategy will continue to be based on: (1) establishing and expanding partnerships with businesses, industries, tribes, states, communities, and consumers; (2) stimulating infrastructure development and environmentally responsible behavior by product manufacturers, users, and disposers; and (3) helping businesses, government, institutions, and consumers reduce waste generation and increase recycling through education, outreach, training, and technical assistance. In FY 2009, EPA will continue the Resource Conservation Challenge (RCC) as a major national effort to find flexible, yet more protective ways to conserve our valuable natural resources through waste reduction, energy recovery, and recycling. Through RCC, the Agency also will pursue the advancement of alternative domestic energy sources as well as clean energy, which power our economy and drive our environmental successes.
- Implementing the EPA Act: The EPA Act³ contains numerous provisions that significantly affect Federal and state underground storage tank (UST) programs and requires that EPA and states strengthen tank release and prevention programs. In FY 2007, working with its tank partners, EPA developed grant guidelines⁴ which implement the UST provisions of the EPA Act. In FY 2009, EPA is requesting \$35.1 million to provide assistance to states to help them meet their new responsibilities, which include: (1) mandatory inspections every three years for all underground storage tanks, (2) operator training, (3) prohibition of delivery for non-complying facilities⁵, and (4) secondary containment or financial responsibility for tank manufacturers and installers. EPA also is submitting legislative language to allow states to use alternative mechanisms such as the Environmental Results Program (ERP) to meet the mandatory three-year inspection requirement. This proposal provides states with a less

² For more information on the CPRMs, go to <http://www.epa.gov/swerrims/landrevitalization/docs/cprmguidance-10-20-06covermemo.pdf>.

³ For more information, refer to http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_public_laws&docid=f:publ058.109.pdf (scroll to Title XV - Ethanol And Motor Fuels, Subtitle B – Underground Storage Tank Compliance, on pages 500-513 of the pdf file).

⁴ For more information, refer to <http://www.epa.gov/OUST>

⁵ Refer to *Grant Guidelines to States for Implementing the Delivery Prohibition Provision of the Energy Policy Act of 2005*, August 2006, EPA-510-R-06-003, http://www.epa.gov/oust/fedlaws/epact_05.htm#Final.

costly alternative to meet the objectives of the EPAct. EPA also will continue implementing the UST Tribal strategy⁶ developed in FY 2006 in Indian country.

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

Homeland Security

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

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

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

Enforcement

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

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

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

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

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

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

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

Enhancing Science and Research to Restore and Preserve Land

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

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

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

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

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

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

2007 PART

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

- Land Protection and Restoration Research

More detailed information is provided in specific program project descriptions.

**Environmental Protection Agency
FY 2009 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 2011, prevent and reduce pesticide and industrial chemical risks to humans, communities, and ecosystems.
- Sustain, clean up, and restore communities and the ecological systems that support them.
- Protect, sustain, and restore the health of critical natural habitats and ecosystems.
- Through 2011, identify and synthesize the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people, communities, and ecosystems. Focus research on pesticides and chemical toxicology; global change; and comprehensive, cross-cutting studies of human, community, and ecosystem health.

GOAL, OBJECTIVE SUMMARY

Budget Authority
Full-time Equivalents
(Dollars in Thousands)

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

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

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

Pesticides Programs

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

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

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

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

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

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

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

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

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

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

Toxics Programs

EPA programs under this goal have many direct and many indirect benefits. For example, each year the Toxic Substances Control Act (TSCA) New Chemicals program reviews and manages the potential risks from approximately 1,500 new chemicals and 40 products of biotechnology that enter the marketplace. This new chemical review process not only protects the public from the possible immediate threats of harmful chemicals, but it also has contributed to changing the behavior of the chemical industry, making industry more aware and responsible for the impact these chemicals have on human health and the environment.

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

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

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

Water Programs

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

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

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

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

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

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

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

Community Action for a Renewed Environment (CARE)

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

Brownfields

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

International Activities

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

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

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

Environmental Justice

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

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

Research

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

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

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

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

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

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

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

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

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

- Improving the linkages in the source-outcome paradigm;

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

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

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

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

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

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

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

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

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

**Environmental Protection Agency
FY 2009 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 statutes, preventing pollution, and promoting environmental stewardship. Encourage innovation and provide incentives for governments, businesses, and the public that promote environmental stewardship and long-term sustainable outcomes.

STRATEGIC OBJECTIVES:

- By 2011, maximize compliance to protect human health and the environment through enforcement and other compliance assurance activities by achieving a 5 percent increase in the pounds of pollution reduced, treated, or eliminated by regulated entities, including those in Indian country. (Baseline: 3-year rolling average FYs 2003-2005: 900,000,000 pounds.)
- By 2011, enhance public health and environmental protection and increase conservation of natural resources by promoting pollution prevention and the adoption of other stewardship practices by companies, communities, governmental organizations, and individuals.
- Protect human health and the environment on tribal lands by assisting federally-recognized tribes to build environmental management capacity, assess environmental conditions and measure results, and implement environmental programs in Indian country.
- Conduct leading-edge, sound scientific research on pollution prevention, new technology development, socioeconomic, sustainable systems, and decision-making tools. By 2011, the products of this research will be independently recognized as providing critical and key evidence in informing Agency policies and decisions and solving problems for the Agency and its partners and stakeholders

GOAL, OBJECTIVE SUMMARY

Budget Authority
Full-time Equivalents
(Dollars in Thousands)

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

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

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

Improving Compliance with Environmental Laws

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

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

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

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

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

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

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

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

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

Improving Environmental Performance through Innovation and Pollution Prevention and Stewardship

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

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

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

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

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

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

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

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

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

Improve Human Health and the Environment in Indian Country

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

- **Establish an Environmental Presence in Indian Country:** The Agency will continue to provide funding through the Indian General Assistance Program (GAP) so each Federally-recognized tribe can establish an environmental presence.
- **Provide Access to Environmental Information:** EPA will provide the information tribes need to meet EPA and Tribal environmental priorities, as well as characterize the environmental and public health improvements that result from joint actions.
- **Implementation of Environmental Goals:** The Agency will provide opportunities for the implementation of Tribal environmental programs by tribes, or directly by EPA, as necessary.

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

Sustainability

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

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

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

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

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

FY 2006 PART

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