Strategic Goal 4: Healthy Communities *and* Ecosystems

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

Overview of Goal 4

EPA's work to achieve healthy communities and ecosystems relies on both regulatory and collaborative approaches. To accomplish its objectives under Goal 4, EPA reviews pesticides according to the latest health and safety standards and registers them for use. The Agency also screens and manages new and existing chemicals. The Agency leads a wide range of community, geographical, and international initiatives, from restoring and redeveloping contaminated properties and communities; to working collaboratively with local organizations, states, tribes, and other federal agencies to make America's most significant water bodies safe for swimming and fishing; to reducing risks to health and the environment for people living along U.S. border areas. EPA also conducts research to bring the best scientific expertise to bear on the nation's environmental challenges.

CHEMICALS AND PESTICIDES

EPA is committed to ensuring that chemicals and pesticides entering the home, the work environment, and agricultural or recreational settings are safe. Under its Pesticides Program, the Agency identifies and assesses potential risks posed by pesticides, sets priorities for addressing these risks, develops strategies for reducing them, and promotes innovative and alternative methods of pest control. Gradually,

Contributing Programs

- Brownfields
- Chesapeake Bay
- Commission for Environmental Cooperation
- OPPTS' Community Assistance Program
- Consumer Labeling Initiative
- Computational Toxicology Research Program
- Ecosystems Protection Research Program
- Environmental Monitoring for Public Access and Community Tracking (EMPACT)
- Endocrine Disruptors Research Program
- Energy Star Programs
- Envirofacts
- Environment and Trade
- Environment Information Exchange Network Grant Program
- Environmental Justice Initiative
- Fellowships
- Global Change Research
- Great Lakes
- Gulf of Mexico
- Homeland Security Research
- Human Health Research Program
- Human Health Risk Assessment Research Program
- International Capacity Building
- Lead Programs
- Mercury Research Program
- National Environmental Monitoring Initiative
- National Estuary Program
- National Library Network Program
- Pesticides and Toxics Research Program
- US-Mexico Border
- Wetlands

old pesticides are being replaced by newer pesticides that EPA has reviewed to ensure that they do not pose unreasonable risks.

EPA continues to develop and improve programs to review and address risks posed by new and existing chemicals. The Agency has targeted particular effort toward assessing potential risks of new substitutes for existing chemicals; as a result, new industrial chemicals are making consumer products and industry processes safer. EPA has screened approximately 80 percent of the 612 pesticide cases eligible for reregistration and more than 23 percent of the more than 82,378 commercial and/or industrial chemicals in the U.S. inventory.[1] The Agency reviews approximately 1,700 industrial chemicals each year.

One of EPA's key strategies for identifying and addressing risks posed by chemicals already in commerce is its High Production Volume (HPV) Challenge Program. Under this program, "sponsor" companies provide the public with critical health and environmental data for 2,800 HPV chemicals—chemicals manufactured in quantities of a million or more pounds per year and routinely encountered in workplaces, homes, and schools. More than 360 chemical companies and 100 industry consortia voluntarily provide EPA with data on 1,397 of these HPV chemicals, and the Agency expects to make these complete data available to the public by the end of 2005.[2]

In recent years, EPA has been collaborating with industry to move new, safe chemical products to the marketplace more quickly and efficiently. The Agency has made its advanced risk screening tools available and provided training to help companies assess chemical risks in the earliest stages of product design and development. As a result, manufacturers can screen out chemicals that would require regulated management or extended review by EPA. Similarly, the Agency has worked with the pesticide industry to establish a more efficient registration process and allow safer pesticide products to reach the market quickly.

Goal 4 At a Glance

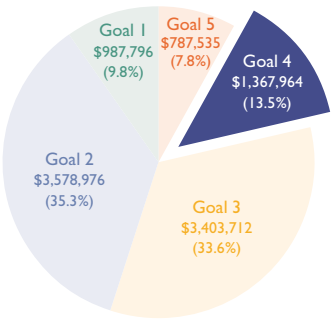
FY 2005 Annual Performance Goals (APGs)

Met = 13 Not Met = 7

Data Available After November 15, 2005 = 6

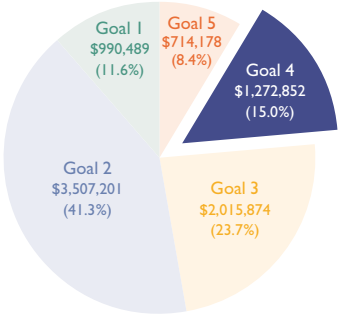
(Total APGs = 26)

FY 2005 Obligations (in thousands)



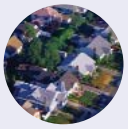
EPA Total = $10,125,983

FY 2005 Costs (in thousands)



EPA Total = $8,500,594

FY 2005 "Report Card"

Strategic Objective	APG Status
Objective 1–Chemical, Organism, and Pesticide Risks Prevent and reduce pesticide, chemical, and genetically engineered biological organism risks to humans, communities, and ecosystems.	2 Met 4 Not Met 4 TBD
 **Objective 2–Communities** Sustain, clean up, and restore communities and the ecological systems that support them.	1 Met 1 Not Met 1 TBD
Objective 3–Ecosystems Protect, sustain, and restore the health of natural habitats and ecosystems.	3 Met 2 Not Met 1 TBD
Objective 4–Enhance Science and Research Through 2008, provide a sound scientific foundation for EPA's goal of protecting, sustaining, and restoring the health of people, communities, and ecosystems by conducting leading-edge research and developing better understanding and characterization of environmental outcomes under Goal 4.	7 Met 0 Not Met 0 TBD

Great Lakes Legacy Act

With the signing of a project agreement in September 2004 and initiation of dredging in October, EPA began implementing the Great Lakes Legacy Act. The Act represents an important step in addressing some of the 75 million cubic yards of contaminated sediments within the 31 US geographic areas designated as Areas of Concern. These are severely degraded geographic areas within the Great Lakes Basin with impairments to one or more of 14 beneficial uses; for example, these areas may have restrictions on fish and wildlife consumption, dredging activities, or drinking water consumption. Under the Act, EPA and its partners are working to remove beneficial use impairments and delist Areas of Concern.

Through the first Great Lakes Legacy Act sediment remediation project, Black Lagoon (Detroit River, Michigan), EPA has remediated approximately 116,000 cubic yards of sediment contaminated with polychlorinated biphenyls (PCBs), mercury, oil, and grease.[5] In FY 2005, EPA signed agreements with the Wisconsin Department of Natural Resources for the remediation of Newton Creek/Hog Island Inlet in Superior, Wisconsin, and with the Michigan Department of Environmental Quality for assessment and remediation of Ruddiman Creek in Muskegon, Michigan.

Protecting children's health is another key focus of Goal 4. Certain hazardous pesticides have been virtually eliminated from residences, schools, and parks where children might be exposed. In 2005, the Centers for Disease Control released data demonstrating major reductions in the incidence of childhood lead poisoning—from approximately 900,000 children with elevated blood lead levels in the early 1990s to 310,000 children in its 1999–2002 survey.[3] To support the nation's goal of eliminating childhood lead poisoning by 2010, EPA is focusing its outreach and education efforts on remaining "hot spots," often disadvantaged urban areas where the incidence of childhood lead poisoning remains high. EPA is also reassessing pesticide tolerance levels established years ago, emphasizing foods most frequently consumed by children.

HURRICANE KATRINA RESPONSE

EPA co-leads the Gulf State Partnership, which has developed a five-state strategy to better address coastal hazards and coordinate federal and state monitoring and assessment in the aftermath of Hurricane Katrina. EPA is coordinating with the National Oceanographic and Atmospheric Administration, U.S. Food and Drug Administration, and the U.S. Geological Survey to develop an environmental impact assessment of Hurricane Katrina's effect on coastal waters of Louisiana, Mississippi, and Alabama. The Agency is supporting local, state, and national efforts to assess aquatic resources, identify stressors that harm or cause deterioration of these resources, document changes over time, restore ecological conditions, and protect human health.

COMMUNITY AND GEOGRAPHICAL INITIATIVES

EPA also collaborates with state, tribal, and local governments; community, industry, and other stakeholder groups; and other nations to address larger geographical issues. For example, the Agency is coordinating the federal effort to improve water quality for the more than 30 million people living in the Great Lakes basin.[4] EPA leads efforts to improve habitat and ecosystems in the Chesapeake Bay and Gulf of Mexico.

Wetlands are among the nation's most critical and productive natural resources, providing a variety of benefits and serving as the primary habitat for many species. The President has called for restoring, improving, and protecting 3 million acres of wetlands

over 5 years. EPA believes that the way to achieve "net gain" is through partnerships and by building state, tribal, and local governments' capacity to protect and manage their wetlands. Toward this end, EPA has awarded $15 million in Wetland Program Development Grants to support states and tribes in restoring, improving, and protecting wetlands. Wetlands data provided in the April 2005 Council on Environmental Quality report, Preserving America's Wetlands, Implementing the President's Goal, indicate that since April 2004, 832,000 acres of wetlands have been restored, created, improved, or protected.[6]

RESTORING COMMUNITIES

In addition to preventing potential new risks to the environment, EPA is working to protect and restore communities affected by past contamination. The Agency provides states, tribes, local governments, and stakeholders with the tools and financial assistance they need to assess, clean up, and redevelop brownfields properties. Brownfields are an economic issue across the country; reusing these properties increases local tax bases, facilitates job growth, uses existing infrastructure, takes development pressure off undeveloped land, and improves and protects the environment.

INTERNATIONAL AFFAIRS

EPA continues to make significant progress toward reducing risks to human health and the environment internationally by investing in efforts to reduce lead, reduce emissions, and provide safe clean water. For example, the Agency collaborated with Russia, Ukraine, and Kazakhstan to reduce and avoid emissions of approximately 260,000 tons of air pollutants, 7.9 millions metric tons of greenhouse gases, and 20 pounds of mercury from coal-fired power plants.[7]

As a result of EPA's leadership through the World Summit on Sustainable Development, all 49 sub-Saharan countries will have phased out leaded gasoline by the end of 2005, 2 years earlier than anticipated, affecting the health of 733 million people. In addition, EPA forged an agreement with the United Nations Environment Programme to address global mercury and announced a U.S government focus on five partnership areas: chloralkali facilities, mercury in products, coal combustions, artisanal gold mining, and research.

Along the US-Mexico border, residents have suffered disproportionately from Hepatitis A and other water-borne diseases due to inadequate potable water and sewage treatment infrastructure. EPA is reducing health risks to border residents by increasing the number of homes connected to safe drinking water systems and with access to basic sanitation. EPA grant funds, together with local, state, and Mexican government contributions, are providing and improving drinking water and wastewater infrastructure for more than 6 million residents of the US-Mexico border area.[8]

Long Island Sound

The Long Island Sound Program has reduced point source nitrogen load to Long Island Sound by approximately 6,000 pounds per day from 2003 levels, significantly improving water quality. As of December 2004, the program has reduced point source nitrogen loads to the Sound by 59,000 pounds per day, or 26.7 percent from baseline levels. This represents 47.3 percent of the total maximum daily load (TMDL) goal to reduce nitrogen pollution to the sound by 58.5 percent by 2014.

No More Pesticide Dumping

EPA helped Russia prevent the release of 1,500 metric tons of obsolete pesticides to the arctic environment. Work included inventorying stocks of obsolete pesticides, analyzing the stocks for heavy metals and chlorinated compounds, and moving them to safe storage. As a result of this EPA investment, Russian authorities now prohibit dumping of these toxic pesticides in trenches, and they are collaborating with the United States and other arctic nations to implement environmentally sound options for destroying the pesticides.

SCIENCE AND RESEARCH

To achieve healthy communities and ecosystems, EPA continues to make significant scientific and technological progress in monitoring ecological condition, homeland security, and nanotechnology.

Programs such as the Environmental Monitoring and Assessment Program develop indicators to monitor the condition of ecological resources, assess the success of programs and policies, and advance the science of ecological monitoring and risk assessment. In 2005, EPA released the first report of its kind describing the condition of streams in the western United States. This report establishes a baseline against which future ecological changes and trends in stream condition can be measured.

Federal, state, and local emergency personnel rely on EPA for tools that will assist in decision-making in the event of a terrorist attack. In 2005, EPA research scientists developed a Web-based system to identify hazards quickly, assess human exposure, and characterize risks during an emergency response. The Emergency Consequence Assessment Tool (ECAT) integrates hazard and exposure information for specific situations. ECAT is being expanded to cover a wider range of scenarios and contaminants, and it will eventually be used to provide information to the public and scientific community.

Through its own research and by participating in the National Nanotechnology Initiative, EPA has taken a leadership role in directing research on the environmental applications and implications of nanotechnology. The Agency is conducting 38 research grants to develop nanotechnology applications to protect the environment and 26 research projects to study the possible harmful effects of manufactured nanomaterials. EPA's Small Business Innovation Research Program has let contracts to more than 25 small companies for developing and commercializing clean technologies, some of which use nanomaterials.

Goal 4 Strategic Objectives

Strategic Objective 1—Chemical, Organism, and Pesticide Risks

Prevent and reduce pesticide, chemical, and genetically engineered biological organism risks to humans, communities, and ecosystems.

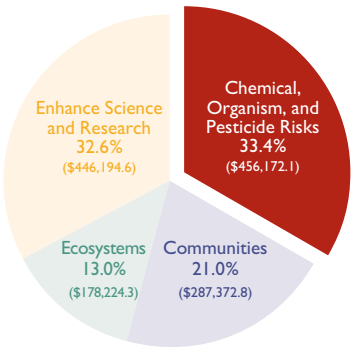
OVERVIEW OF PERFORMANCE

Although EPA did not meet all of its annual performance commitments for pesticide reregistration and tolerance reassessments, the Agency is confident that it will meet future year commitments for ensuring that appropriate tolerance levels are established and safer pesticides are introduced. Much of the Agency's effort to finish hundreds (772) of tolerance reassessment has been completed. The only task remaining is the cumulative risk assessment for these tolerances. The Agency must also finalize 23 Interim Registration Eligibility Decisions, which EPA expects to complete early in FY 2006.

EPA is on target for preventing or reducing chemical and genetically engineered biological organism risks to humans, communities, and ecosystems through mix of targeted regulatory and voluntary programs. EPA did not meet its FY 2005 goal for standardizing and validating screening assays, but believes that it will meet the future target.

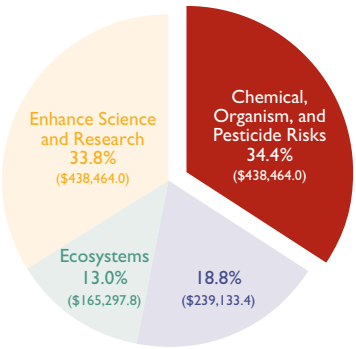
STRATEGIC OBJECTIVE 1—CHEMICAL, ORGANISM, AND PESTICIDE RISKS		
APG #	APG Title	APG Status
4.1	Reassess Pesticide Tolerances	✗ Not met in FY 2005
4.2	Decrease Risk from Agricultural Pesticides	FY 2005 data available in FY 2006
		✔ Met FY 2004 goals in FY 2005
4.3	Exposure to Industrial/Commercial Chemicals	FY 2005 data available in FY 2007
		✔ Met FY 2000 goals in FY 2005
		✗ Not met FY 1999 goals in FY 2005
4.4	Process and Disseminate Toxics Release Inventory (TRI) Information	✔ Met in FY 2005
4.5	Risks from Industrial/Commercial Chemicals	FY 2005 data available in 2007
4.6	Chemical, Organism, and Pesticide Risks	✗ Not met in FY 2005
4.7	Chemical, Organism, and Pesticide Risks (NEW IN FY05)	FY 2005 data available late in FY 2006
4.8	Chemical, Organism, and Pesticide Risks	✔ Met in FY 2005
		✔ Met FY 2004 goals in FY 2005
4.9	Chemical, Organism, and Pesticide Risks	✗ Not met in FY 2005
4.10	Chemical, Organism, and Pesticide Risks (NEW IN FY05)	✗ Not met in FY 2005

FY 2005 Obligations:
Goal 4, Strategic Objective 1
(in thousands)



Goal 4 Total = $1,367,963.8

FY 2005 Costs:
Goal 4, Strategic Objective 1
(in thousands)



Goal 4 Total = $1,272,852.0

The Agency has made considerable progress in preventing or reducing chemical risks. EPA has now screened more than 23 percent of the 82,000 commercial and/or industrial chemicals in the U.S. inventory, and it reviews an average of 1,700 new chemicals each year.[9] EPA exceeded 2005 targets for closing the gap in providing the public with risk screening data for more than 2,200 of the chemicals that have been in the marketplace prior to 1978.[10] EPA also made progress in assessing risks of perfluoroctanoic acid, completing a draft risk assessment, negotiation enforceable consent orders, and memoranda of understanding with industry. With respect to children, the incidence of childhood lead poisoning decreased from approximately 900,000 cases in the early 1990s to 310,000 cases in the 1999–2002 Centers for Disease Control survey.[11]

Communities need information on toxic chemical releases to make informed decisions about protecting their environment. In March 2005, the Agency released the Toxics Release Inventory (TRI) annual Public Data Release (PDR) report containing information on toxic chemical releases and other waste management activities by certain industries, as well as by federal facilities. EPA is continuing to focus resources on modernizing TRI data collection, processing, and dissemination processes with the goal of releasing more reliable information sooner to all communities.

CHALLENGES

Emerging issues, such as using human study data, registering new biopesticides, managing resistance, and protecting endangered species may affect pesticides program priorities.

While the updated Centers for Disease data that show continued declines in the incidence of childhood lead poisoning are encouraging, the data also reveal that the reduction trend is tapering off, jeopardizing achievement of the national goal to virtually eliminate this disease by 2010. Accordingly, EPA is revamping strategies and using a variety of regulatory and voluntary tools to address the remaining population of at-risk children.

Nanotechnology poses unique challenges for assessing the risk of materials manufactured at the nano scale. EPA has been coordinating with other federal agencies and is considering developing a voluntary notification pilot program for nano-scale materials under TSCA.

Strategic Objective 2—Communities

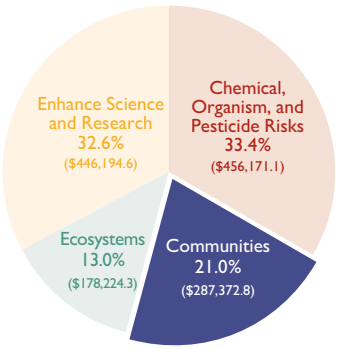
Sustain, clean up, and restore communities and the ecological systems that support them.

STRATEGIC OBJECTIVE 2—COMMUNITIES		
APG #	APG Title	APG Status
4.11	Assess and Cleanup Brownfields	FY 2005 data available in FY 2006
		✔ Met FY 2004 goals in FY 2005
4.12	US-Mexico Border Water/Wastewater Infrastructure	✗ Not met in FY 2005
4.13	Sustain Community Health (NEW IN FY05)	✔ Met in FY 2005

OVERVIEW OF PERFORMANCE

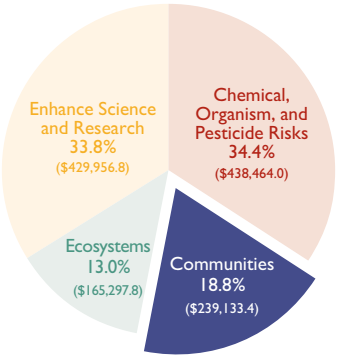
In addition to preventing potential new risks to the environment, EPA is working to protect and restore communities affected by past contamination. The Agency provides states, tribes, local governments, and stakeholders with the tools and financial assistance to assess, clean up, and redevelop brownfields properties. In 2005, EPA announced $76.7 million in brownfields grant funding to recipients in 45 states. The grants included 176 Assessment Grants, 13 Revolving Loan Fund Grants, 11 Job Training Grants, and 106 Cleanup Grants. In 2005, EPA also distributed $49.7 million to 49 states, two territories, and 49

FY 2005 Obligations:
Goal 4, Strategic Objective 2
(in thousands)



Goal 4 Total = $1,367,963.8

FY 2005 Costs:
Goal 4, Strategic Objective 2
(in thousands)



Goal 4 Total = $1,272,852.0

tribes to enhance their response capabilities. From 1995 through FY 2004, EPA grantees assessed 5,021 brownfields properties, leveraging $6.7 billion in cleanup and redevelopment funding and 31,337 jobs. Additionally, EPA has conducted 1,369 targeted brownfields assessments.

EPA, states, and partners from both sides of the US-Mexico border are making significant progress in providing safe drinking water and sanitation services to border residents. To ensure that the most critical public health and environmental problems are addressed first, EPA delayed new project funding in FY 2005 while it developed a process for establishing project priorities. As a result, progress towards achieving the FY 2005 goal was delayed. Work on high-priority projects resumed after the prioritization process was implemented in summer 2005. US-Mexico Border Program achievements will be reflected under a new measure being developed in FY 2006.

In FY 2005, EPA assisted three Free Trade Area of the Americas countries—Colombia, Ecuador, and Peru—in conducting environmental reviews of trade liberalization. EPA supported a workshop in El Salvador to allow representatives from Central American countries to share experiences and lessons learned in conducting environmental reviews of trade agreements. The Agency also made a presentation on the benefits of environmental reviews at a May 2005 Organization of American States workshop on the effects of trade on sustainability.

CHALLENGES

Fluctuations in real estate marketplaces, general economic conditions, and local issues significantly affect the Brownfield Program's ability to demonstrate its effectiveness, particularly with regard to leveraged jobs and investments measures. EPA is evaluating the feasibility of using additional environmental measures to demonstrate program effectiveness.

Patagonia's New Wastewater Treatment Plant

In October 2004, the town of Patagonia, Arizona, on the US-Mexico border completed a new wastewater treatment plant, which is now serving a community of 900 residents. EPA grants of $1.3 million leveraged an additional $1.2 million in other state and federal funds for the project. The 110,000-gallon wastewater treatment plant and improved collection lines will help prevent discharge of raw sewage to ground and surface waters on the border.

USEPA: the Border Environment Infrastructure Fund Deal Sheet—"Wastewater Treatment Facility Replacement and Sewer Collection System Improvements Project" Patagonia, Arizona (February 13, 2003)

Strategic Objective 3—Ecosystems

Protect, sustain, and restore the health of natural habitats and ecosystems.

OVERVIEW OF PERFORMANCE

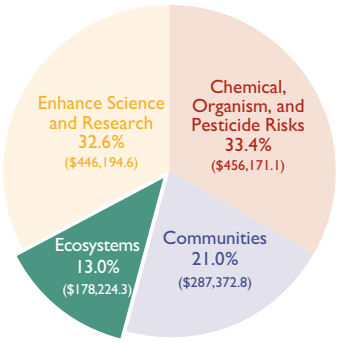
EPA's ecosystem protection programs encompass a wide range of approaches, targeting specific geographic areas as well as broad categories of threatened ecosystems, such as estuaries and wetlands. Pollution, generated locally or transported by rivers and streams and through air deposition, collects in these closed and semi-closed ecosystems and degrades them over time.

Community interest and involvement, as well as EPA's and its partners' increased capability for collecting and reporting data depicting protection and restoration achievements, enabled EPA to make significant progress towards restoring and protecting habitats in estuaries. Since 2001, more than 400,000 acres have been protected or restored; of these, 103,959 acres of estuarine habitat within the 28 estuaries of the National Estuary Program (NEP) were protected and/or restored in FY 2005.[12]

In partnership with the U.S. Army Corps of Engineers and states, EPA is working to increase wetlands acreage and maintain and restore its biological and functional integrity. Wetlands data from 1987 to the 1990s will be available at the end of 2005 to indicate whether there has been a net gain in wetlands. EPA's regulatory programs help to ensure that there is no overall net loss in wetlands, and a regulatory program report on gains and losses of wetland acreage will be available at the end of 2007.

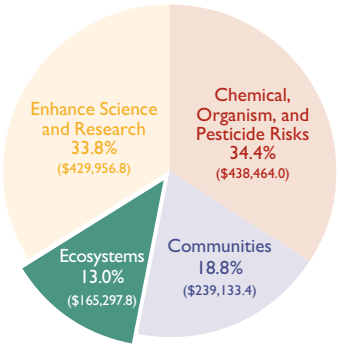
STRATEGIC OBJECTIVE 3—ECOSYSTEMS		
APG #	APG Title	APG Status
4.14	Protecting and Enhancing Estuaries	✔ Met in FY 2005
4.15	Increase Wetlands (NEW IN FY05)	FY 2005 data available in FY 2008
4.16	Great Lakes: Ecosystem Assessment	✔ Met in FY 2005
		✗ Not met for FY 2004
		✗ Not met for FY 2003
4.17	Chesapeake Bay Habitat	✗ Not met in FY 2005
4.18	Chesapeake Bay Habitat (NEW IN FY05)	✗ Not met in FY 2005
4.19	Gulf of Mexico	✔ Met in FY 2005

FY 2005 Obligations:
Goal 4, Strategic Objective 3
(in thousands)



Goal 4 Total = $1,367,963.8

FY 2005 Costs:
Goal 4, Strategic Objective 3
(in thousands)



Goal 4 Total = $1,272,852.0

EPA continues to make progress in improving and protecting the health of ecosystems in the Great Lakes. Based on the most current data, the Great Lakes Index, indicating overall ecosystem condition in the Great Lakes, improved in FY 2005.[13] Long-term concentrations of PCBs in predator fish and trends of toxic chemicals in the air are meeting targeted goals, although cleanup efforts are still necessary to address PCB concentrations which substantially exceed human health and wildlife protection values. Cumulatively, 3.7 million cubic yards of contaminated sediments have been remediated, including 345,000 cubic yards in 2004.[14] Phosphorus concentrations in the Lake Erie Basin are still too high to avoid algal blooms and the related "dead zone".[15] Although EPA has not met the target of delisting three Areas of Concerns (AOC), significant progress has been made towards delisting of two AOCs.[16]

EPA has not met its goals for the Chesapeake Bay. Although the Chesapeake Bay Program is making progress towards protecting acres of submerged aquatic

vegetation, current pollutant loads continue to exceed the level needed to meet water quality standards adopted by states. The FY 2005 nutrient (phosphorus and nitrogen) and sediment pollution load reduction goals were not met; current pollutant loads exceed levels needed to meet WQS in many areas.[17]

In the Gulf of Mexico, the size of the hypoxic zone was reduced in FY 2005.[18] EPA will evaluate the impact of Hurricane Katrina on the size of the hypoxic zone in FY 2006 as part of the more comprehensive impact assessment on public health and water quality.

CHALLENGES

Future restoration and protection of estuaries present challenges as EPA faces more difficult projects, requiring longer lead time, as well as remaining smaller study areas. The United States also faces daunting challenges in conserving coastal wetlands. Recognizing that collaboration is critical, EPA continues to work with partners on new strategies for protecting and restoring these areas.

Although EPA is making progress, challenges remain for the Great Lakes, Chesapeake Bay, and the Gulf of Mexico programs. Growing human and animal populations in the Chesapeake Bay area continue to challenge efforts to reduce pollutant loads. Damage from Hurricane Katrina will affect improvements made in the health of the Gulf of Mexico. Most immediately, states and EPA must assess the impact of the hurricane and plan for recovery.

National Estuary Program Success

In 2005, the six National Estuary Programs (NEPs) in EPA's Region 4, working with their federal, state, and local partners, restored and/or protected approximately 80,000 acres of habitat, including critical estuarine, riparian, and coastal wetlands. The NEPs used Clean Water Act Section 320 and matching dollars to leverage additional funding for this effort. These restored and protected natural habitats and ecosystems will contribute to improving the quality of coastal waters in the region.

Strategic Objective 4—Enhance Science and Research

Through 2008, provide a sound scientific foundation for EPA's goal of protecting, sustaining, and restoring the health of people, communities, and ecosystems by conducting leading-edge research and developing better understanding and characterization of environmental outcomes under Goal 4.

OVERVIEW OF PERFORMANCE

The Agency is making considerable progress toward its 2008 objective of providing a sound scientific foundation to support its work under Goal 4.

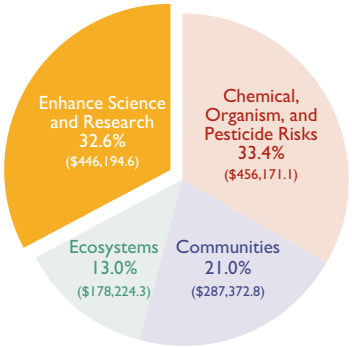
STRATEGIC OBJECTIVE 4—ENHANCE SCIENCE AND RESEARCH		
APG #	APG Title	APG Status
4.20	Conduct Relevant Research to Support the Food Quality Protection Act (NEW IN FY05)	✔ Met in FY 2005
4.21	Conduct Relevant Research: Mercury (NEW IN FY05)	✔ Met in FY 2005
4.22	Conduct Relevant Research: Exposures and Environmental Effects (NEW IN FY05)	✔ Met in FY 2005
4.23	Conduct Relevant Research: Riparian Zone Restoration (NEW IN FY05)	✔ Met in FY 2005
4.24	Risk Assessment Research	✔ Met in FY 2005
4.25	Conduct Relevant Research: Homeland Security (NEW IN FY05)	✔ Met in FY 2005
4.26	Conduct Relevant Research: Regional Scale Ecosystem Assessment Methods (NEW IN FY05)	✔ Met in FY 2005

In 2005, EPA provided methods and models to enable risk assessors and risk managers to measure and evaluate exposure to, and effects of, environmental stressors in children. The objective of this research is to reduce children's exposure to harmful agents and reduce the cost of treating environment-related diseases.

EPA demonstrated its commitment to restoring the health of ecosystems by providing clear and concise information on the utility and effectiveness of vegetative riparian buffers to reduce nitrogen loadings to streams. Decision-makers will use this information to design vegetative buffers that will most effectively reduce nitrogen impacts on streams.

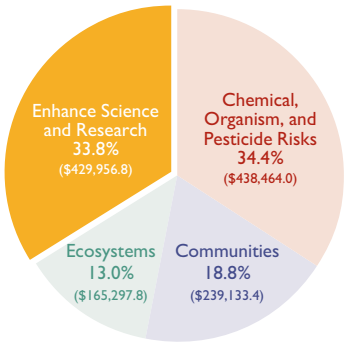
On March 15, 2005, EPA issued the Clean Air Mercury Rule (CAMR) to permanently cap and reduce mercury emissions from coal-fired power plants for the first time. This rule, combined with EPA's Clean Air Interstate Rule, will significantly reduce emissions from the nation's largest remaining source of human-caused mercury emissions. The mercury research program supported CAMR by producing essential scientific information about the status and costs of mercury control technologies for coal-fired utility boilers. This work contributed to a larger effort that considered emissions, control technologies, health effects, and the impacts on our electrical system and economic competitiveness.

FY 2005 Obligations:
Goal 4, Strategic Objective 4
(in thousands)



Goal 4 Total = $1,367,963.8

FY 2005 Costs:
Goal 4, Strategic Objective 4
(in thousands)



Goal 4 Total = $1,272,852.0

CHALLENGES

EPA is working to identify meaningful outcome and efficiency measures for its research programs.

Nanotechnology has the potential to improve the assessment, management, and prevention of environmental risks. As products made from nanoparticles become more numerous and nanoparticles become more prevalent in the environment, EPA is considering how nanotechnology will affect its environmental programs, policies, research needs, and approaches to decisionmaking.

Goal 4 Annual Performance Goals

Strategic Objective 1—Chemical, Organism, and Pesticide Risks

Prevent and reduce pesticide, chemical, and genetically engineered biological organism risks to humans, communities, and ecosystems.

APG 4.1 Reassess Pesticide Tolerances

PERFORMANCE

To ensure that food remains safe, EPA reviews and reassesses tolerance levels. In cases where tolerance levels do not meet current safety standards, the Agency pursues approaches to achieve safe pesticide levels as required by the Food Quality Protection Act (FQPA). In much the same way, EPA's reregistration program assures that currently registered pesticide products are used in ways that protect people, communities, and ecosystems. These reviews are conducted through a public process that promotes transparency and builds partnerships with stakeholders inside and outside the federal government.

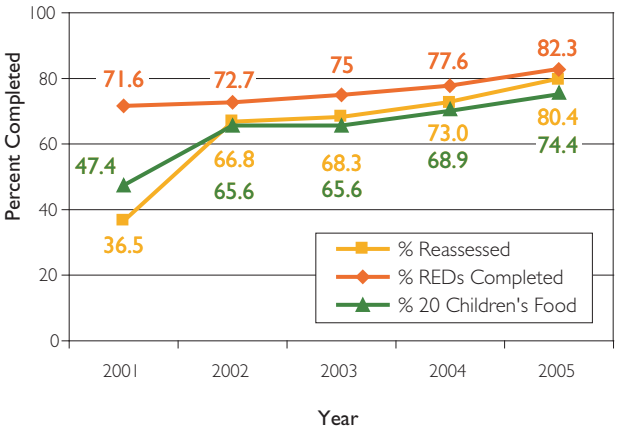
✗ GOAL NOT MET

FY 2005: Ensure that through on-going data reviews, pesticide active ingredients and the products that contain them are reviewed to assure adequate protection for human health and the environment, taking into consideration exposure scenarios such as subsistence lifestyles of Native Americans.

Performance Measures	*Planned*	*Actual*	
• Tolerance Reassessment.	87.7%	80.4%	✗
• Reregistration Eligibility Decision (REDs).	88.2%	82.3%	✗
• Product Reregistration.	400	501	✔
• Tolerance reassessments for top 20 foods eaten by children.	93%	74.4%	✗
• Number of inert ingredients tolerances reassessed.	100	168	✔
• Reduce decision time for REDs.	7%	75%	✔

Data Source(s): The Office of Pesticide Programs Information Network (OPPIN), and EPA's pesticides program staff and managers. Also see www.epa.gov/pesticides.

Performance Measure: % Tolerance Reassessment and Tolerance Reassessments for Top 20 Foods Eaten by Children Completed (Cumulative) and % Registration Eligibility Decisions Completed (Cumulative)



Goal Not Met. Although EPA did not meet all of its annual performance commitments for pesticides reregistration and tolerance reassessments, it remains on target for achieving its long-term goal. During FY 2005, the Agency completed reassessing 80 percent of the 9,721 tolerances that FQPA requires be reassessed, including tolerances on foods most commonly eaten by children.[19] In addition to those fully reassessed in FY 2005, the Agency evaluated approximately 782 additional tolerances; these are not counted as reassessed because cumulative risk assessment has not yet been accomplished. These evaluations, combined with the 2005 completions, place the Agency over its FY 2005 target.

EPA expects to complete the cumulative risk assessment early in 2006; therefore, the Agency feels confident that it is on target to meet the statutory deadline of reassessing all of the 9,721 tolerances by August 2006. The deadline for completing REDs is

Program Assessment Rating Tool (PART)

OMB reassessed the Pesticide Registration program most recently in the 2003 PART process and the Pesticide Reregistration program most recently in the 2004 PART process. Both programs received adequate ratings.

Grants Supporting the Achievement of This APG

Pesticides programs are supported by the Categorical Grant: Pesticide Implementation Program. Responsibility for regulating pesticide use is in large part delegated to states and tribes. These grant resources assist states and tribes in pesticide certification and training/worker protection programs, endangered species activities, and environmental stewardship.

also on target for 2008; in FY 2005 the Agency completed more than 82 percent and an additional 23 Interim REDs, nearly 86 percent of the 612 required. EPA greatly exceeded its FY 2005 target for RED decision time, reducing the time for decisions from a baseline of 40 months to 10 months in FY 2005. Times vary according to the chemicals being evaluated. The program is currently reviewing data to isolate anomalies that resulted in this dramatic reduction of time. Of importance is that this is an anomaly, and does not represent a future commitment to either maintain or further reduce the time involved.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-41.

CHALLENGES

Completing cumulative risk continued to be a challenge during FY 2005, delaying issuance of final reregistration eligibility decisions (REDs). However, the Agency anticipates meeting its mandatory deadlines for this program.

APG 4.2 Decrease Risk from Agricultural Pesticides

PERFORMANCE

Through its registration program EPA makes reduced risk pesticides available for use as alternatives to riskier existing pesticides. Reregistration ensures that older pesticides which remain in the marketplace continue to be safe and meet the latest safety standards. As necessary, the Agency's regulatory programs continued to impose mitigation conditions during registration and reregistration to provide for proper/safe use of pesticides and further reduce risk. Continued outreach, education, and training for the general public and agricultural community ensure that pesticides will be appropriately and safely used, reducing pesticide exposure and risk.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-44.

DATA AVAILABLE FY 2006

FY 2005: Percentage of acre treatments that will use applications of reduced-risk pesticides.

Performance Measures (all are MMTCE)	*Planned*	*Actual*
• Percentage of acre-treatments with reduced risk pesticides	8.7%	Data avail FY 2006

✔ GOAL MET FOR FY 2004

FY 2004: Decrease adverse risk from agricultural uses from 1995 levels.

Performance Measures	*Planned*	*Actual*	
• Register safer chemicals and biopesticides (cumulative).*	131	143	✔
• New Chemicals (cumulative).*	74	79	✔
• New Uses (cumulative).*	3,079	3,142	✔
• Percentage of acre-treatments with reduced risk pesticides.	8.5%	13%	✔
• Occurrences of residues on a core set of 19 foods eaten by children relative to occurrence levels for those foods reported in 1994-1996.**	25%	34%	✔

Data Source(s): Primary source is Doane Marketing Research, Inc. (a private sector research database). The database contains pesticide usage information by pesticide, year, crop use, acreage and sector. Also see www.epa.gov/pesticides and www.epa.gov/epahome/pestoxpgram.htm.

* These performance measures are reported in FY 2005 under APGs 4.10.
** This performance measure is reported in FY 2005 under APG 4.7.

Program Assessment Rating Tool (PART)

OMB reassessed the Pesticide Registration program most recently in the 2003 PART process and the Pesticide Reregistration program most recently in the 2004 PART process. Both programs received adequate ratings.

Grants Supporting the Achievement of This APG

Pesticides programs are supported by the Categorical Grant: Pesticide Implementation Program. Responsibility for regulating pesticide use is in large part delegated to states and tribes. These grant resources assist states and tribes in pesticide certification and training/worker protection programs, endangered species activities, and environmental stewardship.

APG 4.3 Exposure to Industrial/Commercial Chemicals

PERFORMANCE

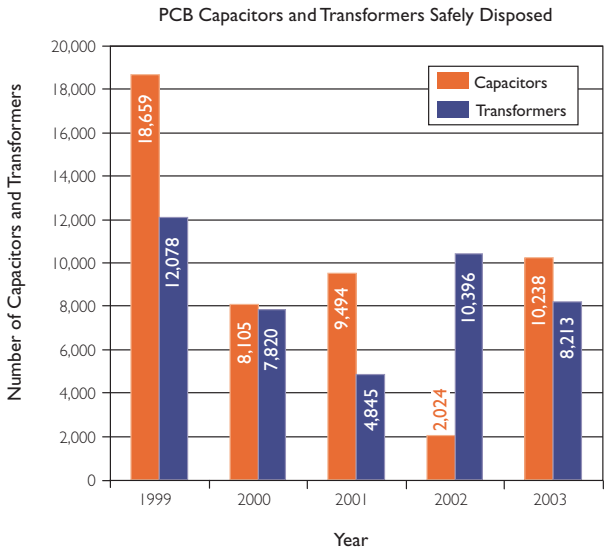
These quantitative performance measures for APG 4.3 track EPA's progress in managing risks associated with the high profile chemicals Polychlorinated Biphenyls (PCBs) and lead. EPA's historic annual performance targets for PCB disposal were established using uncertain and outdated information. EPA expects to meet its targets for FY 2004, FY 2005 and FY 2006, which are based on concerted efforts to improve baseline data through campaigns to persuade companies to retire PCB-containing equipment ahead of schedule.

In FY 2005 EPA initiated a new effort to reach vulnerable populations of children most at-risk of exposure to lead-based paint. The Agency also developed new long-term goals for eliminating demographic disparities in blood levels, in addition to eliminating childhood lead poisoning. EPA also began work to develop rules establishing lead-safe work practice standards for renovation and remodeling projects.

The most recent NHANES data estimated 310,000 children with elevated blood lead levels in

DATA AVAILABLE FY 2007 AND FY 2008	**FY 2005:** Reduce exposure to and health effects from priority industrial/commercial chemicals.	
Performance Measures (all are MMTCE)	*Planned*	*Actual*
• Annual number of transformers safely disposed.	5,000	Data avail 09/2007
• Annual number of large capacitors safely disposed.	9,000	
• Number of children aged 1-5 years with elevated blood levels (>10 ug/dl).	9,000	Data avail 06/2008

DATA AVAILABLE FY 2007	**FY 2004:** Reduce exposure to and health effects from priority industrial/commercial chemicals.	
Performance Measures	*Planned*	*Actual*
• Number of individuals certified nationally through federal administered programs to perform lead-based paint abatements.	18,000	24,000 ✔
• Number of participants in Hospitals for a Healthy Environment (cumulative).	2,000	2,930 ✔
• Children aged 1-5 years with elevated blood lead levels (>10ug/dl).	261,000	Data avail FY 2007
• Safe disposal of transformers.	8,000	
• Safe disposal of capacitors.	6,000	



Program Assessment Rating Tool (PART)

OMB is assessing the Lead program related to this APG in the 2005 PART process. Results will be included in the FY 2007 President's Budget.

Grants Supporting the Achievement of This APG

This program is supported by the Categorical Grant: Lead. These resources assist states and tribes in developing and maintaining authorized programs for training individuals engaged in lead-based paint remediation, accrediting training programs for those individuals, and certifying contractors engaged in lead-based paint remediation.

✔ GOAL MET FOR FY 2000	**FY 2000:** Administer federal programs and oversee state implementation of programs for lead-based paint abatement certification and training in 50 states, to reduce exposure year is to lead-based paint and ensure significant decreases in children's blood levels by 2005.		
(Performance measure is included in the annual goal above.)		*Planned* 50	*Actual* 50 ✔
✗ GOAL NOT MET FOR FY 1999	**FY 1999:** Complete the building of a lead-based paint abatement certification and training in 50 target states, to ensure significant decreases in children's blood lead levels by 2005 through year is reduced exposure to lead-based paint.		
(Performance measure is included in the annual goal above.)		*Planned* 35	*Actual* 30 ✗

Data Source(s): Annual Reports from commercial storers and disposers of PCB Waste, and the Centers for Disease Control and Prevention's (CDC) National Health and Nutrition Examination Survey (NHANES).[20] Also see Lead Program: www.epa.gov/oppt/lead/index.html and PCB Capacitors and Transformers: www.epa.gov/oppt/pcb/.

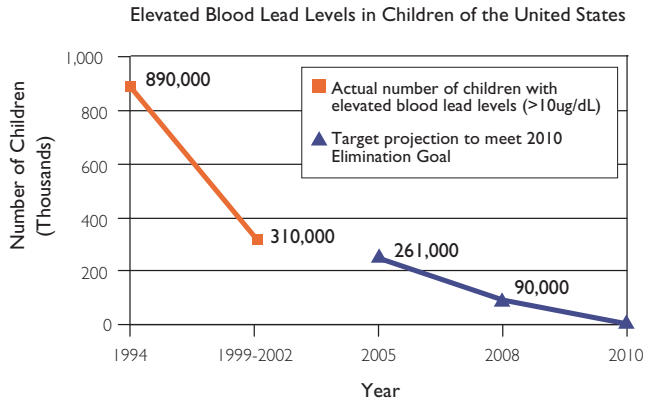
1999-2002, a steep reduction of the more than 900,000 cases estimated in the early 1990's[3]. This information demonstrates significant progress in meeting EPA's 2008 goal of reducing elevated blood lead level incidences to 90,000 cases and the national goal to virtually eliminate childhood lead poisoning by 2010.

The 1999 APG was missed; however, it counted only state lead-based paint abatement certification and training programs. This does not mean that there was a lack of protection because EPA implements the program in the absence of a state program. The 2000 measure captures both state and federal programs, demonstrating that there is either a federal or state program in place in all 50 States.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, pages C-42–C-43.

CHALLENGES

Recently released NHANES data reveal that the rate of reducing childhood blood lead poisoning is slowing, and that there is a higher than average incidence of elevated blood lead levels among low-income children[3]. To counter this trend, EPA has employed targeted outreach and educational strategies to reach these vulnerable communities.



APG 4.4 Process and Disseminate Toxics Release Inventory (TRI) Information

PERFORMANCE

EPA believes that electronic reporting is easier and less time consuming for facilities required to submit these reports and should improve their compliance. Additionally, electronic reporting improves the quality and timeliness of the data in TRI. TRI-ME provides reporting facilities with electronic forms that help detect some types of errors and eliminate the need for EPA to enter the data from paper submissions.

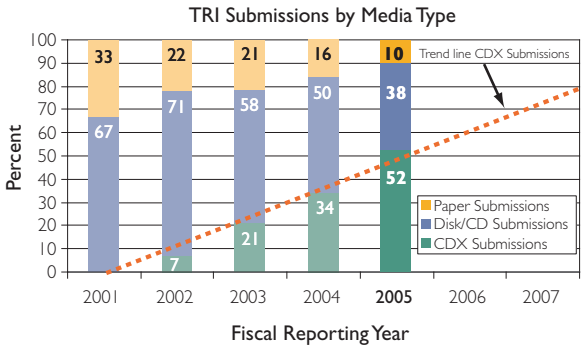
In FY 2004, 38 percent of all reports on chemical releases and other waste management data were submitted to EPA via the internet and EPA's Central Data Exchange (CDX), a 73 percent increase over FY 2003. EPA is aggressively trying to increase CDX submissions through such efforts as targeted training and outreach to the reporting community. EPA set a goal of increasing the percentage of electronic submissions by 10 percent per year, beginning in FY 2005. The Agency met that goal in FY 2005: 42.9 percent were submitted electronically, a 12.9 percent increase over FY 2004. To achieve the FY 2006 goal, more than 47 percent of the reports must be submitted electronically.

✔ GOAL MET

FY 2005: The increased use of the TRI-Made Easy (TRI-ME) will result in a total burden reduction of 5% for FY 2005 from FY 2004 levels.

Performance Measures	*Planned*	*Actual*
• Percentage increase of TRI chemical forms submitted over the Internet using TRI-ME and the CDX.	10%	12.9% ✔

Data Source(s): TRI Data Center Operations Statistical Reports. Also see www.epa.gov/triinter/index.htm.



Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-49.

APG 4.5 Risks from Industrial/Commercial Chemicals

PERFORMANCE

Under this goal, EPA tracks its progress in identifying risks presented by new and existing chemicals and addressing them quickly and effectively. Annual targets for the RSEI measure are based on the Agency's long-term strategic target of reducing relative risks to chronic human health associated with environmental releases of industrial chemicals in commerce by 21 percent from 2001 levels, equating to a 3 percent annual reduction over a 7 year period. The FY 2002 results showed that the Agency exceeded its target of a 2 percent reduction in the RSEI risk value from the 2001baseline, achieving a 5.7 percent actual reduction.

DATA AVAILABLE FY 2007

FY 2005: Identify, restrict, and reduce risks associated with industrial/commercial chemicals.

Performance Measures	*Planned*	*Actual*
• Reduction in the current year production-adjusted risk screening environmental indicators (RSEI) risk-based score of releases and transfers of toxic chemicals.*	2% annual	Data avail 2007
• Percentage of chemicals identified as highest priority by the Acute Exposure Guidelines Levels (AEGLs) Program with short-term exposure limits established.*	52%	70% ✔

AEGLs are short-term exposure limits applicable to a wide range of extremely hazardous substances. First responders use AEGL values

in dealing with chemical emergencies, increasing EPA's ability to deal with threats of chemical terrorism and assist with homeland security. EPA exceeded its FY 2005 goal for developing Proposed AEGL values for additional chemicals, in part because the program was able to address several chemicals as a category. Category opportunities can not be predicted in advance.

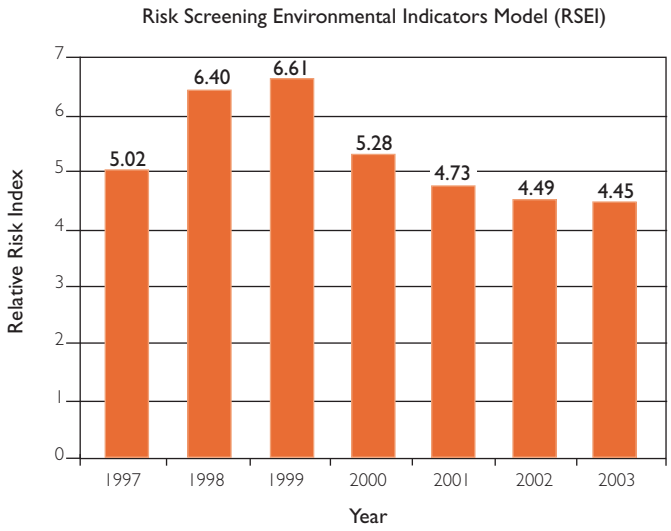
Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, pages C-45–C-46.

Program Assessment Rating Tool (PART)

OMB assessed the Existing Chemicals program related to this APG in the 2002 PART process. The program received an adequate rating.

DATA AVAILABLE FY 2006	**FY 2004:** Same Goal.	
Performance Measures	*Planned*	*Actual*
• Reduction in the current year production-adjusted risk screening environmental indicators (RSEI) risk-based score of releases and transfers of toxic chemicals.*	2%	Data avail 2006

Data Source(s): The Risk Screening Environmental Indicators (RSEI) Model, and Federal Advisory Committee Act (FACA) committee that reviews short term exposure values for extremely hazardous chemicals. Also see www.epa.gov/opptintr/rsei/whats_rsei.html.
*These are interim measures to be finalized in the PART Assessment process.



This measure tracks EPA's progress in reducing existing chemical risks under TSCA and is based on the RSEI model, which calculates a risk index based on releases of TRI chemicals.

APG 4.6 Chemical, Organism, and Pesticide Risks

PERFORMANCE

The endocrine disruptors screening program (EDSP) is required to test all pesticides and determine if they may have an endocrine disrupting effect in humans. EDSP will accomplish this goal by developing appropriate testing techniques, establishing the approach for selecting chemicals for testing, and developing procedures on how the Agency will require testing.

✗ GOAL NOT MET	**FY 2005:** Standardization and validation of screening assays.	
Performance Measures	*Planned*	*Actual*
• Screening assays completed.	11	Not measured in FY 2005 ✗

Data Source(s): Data are generated to support all stages of validation of endocrine test methods through contracts, grants and interagency agreements, and the cooperative support of the Organization of Economic Cooperation and Development (OECD), and EPA's Office of Research and Development (ORD). The scope of the effort includes the conduct of laboratory studies and associated analyses to validate the assays proposed for the Endocrine Disruptor Screening Program (EDSP). Also see www.epa.gov/scipoly/oscpendo/.

Goal Not Met. This APG was not achieved in FY 2005 due to the numerous steps required to complete an assay screening. The Agency's goal of completing assay screenings within 1 year's time was too ambitious, and intends to complete all 11 assay screenings by the end of FY 2006. Nonetheless, in FY 2005 the Agency can point to incremental progress in each of the 11 cases. The Agency uses five internal performance measures to track progress toward overall programmatic goals. To highlight a few, EPA completed 15 detailed review papers, 42 prevalidation studies, and 42 validations by multiple laboratories in FY 2005. These are necessary steps prior to peer-review and completion of assays ready for use.

Program Assessment Rating Tool (PART)

OMB assessed the Endocrine Disruptors program, which is comprised of components from the Office of Prevention, Pesticides and Toxic Substances and the Office of Research and Development in the 2004 PART process. The program received an adequate rating.

Grants Supporting the Achievement of This APG

Results achieved in FY 2005 are due in part to the following Interagency Agreements and Grants with the following entities: U.S. Army Center of Environmental Research (IAG), Smithsonian (IAG); National Research Council (Cooperative Agreement), National Older Workers Career Center (Grant), National Caucus and Center on Black Aged, Inc. (Grant), and Senior Service America, Inc. (Grant).

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-43.

CHALLENGES

Each phase of assay development may uncover new issues to be resolved before an assay is ready for use. For example, EPA may plan on 4 studies to address prevalidation issues. An additional study will be required if it's determined that an ambiguity exists. The need for additional study will then require additional time before the assay is complete and ready for use.

APG 4.7 Chemical, Organism, and Pesticide Risks

PERFORMANCE

Children's health will be protected from pesticide risk through the reduction of pesticide residues in the foods eaten by children.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-47.

CHALLENGES

PDP does not survey the same foods every year, nor do they analyze the same pesticides every year.

DATA AVAILABLE FY 2006	**FY 2005:** Decrease occurrence of residues of carcinogenic and cholinesterase-inhibiting neurotic pesticides on foods eaten by children from their average 1994-1996 levels. (NEW IN FY05)	
Performance Measures	*Planned*	*Actual*
• Reduce occurrence of residues on a core set of 19 foods eaten by children relative to detection levels for those foods reported in 1994–1996.	27%	Data avail 2006

Data Source(s): The United States Department of Agriculture (USDA) Pesticide Data Program (PDP). Also see www.ams.usda.gov/science/pdp/.

Program Assessment Rating Tool (PART)

OMB reassessed the Pesticide Reregistration program related to this APG most recently in the 2004 PART process. The program received an adequate rating.

Grants Supporting the Achievement of This APG

This program is supported through an interagency agreement with USDA which funds state grants.

APG 4.8 Chemical, Organism, and Pesticide Risks

PERFORMANCE

This goal tracks EPA's efforts to prevent the release of chemicals from hazardous facilities. Monitoring of high risk chemical facility through risk management plan (RMP) audits is an important step to ensuring these facilities have the best prevention technologies and procedures in place to prevent a chemical accident. Conducting RMP audits allow EPA to determine the completeness and accuracy of the RMP, understand the various processes used in chemical facilities, review the policies, procedures, and processes in place to prevent chemical accidents, and learn from accidents and follow-up actions at RMP facilities. These audits also help EPA disseminate accident prevention techniques and technologies currently used in a limited number of chemical facilities to facilities nationwide.

The number of RMP audits and inspections completed in FY 2004 was 730. In FY 2004, the number was 885. Actual performance significantly exceeded the target number of 400 in both years. While all of our regions slightly exceeded their specific target for RMP audits and inspections, one of our regions exceeded its target by nearly 400 audits and inspections, due to one of its states with which they have a contract conducting those audits and inspections on behalf of the region. The numbers for FY 2004 and FY 2005 would have been 530 and 496, respectively, without these additional audits and inspections, which are closer to our target. Based on estimates from our regions, we should complete 400 to 500 audits and inspections in FY 2006.

EPA is working to identify improved measures for audits to gain a more complete understanding of improvements in chemical safety resulting from the RMP program. This information along with an analysis of the new information submitted by facilities to the EPA on their RMP programs should provide a better understanding of the prevention activities taking place nationally as well as the state of chemical safety in the country.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-49.

✔ GOAL MET	**FY 2005:** Protect human health, communities, and ecosystems from chemical risks and releases through facility risk reduction efforts and building community infrastructures.		
	Performance Measures	*Planned*	*Actual*
	• Number of risk management plan audits completed.	400	885 ✔
✔ GOAL MET FOR FY 2004	**FY 2004:** Same goal, same measure.		
	(Performance measure is included in the annual goal above.)	*Planned* 400	*Actual* 730 ✔

Data Source(s): Survey of Regional offices. Also see www.epa.gov/oem.

APG 4.9 Chemical, Organism, and Pesticide Risks

PERFORMANCE

Goal Not Met. The availability and proper use of less toxic pesticides will result in the reduction of incidents and mortalities to wildlife. Decreased wildlife mortality rates also indicate that the regulatory programs are contributing to achievement of our long

✗ GOAL NOT MET	**FY 2005:** Standardization and validation of screening assays.		
	Percent reduction in number of incidents and mortalities to terrestrial and aquatic wildlife caused by the 15 pesticides responsible for the greatest mortality to such wildlife. (PART)	*Planned* 11% reduction	*Actual* Insufficient data for analysis ✗

Data Source(s): Data are extracted from written reports of fish and wildlife incidents submitted to the Agency by pesticide registrants under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA), Section 6(a)(2), as well as incident reports voluntarily submitted by state and Federal agencies involved in investigating such incidents.

term goal of protecting human health and the environment.

Outreach, education and training provided to the general public and targeted audiences offer assurance that pesticides will be appropriately and safely used resulting in a reduction in incidents and mortalities to wildlife.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, pages C-47–C-48.

Program Assessment Rating Tool (PART)

OMB reassessed the Pesticide Registration program most recently in the 2003 PART process and the Pesticide Reregistration program most recently in the 2004 PART process. Both programs received adequate ratings.

Grants Supporting the Achievement of This APG

The pesticide programs are supported by the Categorical Grant: Pesticide Program Implementation. Responsibility for regulating pesticide use is in large part delegated to states and tribes. These resources provide assistance to states and Tribes in the areas of pesticides certification and training/worker protection, endangered species activities, and environmental stewardship.

CHALLENGES

The basis of available information provided is insufficient to determine the actual risk reduction. Consequently, the data to report on the measure may not be available in the future. EPA awarded a cooperative agreement to the American Bird Conservancy (ABC) to collect information on avian mortalities. EPA's laboratory at Fort Meade, Maryland, is performing tissue analyses of pesticides for bird carcasses collected under the agreement with ABC. The Agency expect to complete a final report in 2006.

APG 4.10 Chemical, Organism, and Pesticide Risks

PERFORMANCE

These performance measures track regulatory actions that identify risks and set mitigation requirements prior to registration of an approved pesticide. They demonstrate EPA's progress in assuring that registered pesticides meet appropriate standards to protect human health and the environment.

Additionally, new pesticide products may substitute for older, more toxic pesticides. Through use of the newer, less toxic products, the Agency continues to ensure that risk from pesticides is minimized. Through expeditious review of the newer, reduced risk pesticides, EPA seeks to maintain the availability of potential substitutes for the older, more toxic pesticides such as organophosphates.

✗ GOAL NOT MET

FY 2005: Ensure new pesticide registration actions (including new active ingredients, new uses) meet new health standards and are environmentally safe. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*	
• Register safer chemicals and biopesticides (cumulative).	135	154	✔
• *New chemicals (active ingredients) (cumulative). (PART)*	84	79	✗
• New uses (cumulative).	3,479	3,332	✗
• Maintain timeliness of S18 decisions.	45 days	45 days	✔
• *Reduce registration decision times for new conventional chemicals. (PART)*	7%	7%	✔
• *Reduce registration decision times for reduced risk chemicals. (PART)*	3%	3%	✔

Data Source(s): The Office of Pesticide Programs Information Network (OPPIN). Also see www.epa.gov/pesticides/regulating/registering/index.htm and www.epa.gov/epahome/pestoxpgram.htm.

Goal Not Met. In FY 2005, the Agency exceeded its target for registering reduced risk pesticides and met the targets for reducing decision times on new conventional pesticides and reduced risk pesticides, providing additional alternatives for higher risk pesticides faster.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-41.

CHALLENGES

During 2005, the ethical acceptability of using human studies for regulatory purposes presented a challenge to the program. EPA is drafting a rule to provide guidance in this area.

Protecting the health of susceptible populations such as children and Native Americans continues to be a challenging endeavor, particularly in the areas of developmental neurotoxicity, non-dietary pesticide exposure and subsistence lifestyles.

Program Assessment Rating Tool (PART)

OMB reassessed the Pesticide Registration program related to this APG most recently in the 2003 PART process. The program received an adequate rating.

Grants Supporting the Achievement of This APG

The registration program is supported with implementation activities through the Categorical Grant: Pesticides Program Implementation. Responsibility for regulating pesticide use is in large part delegated to states and tribes. These resources provide assistance to states and Tribes in the areas of pesticides certification and training/worker protection, endangered species activities, and environmental stewardship.

Strategic Objective 2—Communities

Sustain, clean up, and restore communities and the ecological systems that support them.

APG 4.11 Assess and Cleanup Brownfields

PERFORMANCE

EPA's Brownfields Program empowers states, tribes, local governments, and other stakeholders in economic redevelopment to work together to prevent, assess, safely clean up, and reuse brownfields sustainably. Reinvesting in brownfields increases local tax bases, facilitates job growth, and takes development pressures off of undeveloped land.

To date, Brownfields grantees have assessed 5,752 properties, leveraging $7.2 billion in cleanup and redevelopment funding, and 33,599 jobs. Additionally, EPA has conducted 1,406 targeted

DATA AVAILABLE FY 2006	**FY 2005:** Leverage or generate funds through revitalization efforts.	
Performance Measures (all are MMTCE)	*Planned*	*Actual*
• *Number of Brownfields properties assessed. (PART)*	1,000	Data avail 2006
• Number of Brownfields cleanup grants awarded.	25	
• Number of properties cleaned up using Brownfields funding.	60	
• Number of acres of Brownfields property available for reuse.	No target	
• Number of jobs leveraged from Brownfields activities.	5,000	
• Percentage of Brownfields jobs training trainees placed.	65%	
• Amount of cleanup and redevelopment funds leveraged at Brownfields sites.	$0.9B	

brownfields assessments. EPA will not be able to provide FY 2005 performance due to grantee reporting delays.

Since FY 2001, the Brownfields Program has exceeded its target for leveraged investment in brownfields properties. In FY 2004, the Brownfields Program did not achieve its target of leveraging $0.9 billion in cleanup and redevelopment funding, however, grantees continue to succeed in efforts to cleanup and redevelop brownfields properties. Program grantees did not report the anticipated leveraged figures, because brownfields cleanup and redevelopment projects are ongoing and will be completed in future years. Additionally, the Brownfields Program did not achieve the FY 2004 target of 65 percent job training participants who are trained and find employment. The program did not meet its target for job placement due to prevailing national economic conditions beyond the program's control.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-50.

CHALLENGES

The Brownfields Program is still collecting information on grantee activities but anticipates reaching its FY 2005 goal.

✔ GOAL MET FOR FY 2004

FY 2004: Assess, cleanup, and promote the reuse of Brownfields properties, leveraging cleanup and redevelopment funding and jobs.

Performance Measures	*Planned*	*Actual*	
• Brownfields cleanup grants awarded.	25	75	✔
• Brownfield properties assessed.	1,000	1,076	✔
• Properties cleaned up using Brownfields funding.	No target	17	✔
• Brownfield property acres available for reuse or continued use.	No target	129	✔
• Jobs generated from Brownfields activities (annual).	2,000	2,250	✔
• Percentage of Brownfields job training trainees placed.	65%	61%	✗
• Amount of cleanup and redevelopment funds leveraged at Brownfield sites.	$0.9B	$0.7B	✗

Data Source(s): EPA collects data from grantee Property Profile Forms and Quarterly Progress Reports in the Brownfields Management System (BMS). Also see www.epa.gov/brownfields/.

Program Assessment Rating Tool (PART)

OMB assessed the Brownfields program related to this APG in the 2003 PART process. The program received an adequate rating.

Program Evaluations

- Office of Inspector General: "EPA Can Better Manage Brownfields Administrative Resources." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-17.
- Government Accountability Office report: "Brownfield Redevelopment: Stakeholders Report That EPA's Program Helps to Redevelop Sites, but Additional Measures Could Complement Agency Efforts." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-17.

Grants Supporting the Achievement of This APG

The Brownfields Program has awarded more than 1,000 Assessment, Cleanup, Revolving Loan Fund, Job Training, and State and Tribal Voluntary Response Program Grants. The Brownfields Program reports on the number of properties assessed, cleaned up, the number of acres made ready for reuse, as well as the amount of cleanup and redevelopment jobs and dollars leveraged by these grantees thus far.

APG 4.12 US-Mexico Border Water/Wastewater Infrastructure

PERFORMANCE

The purpose of the APG is to track the number of people without adequate water service on the border that have been and will be supported by the planning, design and construction of drinking water and wastewater infrastructure construction with capital funding. The funding helps reduce raw sewage and provide safe drinking water to residents on the U.S.-Mexico Border.

To date, drinking water and sanitation service have been provided for 1,163,000 people who previously had no service. This effort requires considerable coordination among six Mexican and four U.S. states, municipalities with varying capacity, and two international organizations that certify the projects and issue subgrants for individual projects.

Goal Not Met. In FY 2005, EPA stopped the certification process to develop and implement a prioritization system to streamline the planning and development process and better target EPA resources to EPA objectives. Planned accomplishments were not achieved in FY 2005 because funding for new projects was delayed until the prioritization system was put in place. The first certifications from the prioritized project list are anticipated in the second quarter of FY 2006.

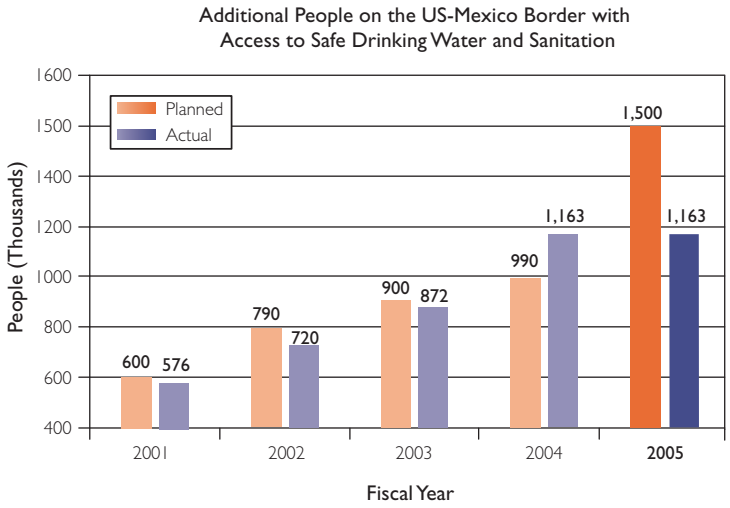
Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-51.

✗ GOAL NOT MET

FY 2005: In the US-Mexico Border Region, sustain and restore community health, and preserve the ecological systems that support them.

Performance Measures	*Planned*	*Actual*
• *Protect the health of 1.5 M people in the Mexico border area by providing adequate water and wastewater sanitation systems funded through the Border Environment Infrastructure Fund. (cumulative) (PART)*	1.5M	1.163M ✗

Data Source(s): North American Development Bank. Also see www.epa.gov/r6border/index.htm.



Source: North American Development Bank Project Information for the Border Environment Infrastructure Fund

Program Assessment Rating Tool (PART)

OMB assessed the US-Mexico Border Water Infrastructure program related to this APG in the 2004 PART process. The program received an adequate rating.

Program Evaluations

Board of Directors of the North American Development Bank report: "North American Development Bank Border Environment Cooperation Commission Business Process Review." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-18.

Grants Supporting the Achievement of This APG

This APG is supported by grants provided to the Border Environment Cooperation Commission and the North American Development Bank for water infrastructure. In FY 2005, the funding for the U.S-Mexico Border water infrastructure grants was $49.6 million. Although no new projects were certified in FY 2005 due to the development of the prioritization system, progress on existing projects continued to provide safe drinking water and sanitation to citizens on the border.

CHALLENGES

The Brownfields Program is still collecting information on grantee activities but anticipates reaching its FY 2005 goal.

The need to better prioritize projects to ensure alignment with the Agency's Strategic Plan required the Agency to develop and implement a new prioritization system for funding projects in FY 2005. The new prioritization process will streamline the planning and development process and better target EPA resources to EPA objectives starting in FY 2006.

APG 4.13 Sustain Community Health

PERFORMANCE

This measure seeks to increase the degree to which other countries assess and understand possible environmental implications of economic growth resulting from trade liberalization. Such understanding should lead to development and implementation of capacity building measures to better address likely environmental impacts, as well as increased commitment on the part of trade partner countries to enforce their existing environmental laws and regulations.

In FY 2005 EPA concluded most of the required work on a new training course on conducting environmental reviews. By delivering this training course in developing countries and continuing our efforts to facilitate such reviews, EPA expects to see more developing countries—both in the western hemisphere and more broadly—improve their capacity to anticipate and address major potential environmental impacts associated with trade liberalization.

✔ GOAL MET	**FY 2005:** Assist trade partner countries in completing environmental reviews. (NEW IN FY05)		
	Performance Measures	*Planned*	*Actual*
	• Number of environmental reviews initiated by FTAA countries following the enactment of the 2002 Trade Promotion Act.	3 countries	3 ✔

Data Source(s): Organization for American States (OAS) FIDA website www.oas.org/usde/fida.

Our baseline (2002) is for zero reviews conducted by the thirty one countries with market economies in Latin America and the Caribbean that—combined with the US, Canada and Mexico—make up the negotiating parties for the FTAA.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-51.

CHALLENGES

The primary challenge we face is uncertainty felt by many developing countries of conducting such reviews. Many countries view environmental considerations or measures in a trade context, even an environmental review of trade liberalization, as a hidden barrier employed by developed countries to limit imports from developing countries. Finally, many such countries have neither the knowledge of procedures nor the data required for generating a meaningful environmental review of trade liberalization.

Strategic Objective 3—Ecosystems

Protect, sustain, and restore the health of natural habitats and ecosystems.

APG 4.14 Protecting and Enhancing Estuaries

PERFORMANCE

The health of the nation's estuaries depends in part on the maintenance of high-quality habitat. This APG tracks the acreage of habitat protected or restored through the National Estuary Program (NEP). Such acreage contributes to the ability of the 28 NEP estuaries to support healthy populations of wildlife and marine organisms, including many commercially valuable fisheries, and to perform the economic, environmental, and aesthetic functions on which coastal populations depend for their livelihood. In FY 2005, the NEPs, working with their partners, protected and restored 103,959 acres of habitat, significantly exceeding the goal of 25,000 acres. This success is partly due to substantial local bond measures that passed, allowing several of the NEPs to significantly exceed their goals. Also, an improved peer process has been established where successes and lessons learned are more readily transferred among the NEPs.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-52.

✔ GOAL MET

FY 2005: Working with NEP partners, protect or restore an additional 25,000 acres of habitat within the study areas for the 28 estuaries that are part of the National Estuary Program.

Performance Measures	*Planned*	*Actual*
• Acres of habitat restored and protected nationwide as part of the National Estuary Program. (incremental)	25,000	103,959 ✔

Data Source(s): NEP GPRA Habitat Report. Also see www.epa.gov/owow/estuaries.

CHALLENGES

Based on the fact that most of the NEPs have been implementing protection and restoration projects for 15 years now, it appears that most of the "easier" projects have been tackled. Remaining projects are expected to be more difficult—at a minimum, require more lead time. In addition, in some of the NEPs with smaller study areas, there is less and less land available for and/or in need of protection or restoration.

We continue to work with our partners to ensure that everyone is using consistent definitions to identify the appropriate acreage for tracking under this APG.

Program Assessment Rating Tool (PART)

OMB is assessing the Oceans/Coastal program related to this APG in the 2005 PART process. Results of this assessment will be included in the FY 2007 President's Budget.

Grants Supporting the Achievement of This APG

Section 320 of the Clean Water Act provides for annual grants to NEPs. NEPs have been very effective at leveraging this "base" grant funding by building relationships with diverse private, local, state, and federal partners. Base funding for FY 2005 totaled approximately $17 million. Estimates indicate that approximately $160 million was leveraged in FY 2005.

APG 4.15 Increase Wetlands

PERFORMANCE

Wetlands are among our Nation's most critical and productive natural resources. They provide a variety of benefits, such as water quality improvements, flood protection, shoreline erosion control, and ground water exchange. Wetlands are the primary habitat for fish, waterfowl, and wildlife, and as such, provide numerous opportunities for education, recreation, and research.

EPA recognizes that the challenges the Nation faces to conserve our wetland heritage are daunting and that many partners must work together for this effort to succeed. This APG acknowledges the joint nature of the task to not only increase acreage of wetlands but maintain and restore their biological and functional integrity.

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The "net gain" element of the wetland goal will be primarily accomplished by other Federal programs (Farm Bill agriculture incentive programs and wetlands acquisition and restoration programs, including those administered by Fish and Wildlife Service) and non-Federal

DATA AVAILABLE FY 2006 AND FY 2008	**FY 2005:** Working with partners, achieve no net loss of wetlands. (NEW IN FY05)	
Performance Measures	*Planned*	*Actual*
• Working with partners, achieve an increase of wetlands with additional focus on biological and functional measures.	100,000 acres/yr	Data avail 2006
• Annually, in partnership with the Corps of Engineers and states, achieve no net loss of wetlands in the CWA Section 404 regulatory program.	No net loss	Data avail 2008

Data Source(s): Organization for American States (OAS) FIDA website www.oas.org/usde/fida.

programs. The U.S. Fish and Wildlife Service's Status and Trends Report provides the data necessary to measure achievement of this APG.

EPA contributes to achieving no overall net loss in wetlands through EPA's regulatory programs, including Clean Water Act Section 404/401 permit review, compliance and enforcement, and other programs, such as Sections 402 and 311. EPA will continue to work with the COE to ensure application of the 404(b)(1) guidelines, which require that discharges into waters of the U.S. be avoided and minimized to the extent practicable.

Additionally, in FY 2005 EPA continued to work with states to build their capability to monitor trends in wetland condition using biological metrics and assessments and has the goal of at least 14 states using these methods by 2008. Five grants were awarded in FY 2004 to promote the development of methods to be used to monitor trends in wetland condition in five states. Work was continued under those five grants in FY 2005, as well as technical support provided to these and other states in fulfillment of this annual goal.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, pages C-53–C-55.

CHALLENGES

In April 2004, the President announced a performance-based goal to restore, enhance, and protect at least 3 million wetland acres over the next 5 years. The link between this new goal and the existing APG is described in EPA's FY 2006 National Water Program Guidance.

The U.S. Fish and Wildlife Service's Status and Trends Report provides the data necessary to measure achievement of this APG and typically is only produced every 10 years. The most recent report was in January 2001 and was not due to be produced again until 2010. Additional funding was provided to produce a report at the end of 2005.

Delays in reporting on "no net loss" in the CWA Section 404 regulatory program are due to budget constraints at the U.S. Army Corps of Engineers. While EPA and other federal agencies have provided extra funds to the COE, implementation of the Corps' new permit tracking database has been delayed until end of 2006 which will postpone obtaining data and information to report on acreage gains and losses in the regulatory program until end of 2007.

Grants Supporting the Achievement of This APG

Wetland Program Development Grants (WPDG) are critical for building State/Tribal and local government's capacity to protect and manage their wetlands. Established in 1990, the WPDG program provides $15 million in funds to states, Tribes, and local governments to develop programs that increase their participation in wetland restoration, improvement, and protection activities. In FY 2005, EPA initiated a grant pilot under the WPDGs to demonstrate the environmental outcomes of implementing comprehensive State and Tribal wetland programs. Funds used in these demonstration projects are designed to determine the extent to which wetland program implementation achieves no net loss, net gain, and protection of vulnerable wetlands.

APG 4.16 Great Lakes: Ecosystem Assessment

PERFORMANCE

Measures under this APG assess the overall progress U.S. environmental programs are making in protecting and restoring the chemical, physical, and biological integrity of the Great Lakes ecosystem. Improvements in the index and measure for this APG' would indicate that fewer toxics are entering the food chain, ecosystem and human health is better protected, fish is safer to eat, water is safer to drink, and beaches are safer for swimming.

The Great Lakes Index shows overall progress in Great Lakes ecosystem condition. Improvements in coastal wetlands, drinking water quality, and air toxics deposition are reflected in increased annual index scores. In FY 2005, EPA reported an index score of 21.9 out of a possible 40, more than the one-point increase over the baseline score of 20. Of this increase, 0.5 points resulted from additional information that was not available at the time the baseline was calculated, and thus, may not reflect actual environmental improvement. The overall increase in index score for FY 2005 might have been even greater, were it not for high phosphorus concentrations in Lake Erie. Thus, while two performance

✔ GOAL MET

FY 2005: Prevent water pollution and protect aquatic systems so that overall ecosystem health of the Great Lakes is improved by at least 1 point.

Performance Measures	*Planned*	*Actual*	
(Performance measure is included in the annual goal above.)	21	21.9	✔
• Total phosphorus concentrations (long-term) in the Lake Erie Central Basin.	10 µg/l	11	✔
• Average concentrations of PCBs in whole lake trout and walleye samples will decline.	5%	6.2%	✔
• Average concentrations of toxic chemicals in the air in the Great Lakes basin will decline.	7%	7.1%	✔
• Restore and delist Areas of Concern (AOC) within the Great Lakes basin.	3 AOC	0 AOC	
• Cubic yards (in millions) of contaminated sediment remediated in the Great Lakes. (cumulative from 1997)	2.9M	3.7M	

✗ GOAL NOT MET FOR FY 2004

FY 2004: Great Lakes ecosystem component will improve, including progress on the fish contaminants, beach closures, air toxics, and trophic status.

Performance Measures	*Planned*	*Actual*	
• Long-term concentration trends of toxics (PCBs) in Great Lakes top predator fish	5%	5.8%	✔
• Long-term concentration trends of toxic chemicals in the air.	7%	8.4%	✔
• Total phosphorus concentrations (long-term, µg/l) in the Lake Erie Central Basin.	10	21.2	✗

measures under this APG were not met for FY 2005, the more comprehensive measure based on the Great Lakes Index indicates that EPA met its goal for FY 2005.

Phosphorus is the limiting nutrient in the Great Lakes that controls algae growth. Lake Erie exceeded phosphorus guideline levels in recent years, particularly its central basin which is most representative of the Lake's anoxia problems. Elevated phosphorus concentrations in Lake Erie are linked to the increased "dead zone," or zone of limited dissolved oxygen. FY 2005 data indicate that the targeted concentration level was not met. Further exploration of this problem, identified by GLNPO, is being augmented by work with NOAA and Environment Canada.

Analysis in 2005 indicate that on average, total PCB concentrations in whole Great Lakes top predator fish have declined 6.2 percent annually between 1990 and 2003; meeting the target for declines in concentration trends. Cleanup efforts, such as the remediation of contaminated sediments and the reduction of PCB loadings to the Great Lakes, need to be continued and enhanced to continue the declining trend. Based on Lake Michigan data, current concentrations in lake trout are approximately 8 times the wildlife protection value (0.16ppm) and current concentrations in game fish fillets are approximately ten times the unlimited consumption level for protection of human health (.05ppm).

Atmospheric deposition has been shown to be a significant source of pollutants to the Great Lakes. From 1992 to 2003, U.S. concentrations of PCBs in the air measured at stations on Lakes Superior, Michigan, and Erie decreased an average of 7.1 percent annually, meeting the targeted commitment[1].

The 31 U.S. or binational Areas of Concerns (AOC) are the most polluted geographic areas in the Great Lakes. EPA is working with the states to restore their impaired beneficial uses (such as restrictions on fish consumption due to high contaminant levels) in order to "delist" ten AOCs by 2010 and all AOCs by 2025. While EPA has not met the target of delisting three AOCs in FY 2005, significant progress has been made toward delisting of two AOCs in FY 2006.

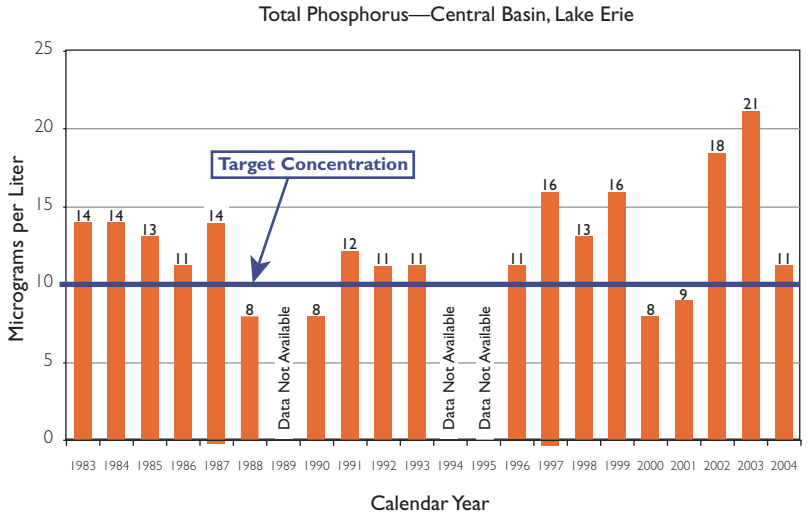
In FY 2005, EPA reported that the commitment to remediate 300,000 cubic yards of contaminated sediments in calendar year 2004 had been met through the combined efforts of EPA, states, and other partners, including the first Great Lakes Legacy Act project. EPA and its partners have already substantially exceeded the 2008 goal of remediating 3.3 million cubic yards of contaminated sediments.

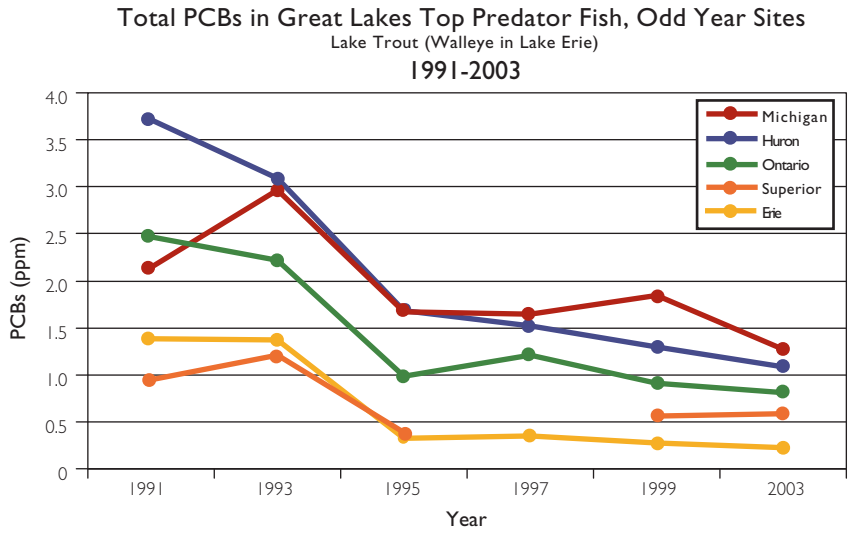
✗ GOAL NOT MET FOR FY 2003

FY 2003: Same goal as FY 2004.

Performance Measures	*Planned*	*Actual*	
• Long-term concentration trends of toxics (PCBs) in Great Lakes top predator fish.	5%	Data avail 11/2005	
• Long-term concentration trends of toxic chemicals in the air.	7%	8.3%	✗
• Total phosphorus concentrations (long-term, µg/l) in the Lake Erie Central Basin.	10	18.4	✗

Data Source(s): EPA Great Lakes National Program Office: Phosphorus Monitoring Program; Fish Monitoring Program; Integrated Atmospheric Deposition Network Program. AOC delisting: GLNPO Internal tracking and communications with Great Lakes States, the US Department of State and the International Joint Commission (IJC). Contaminated sediment remediation: GLNPO collection of sediment remediation data. Also see www.epa.gov/grtlakes/.





Note: Values are for composite samples (five whole fish) of whole fish lake trout in the 600-700 mm size for Lakes Michigan, Ontario, Superior, and Huron. Lake trout in the 400-500 mm size range in Lake Erie.

Source: Great Lakes National Program Office - Great Lakes Fish Monitoring Program, Great Lakes Environmental Database. Wildlife Protection Value reference - Great Lakes Water Quality Initiative technical support document for the procedure to determine bioaccumulation factors, EPA-820-B-95-005. Protocol for a Uniform Great Lakes Sport Fish Consumption Advisory - Great Lakes Sport Fish Advisory Task Force. September 1993. http://www.pspblce.state.pa.us/PA_Exec/Fish_Boat/fishtech.pdf

Program Evaluations

EPA Report: "Great Lakes Fish Monitoring Program (GLFMP) Review." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-18.

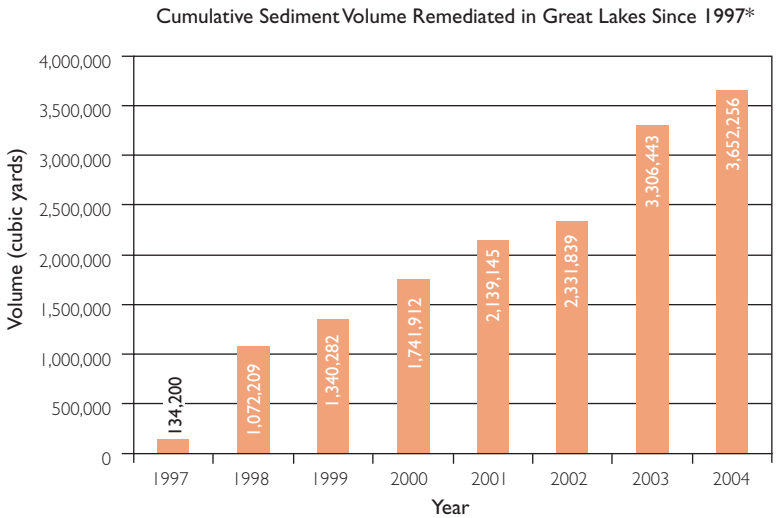
Grants Supporting the Achievement of This APG

Great Lakes National Program Office programs; state grants for Lakewide Management Plans and Remedial Action Plans; competitive grants addressing Contaminated Sediments, Pollution Prevention and Reduction, Habitat (Ecological) Protection and Restoration, Invasive Species, and Strategic or Emerging Issues; and, competitive monitoring grants regarding Atmospheric Deposition, Fish Contaminants, and Biology.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, pages C-55–C-62.

CHALLENGES

Great Lakes restoration and protection, including delisting of Areas of Concern, is dependent upon core EPA programs and organizations outside of EPA's control, such as (i) Departments of State, Interior, Agriculture, Commerce, Housing and Urban Development, Transportation, the Army, and Homeland Security; (ii) Great Lakes states and Tribes; and (iii) municipalities. The President's Executive Order and the Regional Collaboration are improving coordination and collaboration, but EPA does not have the authority to direct the activities that would result in achieving this APG.



* Information in the bar graph is based on quantitative estimates reported by project managers. Data collection and report efforts are described in the "Greal Lakes Sediment Remediation Project Summary Support" Quality Assurance Action Plan (GLNPO, January 2005). Detailed project information may be availabe upon request from project managers.

APG 4.17 Chesapeake Bay Habitat

PERFORMANCE

Submerged aquatic vegetation (SAV) is one of the most important biological communities in the Bay, producing oxygen, nourishing a variety of animals, providing shelter and nursery areas for fish and shellfish, reducing wave action and shoreline erosion, absorbing nutrients such as phosphorus and nitrogen, and trapping sediments. Trends in the distribution and abundance of SAV over time are useful in understanding trends in water quality.

Beginning in FY 2005, achievement of SAV targets will be based on the "single best year" of acreage as observed through the most recent 3 years of data from the aerial survey. This new method for reporting performance more accurately captures the natural fluctuations in acreage due to annual changes caused by weather. Baywide, the single best year in the CY 2002-2004 period was 89,659 acres in 2002.[24]

✗ GOAL NOT MET	**FY 2005:** Prevent water pollution and protect aquatic systems so that the overall aquatic system health of the Chesapeake Bay is improved enough so that there are 90,000 acres of submerged aquatic vegetation (cumulative).		
	Performance Measures	*Planned*	*Actual*
	• Acres of submerged aquatic vegetation (SAV) present in the Chesapeake Bay (cumulative).	90,000	89,659 ✗

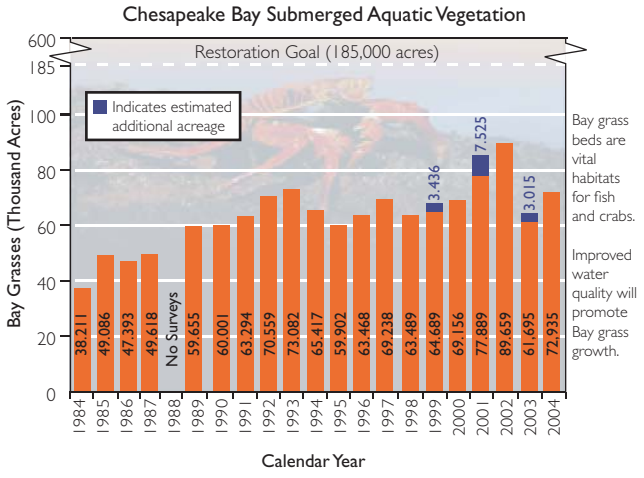
Data Source(s): Virginia Institute of Marine Sciences provides the data (via an EPA Chesapeake Bay Program (CBP) grant to Virginia Institute of Marine Sciences). Also see Submerged aquatic vegetation (SAV) www.chesapeakebay.net/status.cfm?sid=88. Chesapeake Bay SAV www.vims.edu/bio/sav/savreports.html. Chesapeake Bay Program www.chesapeakebay.net.

Grants Supporting the Achievement of This APG

This goal is supported by CWA Section 117(e) grants, which fund the full range of state water quality nutrient reduction programs. In FY 2005, EPA awarded a total of $7,628,000 in Chesapeake Bay Program State Implementation Grants to Maryland, Virginia, Pennsylvania and the District of Columbia. The funds are used to reduce nutrients and sediments entering the Bay for a variety of land uses. The grants have a particular emphasis on state tributary strategy implementation to improve water quality and help meet the goals of the Chesapeake 2000 agreement.

In FY 2005, EPA awarded $1,984,000 to National Fish and Wildlife Foundation to administer the Chesapeake Bay Small Watershed Grants. This funding goes to local governments and watershed organizations to restore wetlands, create riparian buffers, protect undeveloped lands, and improve citizen awareness. All of these outcomes will reduce nutrients and sediments that will help improve water clarity, which will improve SAV habitat.

Goal Not Met. The FY 2005 goal of restoring the acres of SAV to 90,000 was not met, in part because pollution reduction strategies for reducing nutrient and sediment pollution loads were not implemented to levels envisioned by the partners in tributary strategies. Challenges to achieving nutrient and sediment pollution loads are discussed under APG 4.18. In addition, population growth in the Chesapeake Bay watershed continues to make restoration of the SAV difficult. While the program plans to begin a full re-evaluation in 2007, it continues to pursue strategies to accelerate nutrient-sediment reduction: the reduction of nutrient (phosphorus and nitrogen) and sediment pollution loads plays a crucial role in restoring SAV.



Source: US EPA Chesapeake Bay Program data from Virginia Institute of Marine Sciences.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, pages C-62–C-63.

CHALLENGES

Meeting the SAV performance goal is dependent on the reducing phosphorus, nitrogen, and sediments loadings to the Bay and its tributaries. Challenges to accomplishing these reductions are described in APG fact sheet 4.18.

APG 4.18 Chesapeake Bay Habitat

PERFORMANCE

Indicators used to measure environmental improvement in the Bay are reductions in the pounds of nitrogen, phosphorus, and sediment entering the Bay. Implementation of best management practices has reduced these pollutants, offsetting significant load increases that would have resulted from population growth.

The current pollutant-loading rate continues to exceed the level needed to meet the Bay water quality standards adopted by the states in 2005.

The targets in EPA's Strategic Plan for nutrient and sediment reductions are scientifically based and reflect a multi-state consensus. Bay Program partners have committed to meet target load allocations by the end of calendar year 2010.

In FY 2005, states adopted enforceable Bay-specific water quality standards and implemented an innovative basin-wide NPDES permitting strategy for nitrogen and phosphorus. The Chesapeake Executive Council also adopted measures to reduce nutrient pollution from animal manure. With animal manure and poultry litter accounting for a significant amount of the non-point nutrient pollution flowing into the Bay, the Executive Council took action to minimize manure nutrients reaching local waters.

✗ GOAL NOT MET

FY 2005: Reduce nitrogen loads by 74 million pounds per year; phosphorus loads by 8.7 million pounds per year, and sediment loads by 1.06 million tons per year from entering the Chesapeake Bay, from 1985 levels. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*	
• Reduce nitrogen loads by 74 million pounds per year.	74	67	✗
• Reduce phosphorus loads by 8.7 million pounds per year.	8.7	8.4	✗
• Reduce sediment loads by 1.06 million tons per year.	1.06	0.92	✗

Data Source(s): State/district data are provided to the Chesapeake Bay Program Office for input into the Chesapeake Bay Program Watershed Model. Also see www.chesapeakebay.net.

Goal Not Met. The FY 2005 nutrient (phosphorus and nitrogen) and sediment pollution load reduction goals were not met because the goals are ambitious and the level of effort and expenditure needed to meet them far exceed initial estimates made by federal and state partners. The annual targets were aligned to reflect the goal of restoring water quality standards by 2010.

While the program plans to conduct a full re-evaluation beginning in 2007, it continues to

Grants Supporting the Achievement of This APG

This goal is supported by CWA Section 117(e) grants, which fund the full range of state water quality nutrient reduction programs. In FY 2005, EPA awarded a total of $7,628,000 in Chesapeake Bay Program State Implementation Grants to Maryland, Virginia, Pennsylvania and the District of Columbia. The funds are used to reduce nutrients and sediments entering the Bay for a variety of land uses. The grants have a particular emphasis on state tributary strategy implementation to improve water quality and help meet the goals of the Chesapeake 2000 agreement.

In FY 2005, EPA awarded $1,984,000 to National Fish and Wildlife Foundation to administer the Chesapeake Bay Small Watershed Grants. This funding goes to local governments and watershed organizations to restore wetlands, create riparian buffers, protect undeveloped lands, and improve citizen awareness. All of these outcomes will reduce nutrients and sediments that will help improve water clarity, which will improve SAV habitat.

pursue strategies to accelerate nutrient-sediment reduction. Strategies include: (1) state adoption of enforceable Bay-specific water quality standards by the end of summer 2005; (2) implementation of an innovative basin-wide NPDES permitting strategy for nitrogen and phosphorus; and (3) the development of a strategy to address excess animal manure and poultry litter for Chesapeake Executive Council endorsement in 2005.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, pages C-63–C-64.

CHALLENGES

Maintaining the existing nitrogen, phosphorus and sediment loading levels will be a challenge due to the continued expected growth in human and farm animal population in the region. In addition, the current pollutant-loading rate continues to exceed the level needed to meet the bay water quality standards adopted by the states in 2005. In order to achieve the necessary nitrogen, phosphorus and sediment load reductions, states will need to fully implement their pollution reduction strategies.

APG 4.19 Gulf of Mexico

PERFORMANCE

Efforts to improve the overall health of the entire Gulf of Mexico must include a focused effort to reduce the size of the zone of hypoxic conditions (i.e. low oxygen in the water) in the northern Gulf. The hypoxic zone results in the failure to capture fish, shrimp, and crabs in bottom-dragging trawls when the oxygen falls below the critical level of 2 ppm. The seasonal formation and persistence of hypoxia are influenced by discharges and nutrient loads of the Mississippi and Atchafalaya Rivers. The fresher water forms a layer above the saltier Gulf waters. Nitrogen and phosphorus in the river water stimulate the growth of microscopic plants or phytoplankton. These algae are either transferred into the food web or end up as organic debris on the sea floor. Their decomposition by bacteria depletes oxygen in the lower waters until they no longer sustain the life of most marine animals.

✔ GOAL MET

FY 2005: Prevent water pollution and protect aquatic species in order to improve the health of the Gulf of Mexico.

Performance Measures	*Planned*	*Actual*
• Reduce releases of nutrients throughout the Mississippi River Basin to reduce the size of the hypoxic zone in the Gulf of Mexico, as measured by the 5-year running average.	14,128 km sq	12,700 km sq ✔

Data Source(s): Louisiana Universities Marine Consortium (LUMCON) and the National Oceanic and Atmospheric Administration (NOAA). Also see www.epa.gov/gmpo.

The coast wide extent of the hypoxic zone mapped in 2005 was 11,840 square kilometers or 4,564 square miles. The low oxygen waters extended from near the Mississippi River to the Louisiana/Texas border. The long-term average since mapping

Grants Supporting the Achievement of This APG

- Targeted Watershed Initiative grants support nitrogen reduction in the Mississippi River Basin, with a special emphasis on support for innovative programs allowing trading of nutrient reductions. Although there were no Targeted Watershed Initiative grants in the Mississippi River Basin in FY 2005, funding of $943,000 supported a point source inventory, ship-time and monitoring support, modeling, wetlands and water quality trading, sub-basin team support, and nutrient science workshop.
- Grants supporting Gulf States in their efforts to develop nutrient standards for estuaries and near coastal waters. In FY 2005, grants for $375,000 supported Gulf States in their efforts to develop nutrient standards for estuaries and near coastal waters, included the development of a nutrient TMDL model, provided real-time monitors near the mouth of the Mississippi River in the Gulf of Mexico to better understand the dynamics of the hypoxic zone that forms each year in this area.

began in 1985 is 12,700 km (or 4,800 square miles).

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-65.

CHALLENGES

The smaller than predicted size was expected because of a tropical storm and hurricane that affected the area between the Mississippi and the Atchafalaya rivers earlier in July. The effects of Hurricane Katrina on the hypoxic zone will not be determined until research cruises are conducted in FY 2006.

Strategic Objective 4—Enhance Science and Research

Through 2008, provide a sound scientific foundation for EPA's goal of protecting, sustaining, and restoring the health of people, communities, and ecosystems by conducting leading-edge research and developing better understanding and characterization of environmental outcomes under Goal 4.

APG 4.20 Conduct Relevant Research to Support the Food Quality Protection Act

PERFORMANCE:

This research provided protocols, data and models that EPA's Office of Pesticide Programs (OPP) can use to conduct exposure assessments for pesticides. The products will be used as OPP conducts risk assessments for pesticides for the first time or as pesticides that have previously been evaluated are reassessed as required under the Food Quality Protection Act (FQPA). Under FQPA, OPP is required to take into consideration multiple pathways of exposure to pesticides and the cumulative risks they may pose. FQPA also mandates ensuring the protection of sensitive subpopulations such as children. By having tools to be able to understand children's residential exposures to pesticides, OPP will have the sound scientific underpinnings to incorporate this information in setting allowable levels of pesticide residues on crops (tolerances) through its assessments and reassessments.

✔ GOAL MET

FY 2005: Provide high quality exposure, effects and assessment research results that support the August 2006 reassessment of current-use pesticide tolerances to EPA so that, by 2008, EPA will be able to characterize key factors influencing children's and other subpopulations' risks from pesticide exposure. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*
• Children's exposure data and tools for assessing aggregate exposure to residential-use pesticides	9/30/05	9/30/05 ✔

Data Source(s): Research developed under this project. Also see www.epa.gov/heds/index.htm, www.epa.gov/chadnet1/index.htm, and www.epa.gov/heasd/erdem/erdem.htm.

Before this research was conducted, the data available in the scientific literature characterizing children's exposures to residential-use pesticides were extremely limited and of unknown or varying quality. Validated protocols for collecting the data to assess children's aggregate exposures to pesticides through all routes and pathways did not exist. The models that were available for characterizing children's exposures only examined one route or path-

Program Assessment Rating Tool (PART)

OMB is assessing the Human Health Research program related to this APG in the 2005 PART process. Results of this assessment will be included in the FY 2007 President's Budget.

Program Evaluations

Office of Research and Development, Board of Scientific Counselors report: "Review of the Computational Toxicology Research Program Directions." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-19.

way at a time, based on single point estimates. There were no probabilistic models for describing distributions of exposure and addressing uncertainty and variability.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-66.

APG 4.21 Conduct Relevant Research: Mercury

PERFORMANCE

On March 15, 2005, EPA issued the Clean Air Mercury Rule (CAMR) to permanently cap and reduce mercury emissions from coal-fired power plants for the first time ever. This rule, combined with EPA's Clean Air Interstate Rule (CAIR), will significantly reduce emissions from the nation's largest remaining source of human-caused mercury emissions. The work performed to fulfill this APG supported the development of the CAMR. The results of the work also will be used in the future to support effective implementation of the CAMR by EPA's Office of Air and Radiation, EPA's Office of Water, and the States, and to evaluate the rule's effectiveness.

The work conducted under this APG culminated in the production of a white paper (February 18, 2005) that summarizes the status of mercury control technologies for coal-fired utility boilers was produced to support development of the new Clean Air Mercury Rule (CAMR). The paper documented the current status of mercury controls and directly informed the regulatory proposals contained in the CAMR. The paper was placed in the regulatory docket to support the CAMR.

✔ GOAL MET

FY 2005: Provide information on managing mercury and other co-pollutants from utility boilers so that, by 2010, there is an extensive set of data and tools available to help industry and federal, state, and local environmental management officials make decisions on the most cost-effective ways to reduce or prevent mercury releases into the environment. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*
• Information on managing mercury and other co-pollutants from utility boilers	1 report	1 ✔

Data Source(s): (1) EPA's Mercury Information Collection Request. (2) Papers presented at the Joint EPRI DOE EPA Combined Utility Air Pollution Control Symposium, The Mega Symposium, Washington, D.C., August 30-September 2, 2004. (3) DOE/NETL Mercury Control Technology R&D Program Review, Pittsburgh, PA, July 14-15, 2004. Also see www.epa.gov/mercury/control_emissions/technology.htm.

Program Evaluations

Office of Research and Development, Board of Scientific Counselors report: "Review of the Mercury Multi-Year Research Plan." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-21.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-66.

CHALLENGES

No major challenges were encountered in FY 2005 that adversely affected performance under this APG. An earlier white paper on the status of mercury control technologies for electric utility boilers was released in February 2004 by EPA's Office of Research and Development. Subsequently, much new information became available on these technologies. Despite the limited time available to revise the white paper to reflect the best-available scientific information, the revised white paper was finalized on February 18th and placed in the regulatory docket. This revised paper successfully documented the most current status of mercury controls and helped inform the regulatory process.

APG 4.22 Conduct Relevant Research: Exposure and Environmental Effects

PERFORMANCE

The intent of this APG is to provide methods and models so that risk assessors and risk managers will be able to measure and evaluate exposure to and effects of environmental stressors in children. The objective of this research is to reduce children's exposure to harmful agents. The public will benefit from the reduced cost of treating environmental-related diseases and by having a safer environment for children.

Research included evaluating new, less invasive approaches for assessing children's exposures and developing models for assessing aggregate exposure to environmental stressors in a residential setting. Research also demonstrated approaches to reduce the exposure of children with respiratory problems to indoor contaminants. These findings are essential to the long-term goal of this work: to provide methods and models so that risk assessors and risk managers can characterize and provide adequate protection for susceptible subpopulations, including children. Guidance on conducting risk assessments for children as a sensitive subpopulation was also provided. This work is part of a larger program of research that focuses on characterizing how sensitivity or vulnerability to environmental stressors varies as a function of age. This research contributes to understanding how behavior and environments specific to home

✔ GOAL MET

FY 2005: Provide risk assessors and managers with methods and tools for measuring exposure and effects in children, and characterizing and reducing risks to children from environmental agents in schools so that, by 2014, EPA will be able to demonstrate why some groups of people, defined by life stage, genetic factors, and health status, are more vulnerable than others to adverse effects from exposure to environmental agents. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*
• Methods and tools for measuring exposure and effects in children, and characterizing and reducing risks to children from environmental agents in school	9/30/05	9/30/05 ✔

Data Source(s): Peer-reviewed publications and internal review of draft guidance document on risk assessment for children. Also see Human Health Multi-Year Plan (2003) at www.epa.gov/osp/myp.htm, and the National Center for Environmental Research Website at cfpub.epa.gov/ncer_abstracts/index.cfm/fuseaction/research.display/rpt/abs/rfa_id/373.

Program Assessment Rating Tool (PART)

OMB is assessing the Human Health Research program related to this APG in the 2005 PART process. Results of this assessment will be included in the FY 2007 President's Budget.

Program Evaluations

Office of Research and Development, Board of Scientific Counselors report: "Human Health Research Program Review." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-22.

Grants Supporting the Achievement of This APG

- Chloroatrazine protein binding: Biomarkers of exposure and susceptibility (EPA grant R828610). The purpose of this research is to develop a non-invasive method for measuring environmental stressors to be used as biomarker of exposure of children.
- Methods development for exposure-related behaviors (EPA grant R831540). The purpose of this research is to provide information for EPA's Consolidated Human Activity Database, which can be used to assess exposure to environmental stressors in children.
- A longitudinal assessment study of human exposure to pesticides due to variations of dietary consumption patterns (EPA grant R832244). This research focuses on dietary consumptions patterns, dietary exposures and body burdens to environmental stressors for a database to predict exposure among individuals on a national level.
- Data collection platforms for integrated longitudinal surveys of human exposure (EPA grant 831541). The purpose of this research is to develop and test methods to facilitate the collection and processing of longitudinal data for exposure models to environmental stressors.

and school may make children differentially vulnerable to the effects of common environmental stressors.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-66.

APG 4.23 Conduct Relevant Research: Riparian Zone Restoration

PERFORMANCE

In-stream and near-stream restoration actions are being actively pursued by local, state, and non-governmental organizations by utilizing a range of expertise. This expertise is tapped from contractors, consultants, local and state personnel, land owners, as well as many volunteers to design, construct, and implement restoration plans and strategies. To date, very little scientifically sound information has been established as to actual effectiveness of the in-stream and near-stream restoration actions in meeting the goals and objectives for these restoration plans.

The purpose of the APG is to provide clear and concise information on the utility and effectiveness of vegetative riparian buffers to reduce nitrogen loadings to streams. This knowledge, provided in the form of a technical guidance, will be utilized by decision makers in the design and implementation of vegetative buffers that stand a greater probability than past practices of being effective at reducing nitrogen impacts on streams.

The performance measure produces quantifiable results demonstrated by a number of studies as to the influence of vegetative buffers on nitrogen loading.

✔ GOAL MET

FY 2005: Provide technical guidance for implementing and evaluating projects to restore riparian zones, which are critical landscape components for the restoration of aquatic ecosystems and water quality, so that, by 2010, watershed managers have state-of-the-science field-evaluated tools, technical guidance, and decision-support systems for selecting, implementing, and evaluating cost-effective and environmentally-sound approaches to restore ecosystem services as part of watershed management. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*
• Technical guidance for implementing and evaluating projects to restore riparian zones.	1 tech guidance	1 ✔

Data Source: See www.epa.gov/ordntrmt/ORD/NRMRL/ and www.epa.gov/ada/topics/er_nm.html.

This information provides a significant step toward a more comprehensive guideline for watershed management, which is a future PM for the Ecological Research Program.

The performance measure supporting this APG incorporates scientifically derived and published research data regarding the effectiveness of vegetative buffers to reduce the impact of a number of stressors. The collection of this information in a concise manner makes the information more useful, while providing the client with sufficient information to apply the knowledge, as well as explore new methods for buffer design and construction.

Data Quality: A description of the data used to measure EPA's

Program Assessment Rating Tool (PART)

In-stream and riparian zone restoration research is a component of ORD's Ecological Research Program. OMB reassessed this program most recently in the 2005 PART process. Results will be included in the FY 2007 President's Budget.

Program Evaluations

Office of Research and Development, Board of Scientific Counselors report: "Ecological Research Program Review." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-20.

Grants Supporting the Achievement of This APG

A Watershed Classification System for Improved Monitoring and Restoration: Landscape Indicators of Watershed Impairment. EPA STAR Program Grant to Stephen D. Prince, University of Maryland. (This grant was related to the general research area.)

performance can be found in Appendix C, page C-66.

CHALLENGES

It was anticipated that this technical guidance document would have been more inclusive and would have been developed as material for future training workshops and seminars, and related technology transfer actions. To be able to meet this need, the document was to have included additional guidelines for in-stream and riparian restoration. However, this was not possible for several reasons, including the inability to extend the deadlines for the product.

APG 4.24 Risk Assessment Research: Human Health Risk Assessment Research

PERFORMANCE

The Integrated Risk Information System (IRIS) is EPA's primary electronic database containing agency consensus hazard identification and dose-response assessments of the human health effects that might result from exposure to various substances found in the environment. The toxicity information and values in this database are used by EPA Program Offices, Regional Offices, States and Tribes to support risk-based decisions, such as clean-up at Superfund sites and as an input toward regulatory decision-making on environmental pollutants. The APG relates to the progress of IRIS in preparing and submitting assessments for peer review under Agency guidelines, and to process these to internet dissemination at www.epa.gov/iris.

✔ GOAL MET

FY 2005: Through FY 2005, initiate or submit to external review 28 human health assessments and complete 12 human health assessments through the Integrated Risk Information System (IRIS). This information will improve EPA's and other decision-makers' ability to protect the public from harmful chemical exposure.

Performance Measures	*Planned*	*Actual*	
• Complete 8 human health assessments and publish their results on the IRIS website.	8	8	✔
• Initiate or submit to external peer review human health assessments of 8 high priority chemicals.	8	8	✔

Data Source(s): IRIS Track: IRIS information and assessments www.epa.gov/iris. Status of individual IRIS assessments cfpub.epa.gov/iristrac/index.cfm.

In 2005, EPA completed eight human health assessments and published results on the IRIS website cfpub.epa.gov/iristrac/index.cfm. EPA also initiated or submitted to external peer review human assessments of 8 high priority chemicals.

Results achieved in FY 2004–2005 represent the result of increased IRIS resources and efforts to deliver assessments, coupled with additional peer review requirements and quality assurance.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-66.

APG 4.25 Conduct Relevant Research: Homeland Security

PERFORMANCE

First responders have been, and will continue to be, called upon to deal with situations involving the introduction of hazardous chemical or biological materials into the environment. Since 9/11, there has been recognition of the need to develop tools and technologies to enhance security and to mitigate the effects of such incidents. These completed products are the first in a series offered to first responders, decision-makers, water utilities, and communities. They will be expanded and improved to include new developments in this arena.

✔ GOAL MET

FY 2005: By FY 2005, provide tools, case studies, and technical guidance so that, by FY 2006, first responders and decision-makers will have the methods, guidance documents, and technologies to enhance safety and to mitigate adverse effects of the purposeful introduction of hazardous chemical or biological materials into the environment. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*	
• Risk assessment toolbox to predict and reduce the consequences of chemical/biological attacks in U.S. cities.	1 toolbox 9/30/05	1	✔
• Technical guidance for water system owners and operators on methods/strategies for minimizing damage from intentional introduction of biological/chemical contaminants.	3 guidance documents 9/30/05	3	✔
• Water system-related case studies that provide a spectrum of contingency planning situations and responses, including one specifically focused on the National Capital area.	1 set of case studies 9/30/05	1	✔

Data Source: National Homeland Security Research Center www.epa.gov/nhsrc. Technical guidance documents www.asce.org/static/1/wise.cfm.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-66.

APG 4.26 Conduct Relevant Research: Regional Scale Ecosystem Assessment Methods

PERFORMANCE

EPA's Environmental Monitoring and Assessment Program (EMAP) develops statistically rigorous, scientifically defensible monitoring designs and responsive biological indicators to determine the condition of the nation's aquatic resources. The purpose of this APG was to: (1) demonstrate the feasibility of the EMAP approach for use nationally by working with the states and regions (EPA Regions 8, 9, and 10) of the Western US to establish the ecological condition of their wadeable streams; (2) establish a baseline against which future ecological changes and trends in stream condition in the west could be measured; and, (3) transfer the technology to our state partners.

✔ GOAL MET

FY 2005: By FY 2005, the baseline ecological condition of Western streams will be determined so that, by 2008, a monitoring framework is available for streams and small rivers in the Western U.S. that can be used from the local to the national level for statistical assessments of condition and change to determine the status and trends of ecological resources. (NEW IN FY05)

Performance Measures	*Planned*	*Actual*	
• Baseline ecological condition of Western streams determined	1 report	1	✔

Data Source(s): Environmental Monitoring and Assessment Program (EMAP) database. See www.epa.gov/emap/ and www.epa.gov/owow/monitoring/.

In 2005, EPA completed a report on the statistical baseline for ecological condition of Western Streams. The ecological research program is in the process of working with the EPA Regions and Western states to help them analyze data for assessments of the condition of streams (CWA 305(b)) within their jurisdiction.

Because of the ecological research program's success in the Western US, EPA's Office of Water requested that EMAP design and assist in the development and implementation of a National Wadeable Streams Assessment. The purpose of this

assessment would be to establish the first estimate of national wadeable stream condition. It would integrate EPA's Western EMAP work with a stream condition assessment for the remainder of the lower 48 states. The sampling was completed in 2004 for this, and the ecological research program is currently working with the Office of Water to produce a report on the overall condition of wadeable streams in the United States.

Data Quality: A description of the data used to measure EPA's performance can be found in Appendix C, page C-66.

Program Assessment Rating Tool (PART)

Western EMAP streams research is a component of ORD's Ecological Research program. OMB reassessed this program most recently in the 2005 PART process. Results will be included in the FY 2007 President's Budget.

Program Evaluations

Office of Research and Development, Board of Scientific Counselors report: "Ecological Research Program Review." Additional information on this report is available in the Program Evaluation Section, Appendix B, page B-20.

Grants Supporting the Achievement of This APG

- Space-Time Aquatic Resources Modeling and Analysis Program (STARMAP).
- EPA STAR Program Grant to N. Scott Urquhart, Colorado State University.
- An Empirical Evaluation of the Performance of Different Approaches to Classifying Reference Conditions in Streams EPA STAR Program Grant to Charles Hawkins, Utah State University.

Goal 4—PART Measures with Data Availability Beyond FY 2005

EPA and OMB established the annual and efficiency measures included on this table through PART Assessments. These measures will be incorporated into EPA's budget and GPRA documents, including the PAR, as data becomes available. The column titled "Data Available" provides the most current estimate for the date EPA expects to report on each measure.

PART Program	PART Measure	Status	Data Available
Endocrine Disruptors	Detailed Review Papers Completed.	Under Development	FY 2006
	Validation Studies Completed.	Under Development	FY 2006
	Peer Reviews.	Under Development	FY 2006
	Prevalidation Studies Completed.	Under Development	FY 2006
	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.	Under Development	FY 2009
	Determination of the extent of the impact of endocrine disruptors on humans, wildlife, and the environment to better inform the federal and scientific communities.	Under Development	FY 2009
	Provide OPPTS with screening and testing assays using rats, fish, amphibians, and invertebrates.	Under Development	TBD
Pesticide Field Program	Cumulative percent reduction in poisoning incidents	Under Development	TBD
	Cumulative reduction in the number of occupational poisoning incidents associated with exposure from pesticides as reported and confirmed since 1998.	Under Development	FY 2007
	Cumulative reduction in the number of systemic poisoning incidents associated with exposure from organophosphate pesticides as reported to Poison Control Centers since 1996.	Under Development	FY 2007
	Annual number of TSCA Section 5 PMNs received that are self audited using complete battery of P2 Framework/PBT Profiler Screening Tools.	Under Development	TBD
	Percentage of pesticides managed to reduce leaching/persistence.	Under Development	TBD
U.S.-Mexico Border	Percentage of homes connected to potable water supply and wastewater collection and treatment systems.	Under Development	4th Quarter/FY 2006
	Additional people served per million dollars (US and Mexico federal expenditures).	Under Development	4th Quarter/FY 2006
	Percentage of water quality standards met in shared and transboundary surface waters.	Under Development	4th Quarter/FY 2006

NOTES

1 U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics. "TSCA New Chemicals Program" Internal monthly report by Chemical Abstract Services.

2 U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics. "High Production Volume Challenge Program, HPV Commitment Tracking System." Available at www.epa.gov/chemrtk/hpvchmlt.htm.

3 Centers for Disease Control, National Center for Health Statistics. National Health and Nutrition Examination Survey: 1999-2002: May 2005. More information is available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm.

4 U.S. EPA, Great Lakes National Program Office and Government of Canada. The Great Lakes Atlas. 1995. EPA 905-B-95-001. Online at www.epa.gov/glnpo/atlas/index.html.

5 U.S. EPA Great Lakes National Program Office. Volume of Sediment Remediated in the Great Lakes Legacy Act Program. Available from GLNPO Sediment Files.

6 U.S. fish and Wildlife Service Status and Trends Report, Corps of Engineers ORM Database.

7 See www.npaf.ru for results from an environmental finance project, www.vti.ru for results from an electrostatic precipitator performance project, and www.cenef.ru for results from an energy-efficient building codes project.

8 North American Development Bank project files for the Border Environment Infrastructure Fund.

9 U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics. "TSCA New Chemicals Program." Internal monthly report by Chemical Abstract Services.

10 U.S. Environmental Protection Agency, Office of Pollution Prevention and Toxics. "High Production Volume Challenge Program, HPV Commitment Tracking System." Available at www.epa.gov/chemrtk/hpvchmlt.htm.

11 Centers for Disease Control, National Center for Health Statistics. National Health and Nutrition Examination Survey: 1999-2002: May 2005. More information is available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm.

12 U.S. Environmental Protection Agency, National Estuary Program GPRA Habitat Report. More information available at www.epa.gov/owow/estuaries.

13 U.S. Environmental Protection Agency. Great Lakes National Program Office analysis of select Great Lakes State of the 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 internal files.

14 U.S. Environmental Protection Agency. Great Lakes National Program Office. Volume of Sediment Remediated in the Great Lakes Legacy Act Program, August, 2005. Available from Great Lakes National Program Office Sediment Files and from: www.epa.gov/glnpo/glindicators/sediments/remediatea.html.

15 U.S. Environmental Protection Agency. Great Lakes National Program Office: Phosphorus Monitoring Program. More information available at www.epa.gov/glnpo/glindicators/water/phosphorusa.html.

16 U.S. Environmental Protection Agency. Great Lakes National Program Office internal tracking and communications with Great Lakes States, the US Department of State and the International Joint Commission (IJC).

17 State/district data provided to the U.S. EPA Chesapeake Bay Program Office.

18 Data from the Louisiana Universities Marine Consortium (LUMCON) and the National Oceanic and Atmospheric Administration (NOAA).

19 For additional information on EPA authorities for conducting work under the Food Quality Protection Act go to www.epa.gov/pesticides/regulating/tolerances.htm.

20 U.S Environmental Protection Agency, Office of Pollution Prevention and Toxics, National Program Chemicals Program, Internal PCB Annual Report for Storage and Disposal of PCB Waste. Centers for Disease Control, National Center for Health Statistics. National Health and Nutrition Examination Survey: 1999-2002: May 2005. More information is available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5420a5.htm.

21 May 27, 2005 issue of Morbidity and Mortality Weekly Report.

22 Source: Great Lakes National Program Office—Great Lakes Fish Monitoring Program, Great Lakes Environmental Database Wildlife Protection Value reference—Great Lakes Water Quality Initiative technical support document for the procedure to determine bioaccumulation factors, EPA-820-B-95-005. Protocol for a Uniform Great Lakes Sport Fish Consumption Advisory—Great Lakes Sport Fish Advisory Task Force. September 1993.

23 Source: Great Lakes National Program Office—Integrated Atmospheric Deposition Network. Before the end of calendar year 2005, Environment Canada is expected to provide concentration information from stations on Lakes Huron and Ontario in order that the complete performance measure can be evaluated.

24 USEPA. April 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). Washington, DC: US Environmental Protection Agency Region III, Chesapeake Bay Program Office and Water Protection Division, and Office of Water/Office of Science and Technology. Available on the Internet: www.epa.gov/region03/chesapeake/baycriteria.htm.