

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.

Goal Purpose

To protect, sustain, and restore our nation's communities and ecosystems, EPA uses a mix of regulatory programs, partnership efforts, and incentive-based approaches. EPA programs ensure that pesticides and other chemicals entering the market meet health and safety standards, chemicals already in commerce will not harm our health or environment, and that action is taken to reduce risks from chemicals of greatest concern.

Many of our programs to achieve and sustain healthy communities are designed to bring tools, resources, and approaches to bear at the local level. We encourage community redevelopment by providing funds to identify, assess, and clean up hundreds of thousands of properties that lie abandoned or unused due to previous pollution. We help promote community involvement and establish a sense of environmental stewardship to sustain

environmental improvements by assisting communities in addressing local pollution problems through partnerships.

We also collaborate with other federal agencies, states, tribes, local governments and many

nongovernmental organizations on geographically based efforts to protect America's wetlands and major estuaries. Working with our partners and stakeholders, we have established special programs to protect and restore our natural resources.

Contributing Programs

- Brownfields
- Chemical Risk Review and Reduction
- Chemical Risk Management
- Chesapeake Bay
- Children's Health Protection
- Commission for Environmental Cooperation
- Community Action for a Renewed Environment (CARE)
- Computational Toxicology Research
- Endocrine Disruptors Research
- Environment and Trade
- Environmental Justice
- Global Change Research
- Great Lakes
- Gulf of Mexico
- Homeland Security Research
- Human Health and Ecosystem Protection Research

- Human Health Risk Assessment
- International Capacity Building
- Lead and Lead Categorical Grant Programs
- Long Island Sound
- Mercury Research
- National Environmental Monitoring Initiative
- National Estuary Program
- Persistent Organic Pollutants
- Pesticides and Toxics Research
- Pesticides Licensing and Field Program
- Smart Growth
- Research Fellowships
- State and Local Prevention and Preparedness
- Targeted Watersheds
- US-Mexico Border Wetlands

Many human health and environmental risks to the American public originate outside our borders. Many pollutants can travel easily across borders—via rivers, air and ocean currents, and migrating wildlife. EPA employs a range of strategies to help mitigate some of these risks, including participation

in bilateral programs, cooperation with multinational organizations, and contribution to a set of measurable environmental and health end points.

Sound science guides us in identifying and addressing emerging issues and advances our understanding of long-standing

human health and environmental challenges. Our cutting edge research helps us better characterize risks and benefits, further our ability to measure and describe environmental conditions, and encourage stewardship and sustainable solutions to environmental problems.

Goal 4 At a Glance



GOAL 4 FY 2006 PERFORMANCE AND RESOURCES

STRATEGIC OBJECTIVE	APG STATUS	OBLIGATIONS	COSTS
 OBJECTIVE 1—CHEMICAL, ORGANISM, AND PESTICIDE RISKS Prevent and reduce pesticide, chemical, and genetically engineered biological organism risks to humans, communities, and ecosystems.	3 Goals Met 3 Goals Not Met 2 Data Available After 11/15/06	\$469,194.2	\$389,810.4
 OBJECTIVE 2—COMMUNITIES Sustain, clean up, and restore communities and the ecological systems that support them.	2 Goals Met 1 Data Available After 11/15/06	\$276,470.5	\$259,481.7
 OBJECTIVE 3—ECOSYSTEMS Protect, sustain, and restore the health of natural habitats and ecosystems.	2 Goals Met 2 Goals Not Met 1 Data Available After 11/15/06	\$201,189.7	\$173,625.4
 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 a better understanding and characterization of environmental outcomes under Goal 4.	3 Goals Met 1 Goal Not Met	\$427,138.5	\$410,018.8
GOAL 4 TOTAL	20 APGs	\$1,373,992.9	\$1,232,936.3

In the Years Ahead. . .

EPA's annual performance goals are stepping stones to longer-range results. These results are specified in a series of "Strategic Targets" that lay out the work we intend to accomplish over the next several years to achieve our objectives under Goal 4. Meeting our annual performance goals moves us closer to such Strategic Targets as:

By 2011, eliminate childhood lead poisoning as a public health concern by reducing to zero the number of cases of children (aged 1-5 years) with elevated blood lead levels.

By 2011, reduce the concentration of pesticides detected in the general population by 50 percent. (Baselines are determined from the Centers for Disease Control's 1999-2002 National Health and Nutrition Examination Survey.)

By 2011, make an additional 1,125 acres of Brownfields ready for reuse from the 2006 baseline.

By 2012, provide safe drinking water to 25 percent of homes in the Mexican border area that lacked access to safe drinking water in 2003. (In 2003, 98,515 homes lacked access to safe drinking water.)

By 2011, working with partners, achieve a net increase of 100,000 acres of wetlands per year with additional focus on biological and functional measures and assessment of wetland condition.

By 2011, prevent water pollution and protect aquatic systems so that the overall ecosystem health of the Great Lakes is at least 23 points on a 40-point scale.

For a complete list of strategic targets, see EPA's new *2006–2011 Strategic Plan*, available at <http://www.epa.gov/ocfo/plan/htm>.



Strategic Objective 1— Chemical, Organism, and Pesticides Risks

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

EPA's pesticide program promotes public health safety, safe and abundant food, worker safety, and protection of land and other media from pesticide contamination. Our FY 2006 efforts put the Agency on a trajectory to provide long-term health benefits by 2011 that include:

- Reducing the concentration of pesticides detected in the general population by 50 percent.
- Protecting workers exposed to pesticides by maintaining or improving upon the current low incident rate.

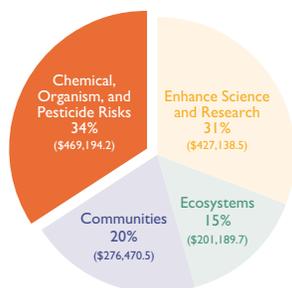
STRATEGIC OBJECTIVE 1—CHEMICAL, ORGANISM, AND PESTICIDES RISKS

APG #	APG Title	APG Status
4.1	Pesticide Tolerance Reassessments	✓ Goal Met for FY 2006
4.2	Managing PBT Chemicals Internationally	✗ Goal Not Met for FY 2006
4.3	Decrease Risk from Agricultural Pesticides—Pesticide Registration	✗ Goal Not Met for FY 2005
4.4	Decrease Risk from Agricultural Pesticides—Acre Treatments with Reduced Risk Pesticides	FY 2006 Data Available in 2007
		✓ Goal Met for FY 2005
4.5	TRI Information	✓ Goal Met for FY 2006
4.6	Exposure to Industrial/Commercial Chemicals	FY 2006 Data Available in 2009
		FY 2005 Data Available in 2009
4.7	Risks from Industrial/Commercial Chemicals	✗ Goal Not Met
4.8	Chemical Facility Risk Reduction	✓ Goal Met for FY 2006

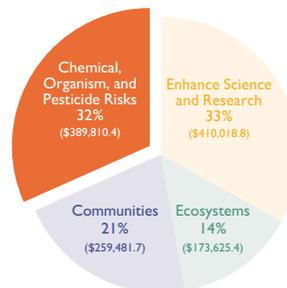
Detailed information on these APGs is provided in Section II.2—Annual Performance Goals and Measures: Detailed Results FY 2003–FY 2006, pages 165–169. Additionally, the data that EPA has used to measure its performance are described in the "Supplemental Information" to this report, provided on the Internet. See pages B-90–B-108 at <http://www.epa.gov/ocfo/finstatement/2006PAR>.

GOAL 4: OBJECTIVE I—CHEMICAL, ORGANISM, AND PESTICIDE RISKS—FY 2006 RESOURCES

FY 2006 Obligations:
Chemical, Organism, and Pesticide Risks
(in thousands)



FY 2006 Costs:
Chemical, Organism, and Pesticide Risks
(in thousands)



FY 2006 RESOURCES FOR PROGRAM PROJECTS SUPPORTING THIS OBJECTIVE*

Program/Projects are EPA's fundamental unit for budget execution and cost accounting, and they serve as the foundation for the Agency's budget. Frequently, program/projects support multiple APGs and objectives. This table lists the program/projects and associated resources that support this objective.

PROGRAM PROJECT	FY 2006 OBLIGATIONS	FY 2006 COSTS
Categorical Grant: Pesticides Program Implementation	\$14,605.4	\$9,235.6
Categorical Grant: Lead	\$14,961.5	\$12,180.0
Commission for Environmental Cooperation	\$510.3	\$335.2
Congressionally Mandated Projects	\$3,117.8	\$7,291.9
Homeland Security: Communication and Information	\$645.8	\$597.2
Homeland Security: Preparedness, Response, and Recovery	\$2,072.6	\$1,684.7
Homeland Security: Protection of EPA Personnel and Infrastructure	\$4,324.7	\$5,588.1
International Capacity Building	\$2,497.5	\$2,637.3
Pesticides: Field Programs	\$25,171.1	\$22,830.0
Pesticides: Registration of New Pesticides	\$54,496.6	\$31,335.0
Pesticides: Review / Reregistration of Existing Pesticides	\$78,948.1	\$57,246.4
POPs Implementation	\$1,953.3	\$2,839.0
State and Local Prevention and Preparedness	\$11,425.1	\$12,381.3
Toxic Substances: Chemical Risk Management	\$9,658.2	\$10,352.2
Toxic Substances: Chemical Risk Review and Reduction	\$43,070.5	\$44,043.0
Toxic Substances: Lead Risk Reduction Program	\$12,022.5	\$13,238.7
TRI / Right to Know	\$13,887.5	\$13,805.2
Administrative Law	\$461.7	\$457.6
Alternative Dispute Resolution	\$130.3	\$155.3
Central Planning, Budgeting, and Finance	\$6,319.8	\$5,837.3
Children and other Sensitive Populations	(\$0.1)	\$6.0
Civil Rights / Title VI Compliance	\$862.0	\$934.4
Congressional, Intergovernmental, External Relations	\$3,241.6	\$3,596.3
Exchange Network	\$3,413.6	\$1,591.1
Facilities Infrastructure and Operations	\$78,308.5	\$76,965.6
Acquisition Management	\$4,072.8	\$4,055.4
Human Resources Management	\$7,267.7	\$6,981.0
Information Security	\$914.9	\$795.5
IT / Data Management	\$56,618.7	\$26,018.5
Legal Advice: Environmental Program	\$4,559.5	\$4,833.7
Legal Advice: Support Program	\$1,946.3	\$2,108.6
Audits, Evaluations, and Investigations	\$2,228.8	\$2,389.6
Regional Science and Technology	\$197.0	\$291.5
Science Advisory Board	\$480.4	\$510.8
Small Minority Business Assistance	\$202.3	\$247.0
Financial Assistance Grants / IAG Management	\$2,844.7	\$2,836.4
Regulatory/Economic-Management and Analysis	\$1,755.2	\$1,578.0
TOTAL	\$469,194.2	\$389,810.4

*Resources associated with Program Projects may not match the Goal and Objective obligations and costs exactly due to rounding.

- Achieving a 50 percent reduction in moderate to severe incidents for 6 acutely toxic pesticides.
- Reducing the percent of urban watersheds that exceed National Pesticide Program aquatic life benchmarks for three key pesticides and reducing the percent of agricultural watersheds that exceed EPA aquatic life benchmarks for two key pesticides.

In addition, the Pesticide Program's success in ensuring that safe pesticides continue to be available to address emergency pest infestations results in avoiding \$1.5 billion in crop losses and \$900 million in termite structural damage each year.

The 1996 Food Quality Protection Act (FQPA) required EPA to reassess the safety of thousands of existing tolerances and tolerance exemptions by August 3, 2006, while simultaneously making determinations about the reregistration of existing pesticides and reviewing the registrations of thousands of pesticide end-use products. EPA substantially succeeded in meeting these important goals.

FQPA required the Agency to complete 33 percent of the required tolerance reassessment decisions within 3 years, 66 percent within 6 years, and 100 percent within 10 years, giving priority to the review of pesticides that pose the greatest risk to public health. EPA readily met the first two statutory deadlines and completed nearly all the remaining

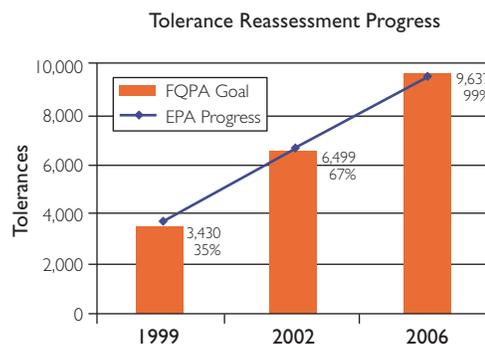
tolerance reassessment decisions within the 10-year timeframe. This tolerance reassessment effort has led to EPA decisions to revoke or modify thousands of existing tolerances and to require the establishment of many new tolerances, improving food safety and human health protection in the United States.

FQPA presented new challenges that strengthened EPA's existing pesticide reregistration program. Thus, the Agency set a goal to complete reregistration of all the food-use pesticides as it completed their tolerance reassessments. Reregistering food-use pesticides meant not only that EPA reassessed their tolerances, but also evaluated the safety of those pesticides for workers and the environment. This effort entailed review of tens of thousands of new studies—a significant amount of additional work to accomplish in 10 years. EPA has completed nearly all of this work:

- Completed 9,637, or over 99 percent of the 9,721 tolerance reassessment decisions required by FQPA.
- Recommended the revocation of 3,200 tolerances.
- Recommended the modification of 1,200 tolerances.
- Confirmed the safety of 5,237 tolerances.

The 84 remaining tolerance reassessment decisions are directly linked to 5 pesticides (aldicarb, oxamlyl, carbaryl, formetanate,

and carbofuran). All of these are carbamates, with aldicarb having 23 of the tolerance decisions pending. The remaining 4 are carbamates linked to 61 of the tolerance decisions, where the individual tolerance has been completed but cannot be counted until the cumulative assessment is done. In order to complete cumulative assessment on these carbamates, EPA first needs to complete aldicarb. Human studies legislation in August 2005 required EPA develop a new rule to guide EPA consideration of such data. Following Congress' direction, EPA established a Human Studies Review Board (HSRD) in February 2006. The Board is tasked with conducting an independent review of EPA data used for this and other purposes, which directly contributes toward EPA's decisions on tolerance reassessments. EPA asked the HSRB to review the results of 29 completed human toxicity studies concerning 12 different



pesticides. The Board recommended EPA incorporate additional human studies data for aldicarb, studies deemed to have been conducted in an ethical manner. EPA concurred with the Board's recommendation resulting in the need to

PESTICIDE PROGRAMS IN THE FIELD

EPA's regional pesticide programs work with states, tribes, local governments, and the regulated community in a variety of efforts to reduce risks associated with pesticide use and protect communities and the environment.

Collecting and Disposing of Pesticides

One objective established in EPA's Strategic Plan is to reduce the worldwide inventory of persistent organic pollutants, such as DDT, Endrin, and Toxaphene. EPA Region 9 staff worked with Arizona and Sonora, Mexico to collect unwanted and obsolete pesticides from farmers in the U.S-Mexico Border region and dispose of them properly. Many of the pesticides collected had been improperly stored, were packaged in deteriorating containers, or posed a risk to children playing in or waste piles. Approximately 36,000 pounds and 300 gallons of waste pesticides were collected in San Luis, Sonora; the Yuma, AZ event brought in approximately 5,600 pounds and 180 gallons of waste pesticides, including Endrin, Diazinon, and 2,4-D—all of which have been cancelled or severely restricted in approved uses.

Pesticide Tribal Circuit Rider

To ensure coverage of Indian country under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), EPA's Region 8 successfully piloted an innovative approach with the Cheyenne River Sioux Tribe. Under a unique cooperative agreement with EPA, the Tribe hosts a pesticide circuit rider who performs program and enforcement activities on several reservations as an extension of Region 8's responsibility for direct implementation. As a result, FIFRA program coverage was extended to two South Dakota reservations: Lower Brule and Crow Creek. Other tribes in the region are following the development and implementation of the circuit rider program with great interest. Region 8 has secured additional EPA funding to add two more pesticide tribal circuit riders to the program.

conduct a new risk assessment. EPA will complete decisions on the remaining tolerance reassessments by 2007 after following all appropriate procedures for the new risk assessment, such as considering public comment.

EPA's pesticide registration program licenses pesticides for use, ensuring they present a reasonable certainty of no harm to human health and the environment. During FY 2006, EPA made impressive progress in reviewing and registering new pesticides, new uses for existing pesticides, and other registration requests in accordance with FQPA standards and Pesticide Registration Improvement Act timeframes. In completing these actions, EPA gave special consideration to susceptible populations, especially children. Specific accomplishments included registering 15 reduced-risk chemicals and biopesticides, 101 new active ingredients, and 235 new uses.

EXPLANATION OF MISSED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.3: EPA did not achieve its annual performance goal for Decreased Risk from Agricultural Pesticides because the program was unable to meet its target for the following measure, "Maintain timeliness of S18 decisions." EPA's response time for S18 decisions (emergency pesticide use exemptions for pest infestations) was slightly higher than the target of 45 days because the focus of the program was diverted to address



Homeland Security and food security concerns associated with soybean rust.

Under this objective, EPA also identifies and reduces risks presented by new and existing chemicals and manages risks associated with national priority chemicals, such as polychlorinated biphenyls (PCBs), asbestos, and lead. The Agency achieved significant results in FY 2006 that contribute to providing many important health benefits by 2011, including:

- Managing risks that EPA has identified as unacceptable from 100 percent of High Production Volume (HPV) chemicals.
- Eliminating childhood blood lead poisoning as a public health concern.
- Reducing to 28 percent the difference in the geometric mean blood lead level in low-income children aged 1-5 as compared to the geometric mean for non-low-income children aged 1-5.
- Eliminating the use of lead in gasoline in 35 countries that still use lead as an additive, affecting more than 700 million people.

EPA's HPV Challenge Program is a key component of the Agency's strategy for identifying and addressing risks posed by chemicals already in commerce. Under the HPV Challenge, the Agency will complete work by December 2006 to provide the public with critical health and environmental effects data on

more than 2,200 chemicals encountered in communities every day. As of August 2006, 373 chemical companies and 104 industry consortia had volunteered to provide data directly to EPA for 1,383 HPV chemicals and to the International Council of Chemical Associations (ICCA), the European component of the program, for 862 chemicals. Data for 1,350 of the HPV chemicals and 360 of the ICCA chemicals



will be available to the public by the end of 2006. U.S. chemical manufacturers voluntarily expanded the HPV program, launching the Extended HPV Program in FY 2006 to make data publicly available for an additional 574 chemicals that achieved HPV status after the EPA HPV Challenge Program was established.

EPA's ability to make HPV data publicly available was substantially enhanced in FY 2006 through the release of the HPV

Information System (HPVIS), a searchable on-line database. As of August 2006 this powerful new tool contained 300 submissions, representing 863 chemical substances, either as single chemical submissions or as members of chemical categories. Additional submissions will be added over time. HPVIS is also being used to run a step-wise Tiering Process to set priorities for the Agency's reviews of individual chemicals and categories of chemicals. The reviews will result in a screening-level characterization of the potential hazards of each chemical examined.

EXPLANATION OF MISSED GOALS (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.6: EPA did not achieve its FY 2004 targets regarding the safe disposal of 8,000 transformers and 6,000 capacitors because EPA's annual performance targets for PCB disposal were established using uncertain and outdated information.

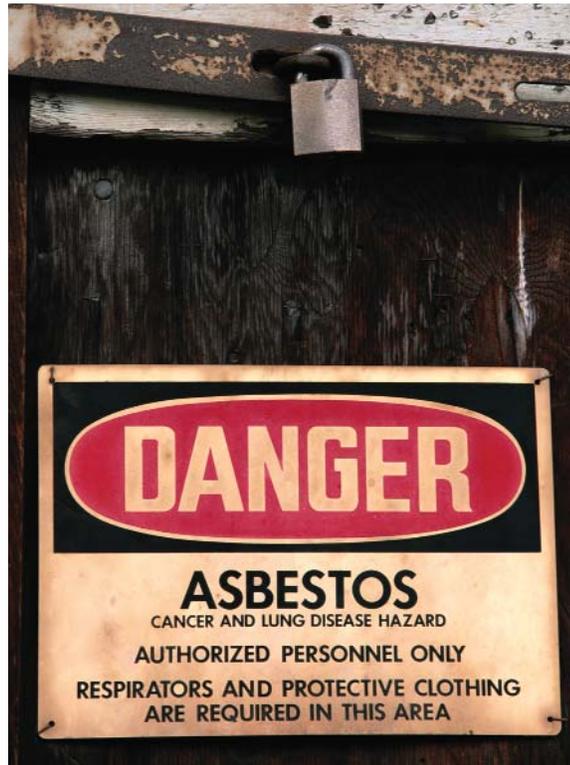
APG 4.7: With regard to the Voluntary Children's Chemical Evaluation Program (VCCEP) Data Needs, EPA could not complete and issue the Data Needs documents because additional information needed to finalize the documents could not be obtained from the volunteer company sponsors. The volunteer company sponsors experienced unexpected delays in responding to requests for additional information.

In addition to focusing on HPV chemicals and reviewing new chemicals before they enter U.S. commerce, EPA also is assessing and acting on several prominent existing chemicals of potential concern. The Agency continued to explore the hazards, sources, and pathways of exposure and risks of perfluorooctanoic acid (PFOA), a chemical widely used in consumer products such as non-stick cookware coating, fire resistance materials, dental floss, and breathable sportswear and clothing. In FY 2006 EPA launched a global PFOA Stewardship Program, under which participating companies have committed to reducing PFOA from emissions and product content by 95 percent no later than 2010 and completely by 2015.

Polybrominated diphenyl ethers (PBDEs) used as flame retardants appear to be persistent and bioaccumulative in the environment. During FY 2006 EPA outlined a comprehensive approach to addressing PBDEs. In addition, pursuant to Great Lakes Chemical Corporation's voluntary phase-out of pentaBDE and octaBDE, on June 13, 2006 EPA issued a final Significant New Use Rule requiring that EPA be notified prior to U.S. manufacture or import of these commercial products for any use.

The Agency has also made substantial progress in addressing national priority chemicals, including asbestos, PCBs, and mercury. In November 2005 EPA

issued an Asbestos Project Plan to (1) improve the state of the science for asbestos; (2) identify and address ways people are exposed to asbestos in products, schools, and buildings and potential ways to reduce exposure; and (3) assess and reduce risks associated with areas that require asbestos cleanup. During FY 2006 EPA continued outreach to raise



public awareness of asbestos issues, for example, releasing a draft brochure for public comment on *Current Best Practices for Preventing Asbestos Exposure Among Brake and Clutch Repair Workers* (August 2006). Other FY 2006 efforts focused on asbestos-contaminated vermiculite attic insulation.

EPA continued to focus on the safe management, cleanup, and disposal of PCBs, issuing *PCB Site Revitalization Guidance* to assist with PCB cleanups,

particularly in Brownfields redevelopment. EPA worked with the Navy to ensure proper disposal of the ex-Oriskany as an artificial reef off the coast of Florida.

EPA's *Roadmap for Mercury*, released in FY 2006, lays out the Agency's direction for mercury and provides the most current programmatic information on ongoing and planned actions to reduce mercury. Through international partnerships, EPA is working both domestically and abroad to reduce the use of mercury in products. Under the National Vehicle Mercury Switch Recovery Program, mercury switches are removed from old automobiles before the vehicles are melted to make new steel, thereby reducing the mercury emitted by electric arc furnaces (See Goal 5). EPA also proposed a rule effectively to close out the use of elemental mercury switches in convenience light assemblies and anti-lock brake systems in post-2003 automobiles.

The proposed Significant New Use Rule for mercury switches in motor vehicles is one way the Agency is promoting reduced use of mercury in products cost-effectively.

Data released in 2005 by the Centers for Disease Control demonstrated 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 from 1999 to 2002. These findings

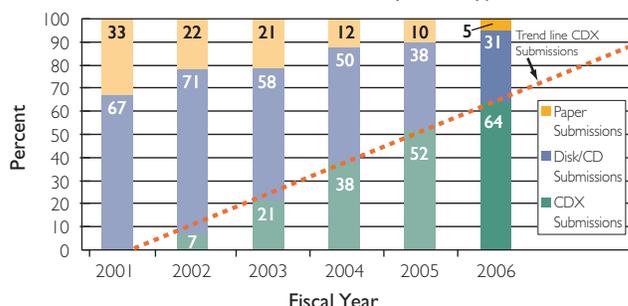
indicate major progress towards EPA's 2008 strategic target for reducing the incidence of childhood lead poisoning to 90,000 cases as well as toward the federal goal to eliminate this disease as a public health concern by 2010. Because the remaining population of at-risk children is often difficult to reach and evidence has shown a higher incidence of childhood lead poisoning among low-income than non-low income children, in FY 2006 EPA established a second long-term goal for the Lead Program to reduce the disparity in blood lead levels between low- and non-low-income children. In addition, the Agency refined its public education and outreach efforts to reduce exposure to at-risk children and launched a targeted grant program aimed at reducing the incidence of child lead poisoning in vulnerable populations. To reduce children's exposure to hazards created by renovation, remodeling, and painting that disturb lead-based paint, EPA proposed a major new rule to establish lead-safe work practices and is currently working

to finalize this rule. EPA, in coordination with the Partnership for Clean Fuels and Vehicles, also assisted 40 countries in phasing lead out of gasoline, including 36 countries in sub-Saharan Africa.

EPA's Central Data Exchange (CDX)—the portal for electronic data reporting for the Agency—supports the Government Paperwork Elimination Act, enhances the quality of information, and allows for more timely collection and publication of environmental data. EPA tracks the utilization of CDX by stakeholders (EPA programs, states, tribes, local governments, and industry), which is correlated with improved data quality and timeliness of information needed to

support environmental program management. For FY 2006, CDX exceeded the majority of its performance measures, for example, achieving a total of 32 systems flowing data, exceeding the FY 2006 target of 29 data flows. At the end of FY 2005, CDX reported 22 data flows in production. Between FYs 2005 and 2006, CDX added 10 data flows—an increase of more than 24 percent. CDX and the Exchange Network achieved a total of 41 state nodes and 1 tribal node in production for FY 2006, exceeding the target for state nodes by 3. The number of states participating in the TRI State Data Exchange expanded from 4 to 12. Due to the addition of new data flows, CDX achieved more than 60,000 registered accounts in FY 2006, exceeding its target by 26 percent.

TRI Submissions by Media Type



EXPLANATION OF MISSED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.2: By supporting the United Nations Environment Programme's (UNEP) publication of the Global Mercury Assessment in 2002 and creation of the UNEP Mercury Program in 2003, EPA catalyzed many efforts to

better characterize mercury use and emissions globally. As part of a voluntary effort to inventory emission data by key sector, for example, China completed a "situational assessment" of mercury use and emissions. The inventory measured coal content in various coals in China, traced which coals were going to which power plants, and arrived at an overall emissions estimate for the entire power sector in China (comprising about 300 plants of 300 mw or greater generating capacity). The Department of Energy took stack emissions measurements at six of these power plants. With these two sets of data, we achieved a clear picture of the emissions from this sector in China.

In India, monitoring and reporting on mercury stack emissions has been delayed due to ongoing national discussions regarding this power sector. As a result, fewer power sector inventories are underway than were planned for FY 2006. EPA continues to work closely with appropriate ministries in the Government of India and will disseminate data to U.S. government partners once they become available.

ADDITIONAL INFORMATION RELATED TO OBJECTIVE 4.1:

PROGRAM EVALUATIONS: OIG Reports: Measuring the Impact of the Food Quality Protection Act: Challenges and Opportunities; and Opportunities to Improve Data Quality and Children's Health through the Food Quality Protection Act.

Eastern Research Group Inc. for EPA Office of Planning, Economics and Innovation and EPA Office of Pollution Prevention and Toxics: Evaluation of EPA Hospitals for Healthy Environment (H2E) Program.

Additional information on these reports is available in the Program Evaluation Section, Appendix A, page A-18.

GRANTS: The Exchange Network Grant Program is used to support the state, tribe, and territories performance measure. Grants are available to build out state IT infrastructure, develop state nodes, and to develop data exchanges with EPA and states.

Lead Categorical Grants contribute significantly to reductions in the incidence of childhood lead poisoning. In FY 2006, the Agency launched a targeted grant program aimed at reducing the incidence of child lead poisoning in vulnerable populations.

PART: *The Existing Chemicals Program was assessed in the 2002 PART process and received a rating of "results not demonstrated." The program was reassessed in the 2003 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include developing an efficiency measure targeting reduced costs to process TSCA 8(e) Notice of Substantial Risk reports and making data available to users.*

The New Chemicals Program was assessed in the 2002 PART process. The program initially received a rating of "adequate." The program was reassessed in the 2003 PART process and received a rating of "moderately effective." In response to the PART process, the program is conducting follow-up actions which include developing an efficiency measure targeting reduced costs during initial stages of the Pre-Manufacture Notice review process resulting from information technology improvements.

The Lead Program (including Lead Categorical Grants) was assessed in the 2005 PART process and received a rating of "moderately effective." In response to the PART process, the program is conducting follow-up actions which include improving oversight of regional office operations and grantee performance, assessing the effectiveness of the program's

outreach activities, and improving the linkage of program goals to the resources supporting their achievement.

The Pesticide Registration Program was first assessed in the 2002 PART process and initially received a rating of "results not demonstrated." The program was reassessed in the 2003 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include the development of outcome efficiency measures and risk-based outcome performance measures, improvements to management grantee performance information, and establishing more substantive linkages between the budget and program performances.

The Pesticide Reregistration Program was first assessed in the 2002 PART process and initially received a rating of "results not demonstrated." The program was reassessed in the 2004 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include the development of outcome efficiency measures and risk-based outcome performance measures, improvements to management grantee performance information, and establishing more substantive linkages between the budget and program performances.

The Pesticide Field Program was assessed in the 2004 PART process and received a rating of "results not demonstrated." In response to the PART process, the program is conducting follow-up actions which include the development of outcome efficiency measures and risk-based outcome performance measures, improvements to management grantee performance information, and establishing more substantive linkages between the budget and program performances.

The Endocrine Disruptor Program (consisting of the OPPTS Endocrine Disruptor Screening Program (EDSP and ORD endocrine disruptor efforts) was assessed in the 2004 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions, which include developing an efficiency measure.

Web Links:

www.epa.gov/tri/report/trime/tutorials/index.htm www.epa.gov/cdx



Strategic Objective 2— Communities

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

MEXICO BORDER

Through the Border Water Infrastructure Program, EPA, Mexico's National Water Commission, and U.S. and Mexican states sharing the international boundary continue to make significant progress in providing access to safe drinking water and adequate wastewater collection and treatment to residents in the border area. Under the program, each federal and state participant provides a share of the capital funding which, together with border area communities' resources, is used to construct water and wastewater plants and pipelines where this infrastructure does not exist, is undersized, or is outdated and obsolete. In FY 2006, EPA implemented a new system to identify the most severe public health and environmental threats for funding priority. All of the EPA-funded projects are beginning design and construction. EPA has solicited project proposals for FY 2007-08, and the evaluation process for ranking projects is underway. The ranking emphasizes program efficiency, based on the number of people served and homes connected to facilities relative to EPA funding. Projects selected, developed, and designed before the new prioritization system was in place are now either completed and operating or nearing completion.

STRATEGIC OBJECTIVE 2—COMMUNITIES		
APG #	APG Title	APG Status
4.9	World Trade Organization—Regulatory System	✓ Goal Met for FY 2006
4.10	Revitalize Properties	FY 2006 Data Available in 2007
		✗ Goal Not Met for FY 2005
4.11	U.S. – Mexico Border Outreach	✓ Goal Met for FY 2006

Detailed information on these APGs is provided in Section II.2—Annual Performance Goals and Measures: Detailed Results FY 2003–FY 2006, pages 169–170. Additionally, the data that EPA has used to measure its performance are described in the “Supplemental Information” to this report, provided on the Internet. See pages B-108–B-111 at <http://www.epa.gov/ocfo/finstatement/2006PAR>.

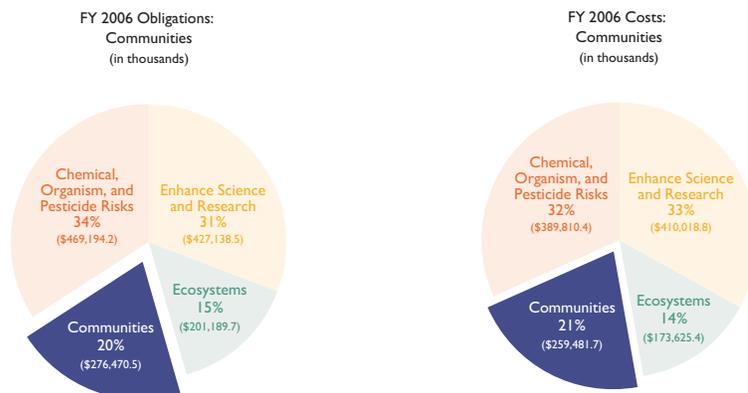
Along the U.S.-Mexico border, the second of the three largest tire piles is expected to be cleaned up by the end of 2006. The Centinela site in the Mexicali area contained approximately 1.2 million scrap tires. Removed tires are used in cement kilns as tire-derived fuel, in asphalt as crumb rubber, and in erosion control embankments, among other uses. Since 2003, close to 2.5 million scrap tires have been cleaned up along the border, using resources from both the United States and Mexico. The number of abandoned scrap tires along the U.S.-Mexico border is estimated at 9-10 million. EPA also has worked closely with Secretariat of Environment & Natural Resources (Secretaría del Medio Ambiente y Recursos Naturales, SEMARNAT) to introduce ultra-low sulfur fuels in the U.S.-Mexico border region.

BROWNFIELDS

EPA's Brownfields Program is on target to achieve its performance goals. Complete performance information for FY 2006 is not yet available because of the grantee reporting cycle; however, EPA expects to report this information in June 2007. FY 2005 results now available show that the Brownfields program achieved its performance goals, assessing 1,381 properties, cleaning up 68 properties, and leveraging 6,128 jobs and \$1 billion in cleanup and redevelopment funding.

EPA's Brownfields Program made 1,088 acres ready for reuse through site assessment or property cleanup. The Agency has expanded the definition of “ready for reuse” to include certification that any required institutional controls are in place.

GOAL 4: OBJECTIVE 2—COMMUNITIES—FY 2006 RESOURCES



FY 2006 RESOURCES FOR PROGRAM PROJECTS SUPPORTING THIS OBJECTIVE*

Program/Projects are EPA's fundamental unit for budget execution and cost accounting, and they serve as the foundation for the Agency's budget. Frequently, program/projects support multiple APGs and objectives. This table lists the program/projects and associated resources that support this objective.

PROGRAM PROJECT	FY 2006 OBLIGATIONS	FY 2006 COSTS
Categorical Grant: Brownfields	\$52,993.5	\$46,542.7
Brownfields	\$8,670.7	\$38,730.2
Commission for Environmental Cooperation	\$3,686.5	\$3,746.8
Congressionally Mandated Projects	\$2,239.8	\$1,310.6
Environment and Trade	\$2,329.6	\$1,914.3
Environmental Justice	\$5,286.1	\$5,723.1
Geographic Program: Other	\$1,726.6	\$905.3
Homeland Security: Communication and Information	\$99.7	\$92.0
Homeland Security: Protection of EPA Personnel and Infrastructure	\$456.0	\$571.3
Brownfields Projects	\$100,288.4	\$51,908.4
Infrastructure Assistance: Mexico Border	\$48,929.1	\$63,248.4
Regulatory Innovation	\$2,702.4	\$2,961.8
US Mexico Border	\$8,003.0	\$6,678.1
Administrative Law	\$72.0	\$71.4
Alternative Dispute Resolution	\$20.8	\$24.5
Central Planning, Budgeting, and Finance	\$1,958.7	\$1,793.3
Children and other Sensitive Populations	\$969.4	\$2,694.9
Civil Rights / Title VI Compliance	\$177.5	\$190.5
Congressional, Intergovernmental, External Relations	\$817.2	\$873.9
Exchange Network	\$529.0	\$248.9
Facilities Infrastructure and Operations	\$9,943.4	\$9,914.8
Acquisition Management	\$524.7	\$507.4
Human Resources Management	\$834.7	\$805.8
Information Security	\$78.0	\$68.0
IT / Data Management	\$5,697.5	\$3,002.9
Legal Advice: Environmental Program	\$703.5	\$724.7
Legal Advice: Support Program	\$257.0	\$271.4
Audits, Evaluations, and Investigations	\$2,086.2	\$2,128.8
Regional Geographic Initiatives	\$7,734.1	\$7,404.1
Regional Science and Technology	\$64.7	\$63.7
Science Advisory Board	\$75.0	\$79.7
Small Minority Business Assistance	\$31.6	\$38.5
Financial Assistance Grants / IAG Management	\$1,628.0	\$1,624.7
Children and Other Sensitive Populations: Agency Coordination	\$4,582.3	\$2,370.7
Regulatory/Economic-Management and Analysis	\$273.8	\$246.2
TOTAL	\$276,470.5	\$259,481.8

*Resources associated with Program Projects may not match the Goal and Objective obligations and costs exactly due to rounding.

EXPLANATION OF MISSED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.10: EPA believes that the 62 percent placement rate (cumulative) for the Job Training Program is primarily linked to two issues. First, grantees may not be reporting job placements following the close of their grant once funding has been exhausted. EPA is working with its job training grantees to establish procedures that will count persons placed after the grant has been closed out. Second, while grantees often train many people, there are a number of reasons why individuals may not be placed. Some graduates elect to pursue further education; others may take a number of temporary contractual work placements before obtaining full-time employment in the construction/remediation/environmental industry.

ENVIRONMENTAL JUSTICE

EPA continued to integrate environmental justice in the Agency's day-to-day work and to address environmental justice concerns, funding and working with 30 community-based organizations nationwide to improve environmental and human health conditions through collaborative problem-solving. In FY 2006, EPA also awarded six grants to community-based organizations located in areas impacted by Hurricanes Katrina and Rita to help address environmental justice concerns.

Canyon Creek Watershed Brownfields Assessment Project

Ouray County, CO is receiving a \$200,000 Brownfields Assessment Grant that targets approximately 2,204 acres of the Canyon Creek watershed impacted by silver and gold mining activities in the late 1800s. In April 2006, 231 patented mining claims within the Canyon Creek Basin were investigated, and 160 of the 232 claims were found to be free of mining contamination. Now that the uncertainty about contamination has been removed, public entities and land trusts are moving forward to acquire the privately held claims. The U.S. Forest Service has acquired 5 claims totaling 55.66 acres; a local land trust is in negotiations to acquire an additional 90 acres to be preserved as backcountry open space. The study also identified those claims with the greatest potential for health and environmental impacts. The second phase of this project entails an assessment to fully characterize 10 of these claims. Ouray County is preparing to undertake cleanup and restoration efforts that may be required.



INTERNATIONAL EFFORTS

EPA is cooperating with Russia to develop and implement joint projects on homeland security research, including a new project on the use of polyguanidine-based disinfectants for protecting drinking water and a proposed project on hazardous

chemical stability in drinking water. Even in the remote Arctic, industrial chemicals such as polychlorinated biphenyls (PCBs) are found in the tissues of local wildlife. As a result of EPA's efforts, in FY 2006 more than 756 metric tons of obsolete pesticides were inventoried and placed into environmentally-safe

Wastewater Collection and Treatment Along the U.S.-Mexico Border

Before 1989, rapid, unplanned urban growth occurred in much of the South Central region of Doña Ana County, New Mexico. During this time, development and construction in the communities of Vado, Del Cerro, La Mesa, San Miguel, Berino, and Chamberino were essentially unregulated. Today, many existing unregulated residential lots contain five or six homes on one acre of land. Wastewater is treated by onsite systems, many including failing septic tanks, and 40 percent of the homes have cesspools. Field observations have shown that surface flow of raw sewage is rampant within all six communities, threatening the shallow groundwater table. Furthermore, the high density of homes combined with a prominent layer of poorly draining soil causes frequent surfacing of contaminated water, posing an immediate threat to public health. Rodents and insects are attracted into the area, and children who enjoy playing in water puddles after rainstorms can stray into contaminated water.

To address this lack of sanitation, EPA has proposed a project to construct a wastewater collection system and wastewater treatment plant. The project, which will cover an area beginning 12 miles south of Las Cruces along Highway 128 and extending to about 10 miles south, will serve a 2000 population of 9,140 and a 2020 population of 17,400.



temporary storage facilities in eight Arctic and sub-Arctic regions of the Russian Federation. To date, EPA's efforts have helped to inventory and store more than 2300 tons of obsolete pesticides.

ADDITIONAL INFORMATION RELATED TO OBJECTIVE 4.2:

PROGRAM EVALUATIONS: EPA Needs to Conduct Environmental Justice Reviews of Its Programs, Policies, and Activities. Additional information on this report is available in the Program Evaluation Section, Appendix A, page A-20.

GRANTS: This objective 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.

EPA's Brownfields Program works in partnership with states, tribes, localities, and other stakeholders to promote the assessment, cleanup, and sustainable reuse of brownfields properties. In 2006, EPA selected 184 communities to receive Brownfields Assessment Grants for inventory, planning, and assessment activities. EPA selected 96 communities to receive Brownfields Cleanup Grants for work at identified properties. In addition, 12 communities received grants to capitalize revolving loan funds that provide loans and subgrants for property cleanup; 12 grants were awarded to establish environmental job training programs in communities impacted by brownfields. EPA awarded nearly \$50 million in grant funding to states and tribes to establish and enhance state and tribal response programs.

PART: *The U.S.-Mexico Border Water Infrastructure Program was assessed in the 2004 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include developing baselines and targets for its long-term and efficiency measures.*

The Brownfield's Program was assessed in the 2003 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include implementing new performance measures, modernizing its information collection infrastructure, and conducting regional program reviews.

Web Links:

<http://www.epa.gov/border2012/>
<http://www.epa.gov/brownfields/>
<http://www.epa.gov/gmpo/>
<http://www.epa.gov/brownfields/>



Strategic Objective 3— Ecosystems

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

ECOSYSTEMS

In FY 2006, the cooperative efforts of EPA, states, tribes, and others helped to restore and protect important ecosystems across the country. Some key successes include:

- Protecting nationally significant estuaries and coastal habitat. EPA and its partners expanded implementation of key actions called for in plans for protecting 28 nationally significant estuaries, including protecting more than 140,000 acres of coastal habitat in these estuarine areas.
- Protecting the Great Lakes. EPA began implementing near-term actions to improve the Great Lakes ecosystem, including remediating contaminated sediments.

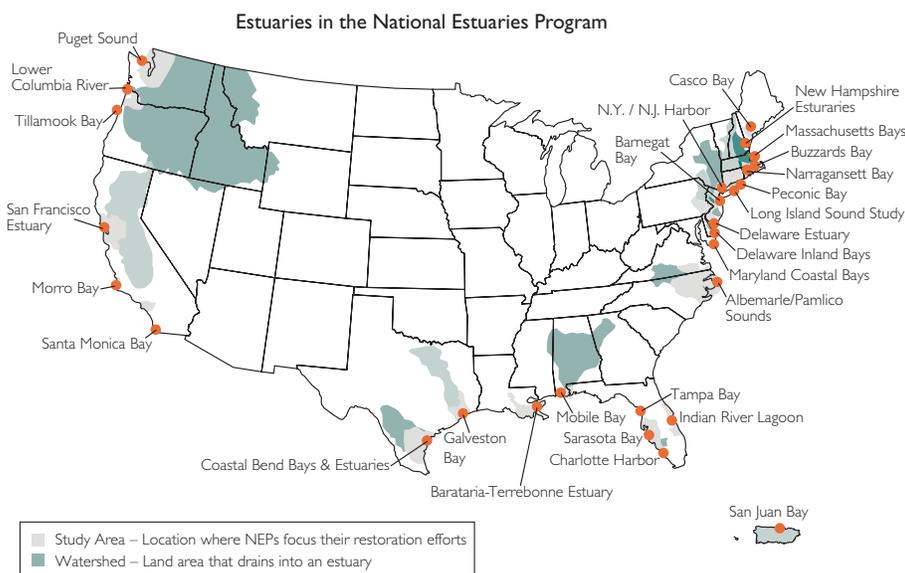
STRATEGIC OBJECTIVE 3—ECOSYSTEMS		
APG #	APG Title	APG Status
4.12	Protecting and Enhancing Estuaries	✓ Goal Met for FY 2006
4.13	Protect Wetlands	FY 2006 Data Available in 2011
		FY 2005 Data Available in 2011
4.14	Great Lakes Ecosystem	✓ Goal Met for FY 2006
4.15	Chesapeake Bay Habitat	✗ Goal Not Met for FY 2006
4.16	Gulf of Mexico	✗ Goal Not Met for FY 2006

Detailed information on these APGs is provided in Section II.2—Annual Performance Goals and Measures: Detailed Results FY 2003–FY 2006, pages 171–173. Additionally, the data that EPA has used to measure its performance are described in the “Supplemental Information” to this report, provided on the Internet. See pages B-111–B-131 at <http://www.epa.gov/ocfo/finstatement/2006PAR>.

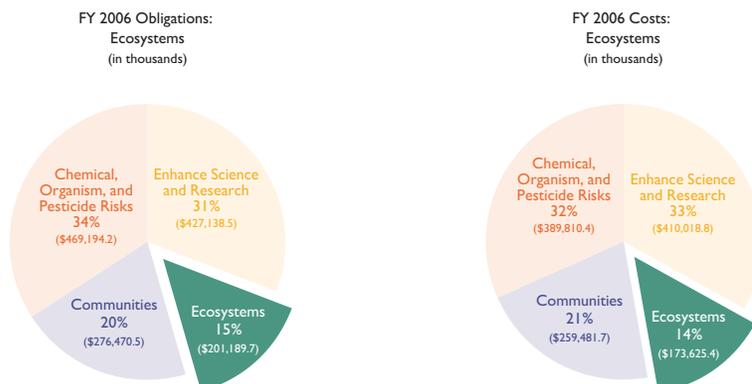
- Protecting the Gulf of Mexico. EPA and states implemented programs, including restoring and protecting coastal habitat and restoring polluted waterbodies, which resulted in an improvement in the overall condition of the Gulf of Mexico.

NATIONAL ESTUARY PROGRAM

The return on EPA’s investment in the National Estuary Program (NEP) is high. In 2006, the 28 NEPs leveraged approximately \$18 million in EPA base funding to generate nearly \$600 million (35:1). (See the NEP GPRA Habitat Report and ww.epa.gov/owow/estuaries). In 2006, NEPs used these and other funds to protect and restore more than 140,000 acres of habitat. These results were obtained via the strong relationships NEPs have forged with a diversity of private, local, state, and federal partners. Because population growth density are rapidly increasing along U.S. coasts, progress in improving water quality and restoring and protecting habitat in these coastal areas will continue to require the concerted efforts of EPA and our state and local partners.



GOAL 4: OBJECTIVE 3—ECOSYSTEMS—FY 2006 RESOURCES



FY 2006 RESOURCES FOR PROGRAM PROJECTS SUPPORTING THIS OBJECTIVE*

Program/Projects are EPA's fundamental unit for budget execution and cost accounting, and they serve as the foundation for the Agency's budget. Frequently, program/projects support multiple APGs and objectives. This table lists the program/projects and associated resources that support this objective.

PROGRAM PROJECT	FY 2006 OBLIGATIONS	FY 2006 COSTS
Categorical Grant:Wetlands Program Development	\$13,336.9	\$13,927.9
Categorical Grant:Targeted Watersheds	\$15,670.4	\$8,040.3
Congressionally Mandated Projects	\$7,377.3	\$3,202.0
Geographic Program: Chesapeake Bay	\$22,273.7	\$24,481.1
Geographic Program: Great Lakes	\$20,044.0	\$20,604.9
Geographic Program: Gulf of Mexico	\$3,712.3	\$3,544.2
Geographic Program: Lake Champlain	\$3,980.8	\$2,429.3
Geographic Program: Long Island Sound	\$958.6	\$1,147.8
Geographic Program: Other	\$6,520.8	\$4,147.6
Great Lakes Legacy Act	\$32,567.0	\$17,784.7
Homeland Security: Communication and Information	\$130.2	\$120.4
Homeland Security: Protection of EPA Personnel and Infrastructure	\$213.1	\$275.6
National Estuary Program / Coastal Waterways	\$26,298.5	\$25,539.2
Wetlands	\$20,449.3	\$20,868.2
Administrative Law	\$93.1	\$92.3
Alternative Dispute Resolution	\$26.3	\$31.3
Central Planning, Budgeting, and Finance	\$5,053.1	\$4,762.5
Civil Rights / Title VI Compliance	\$269.1	\$286.2
Congressional, Intergovernmental, External Relations	\$1,245.7	\$1,305.6
Exchange Network	\$688.3	\$320.8
Facilities Infrastructure and Operations	\$10,889.4	\$10,828.9
Acquisition Management	\$349.0	\$347.6
Human Resources Management	\$797.8	\$780.3
Information Security	\$44.8	\$38.8
IT / Data Management	\$4,231.4	\$2,651.5
Legal Advice: Environmental Program	\$958.9	\$970.5
Legal Advice: Support Program	\$298.1	\$306.1
Audits, Evaluations, and Investigations	\$1,363.3	\$1,461.3
Regional Geographic Initiatives	(\$282.2)	\$1,733.4
Regional Science and Technology	\$100.8	\$101.5
Science Advisory Board	\$96.9	\$103.0
Small Minority Business Assistance	\$40.8	\$49.8
Financial Assistance Grants / IAG Management	\$1,038.4	\$1,022.7
Regulatory/Economic-Management and Analysis	\$353.9	\$318.2
TOTAL	\$201,189.8	\$173,625.5

*Resources associated with Program Projects may not match the Goal and Objective obligations and costs exactly due to rounding.

EXPLANATION OF SIGNIFICANTLY EXCEEDED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.12: It is extremely difficult to determine a realistic acreage goal when so many varying factors can influence that number. Moreover, acreage has varied widely among and between NEPs and from year to year, making it very difficult to determine any pattern or trends in the total number of acres protected or restored from one year to the next. However, because most NEPs have now been implementing protection and restoration projects for 15 years, there is general agreement that most of the "easier" projects have been tackled. Remaining projects will be more difficult—at a minimum, they will require more lead time. In addition, some NEPs with smaller study areas have less land in need of protection or restoration.

As part of the PART process, EPA revised NEP habitat acreage goals. While the program's PART results came too late to affect the FY 2006 strategic planning process, EPA considered them when setting FY 2007 targets. For the NEP acreage strategic target, EPA has increased its goal by 100 percent, setting a national target of 50,000 acres.

WETLANDS

The 2006 National Wetlands Inventory Status and Trends Report showed that from 1998 to 2004 wetland gains exceeded wetland losses in the United

States at a rate of 32,000 acres per year. EPA works with the U.S. Army Corps of Engineers to implement the Clean Water Act (CWA) Section 404 wetlands permit program. Also, through several non-regulatory wetlands programs, EPA works with states and other partners to protect and restore wetlands.

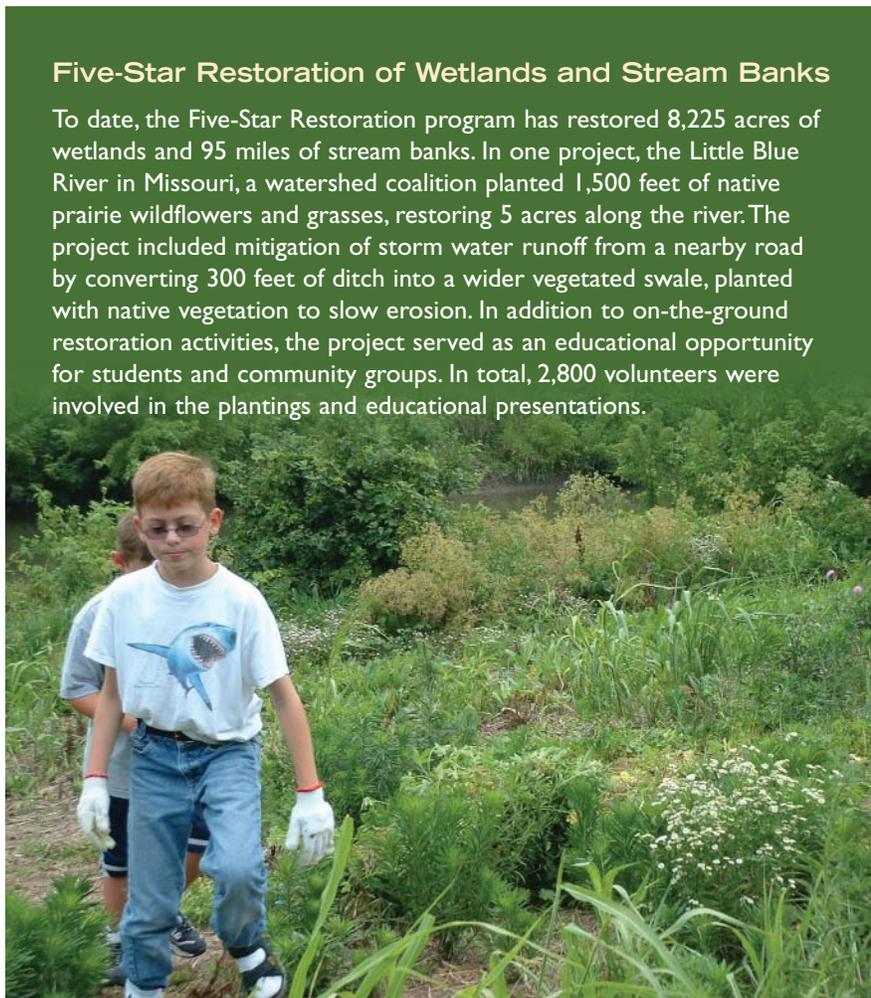
GREAT LAKES

Measures under EPA's Great Lakes annual performance goal 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 would

indicate that fewer toxics are entering the food chain, ecosystem and human health is better protected, fish are safer to eat, water is safer to drink, and beaches are safer for swimming. EPA met its FY 2006 Great Lakes Index target score of 21.1 out of a possible 40, but the decline from 21.9 to 21.1 in FY 2006 is due to the drinking water quality violation. Although the index did not maintain last year's higher score, performance results show long-term progress in the Great Lakes ecosystem condition from a baseline score of 20. Improvements in phosphorus concentrations and air toxics deposition and a decrease in drinking water quality are reflected in the current index

Five-Star Restoration of Wetlands and Stream Banks

To date, the Five-Star Restoration program has restored 8,225 acres of wetlands and 95 miles of stream banks. In one project, the Little Blue River in Missouri, a watershed coalition planted 1,500 feet of native prairie wildflowers and grasses, restoring 5 acres along the river. The project included mitigation of storm water runoff from a nearby road by converting 300 feet of ditch into a wider vegetated swale, planted with native vegetation to slow erosion. In addition to on-the-ground restoration activities, the project served as an educational opportunity for students and community groups. In total, 2,800 volunteers were involved in the plantings and educational presentations.



Ruddiman Creek Cleanup

In May 2006, the community of Muskegon, Michigan celebrated completing the Great Lakes Legacy sediment cleanup project at Ruddiman Creek and Pond. Completed in about 10 months, the project removed 89,870 cubic yards of sediment, which contained approximately 328,000 pounds of lead, chromium, and other contaminants. Wing dams and flow structures were installed to better protect the shoreline during storm events. The disturbed areas are being graded and new native plantings installed to protect the creek banks and begin restoring the site. The project cost about \$13 million, with 65 percent funded through the Great Lakes Legacy Act and 35 percent through the State of Michigan's Clean Michigan Initiative funds. This is the third remediation project completed to date under the Great Lakes Legacy Program.

Further information on the Great Lakes Legacy Act program is available from: <http://www.epa.gov/greatlakes/sediment/legacy/index.html>



score.¹ The drinking water component of the index reflecting three drinking water quality violations in 2005 has proven more volatile than anticipated and is expected to be revised in 2007 to be consistent with EPA's drinking water program. According to the rating guidelines, the drinking water component received a perfect score of 5 when reported in 2005 because no treatment facilities reported drinking water violations. Although only 3 violations were reported throughout the whole of the Great Lakes, a score of 3 was assigned for reporting in 2006 because those 3 violations were in the 2–5 percent range described in the index. There has been no substantial increase to human health risk because of these isolated drinking water violations. State information now shows that only 40 million, rather than 75 million, cubic yards of contaminated sediment require remediation; this is good news for the Great Lakes, but a baseline issue that did not otherwise affect the index in 2006. Thus, while one performance measure under this annual performance goal was not met for FY 2006 and data is unavailable for another, the more comprehensive measure based on the Great Lakes Index indicates that EPA met its goal for FY 2006.

On December 12, 2005, EPA Administrator Steve Johnson announced at the Great Lakes Regional Collaboration that the Bush Administration had identified 48 near-term prioritized actions in support of the Great Lakes. Since then, the Wetlands Working Group has been created

and is making advances such as the Great Lakes Habitat Initiative and Coastal Wetlands Restoration Partnership. The Aquatic Invasive Species Rapid Response Working Group was created and is making progress; the Midwest Natural Resources Group has developed an “Action Plan for Addressing Terrestrial Invasive Species Within the Great Lakes Basin;” and beach sanitary surveys have been developed to help state and local water program managers ascertain local beach contamination and evaluate conditions that pose risks to human health at recreational beaches.

Analysis reported in 2006 indicated that on average, total PCB concentrations in whole Great Lakes top predator fish declined 6 percent annually between 1990 and 2003, meeting the target for declines in concentration trends. Additional reporting for this measure will be delayed until mid-2007, due to a change in principal investigators. Cleanup efforts, such as remediating contaminated sediments and reducing PCB loadings to the Great Lakes, need to be continued and enhanced to maintain the declining trend. Based on Lake Michigan data, current concentrations in lake trout are approximately eight times the wildlife protection value (0.16 ppm), 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 2004, concentrations of PCBs in

U.S. air measured at stations on Lakes Superior, Michigan, and Erie decreased an average of 8 percent annually, meeting the targeted commitment.

In FY 2006, EPA reported the remediation of 375,000 cubic yards of contaminated sediments in calendar year 2005 through the combined efforts of EPA, states, and other partners, including the second and third Great Lakes Legacy Act projects. On May 15, 2006, at the completion of Ruddiman Creek dredging, Congressman Peter Hoekstra stated that, “A lot of times we go to Washington, and we pass a bill, and we declare a victory, and nothing has happened. This is actually a case where we go to Washington, we pass a bill, it comes back, and it almost works exactly the way we envisioned it to work, and that’s because of all the folks that have come together that have shared the same vision.” Having remediated 4.1 million cubic yards of contaminated sediments through calendar year 2005, EPA and its partners have already substantially exceeded the 2008 goal of remediating 3.3 million cubic yards of contaminated sediments.

In 2006, EPA and its state and local partners announced that cleanup efforts had improved conditions enough to remove the Oswego River Area of Concern (AOC) from the list of the most polluted areas in the Great Lakes basin. This is the first U.S. area to come off the list of Great Lakes’ AOCs. The Oswego River has been transformed from an area plagued by a legacy of pollution problems, uncontrolled wastewater

discharges, contaminated fish and fish habitats, and excessive algae growth to an environmental success story. Pollution reduction activities; watershed best-management practices; cooperation by local municipalities, industry, power utilities and the Port of Oswego; and many other improvements have contributed to a healthier watershed. EPA is working with states to restore impaired beneficial uses (such as restrictions on fish consumption due to high contaminant levels) in the AOCs in order to delist eight AOCs by 2010 and all by 2025. Monitoring results in 2006 identified impediments to restoring additional AOCs until 2007. EPA has targeted additional resources to accelerate progress in AOCs in order to meet AOC restoration goals.

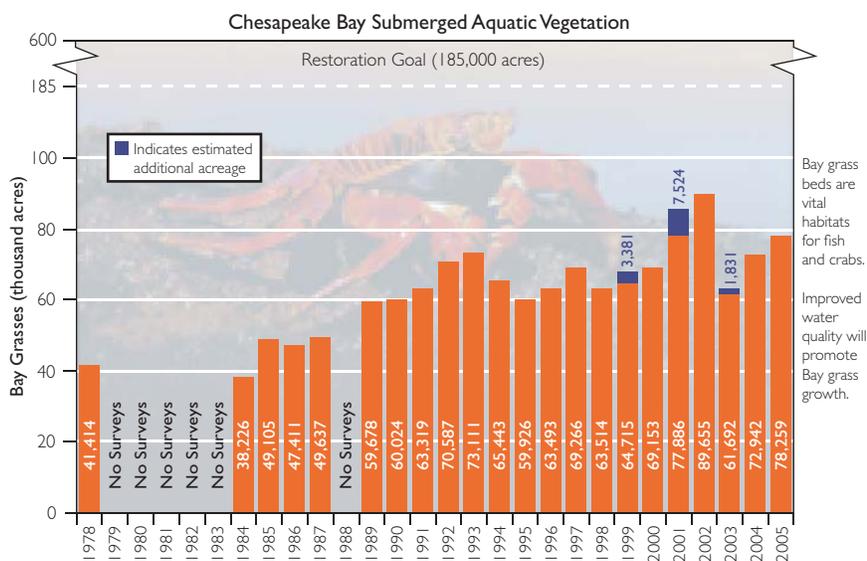
Phosphorus is the limiting nutrient in the Great Lakes that controls algae growth. Lake Erie exceeded phosphorus guideline levels in recent years, particularly in its central basin, which is most representative of the Lake’s anoxia problems. Elevated phosphorus

concentrations in Lake Erie are linked to the increased “dead zone,” or zone of limited dissolved oxygen. FY 2006 data indicate that the targeted concentration level was not met. Exploration of this problem, which was identified by the Great Lakes National Program Office, is being augmented by work with the National Oceanic and Atmospheric Administration (NOAA) and Environment Canada.

CHESAPEAKE BAY

In FY 2006, the Chesapeake Bay Program achieved 42 percent (78,260 acres) of its long-term goal to restore 185,000 acres of submerged aquatic vegetation (SAV) necessary to achieve Chesapeake Bay water quality standards, compared to 21 percent (38,211 acres) in 1984.

To achieve water quality standards in the Chesapeake Bay as soon as possible, EPA is committed to increasing the current pace of restoration. Working with its Bay Program partners, the Agency will make the most cost-effective use of



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

available regulatory, incentive, and voluntary tools; identify opportunities to reduce nutrient and sediment loads; and find new economies and innovations to accelerate progress dramatically. A key strategy to reduce nutrient discharges is implementing advanced wastewater treatment. Another key strategy to reduce nitrogen, phosphorus, and sediment loadings is restoring and protecting riparian forests that prevent sediment and nutrient pollution from entering waterways from the land. Implementing best agricultural management practices to reduce nutrients and sediment is also key to achieving Bay goals, and EPA will work closely with the U.S. Department of Agriculture to promote these efforts.

EXPLANATION OF MISSED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.15: EPA did not meet its FY 2006 goal of restoring acres of SAV to 90,000, as it missed targets for reducing the nutrient (phosphorus and nitrogen) and sediment pollution loads that play a crucial role in restoring SAV. The FY 2006 target for SAV was developed in accordance with an ambitious timeframe that reflects deadlines for 2010 established in *Chesapeake 2000* agreements. To develop the targets included in its 2006-2011 *Strategic Plan*, EPA conducted a “reality-check” assessment of timeframes for accomplishing long-term goals. The FY 2011 target for achieving 45 percent (83,250 acres) of the SAV restoration goal is ambitious, yet realistically reflects this assessment.

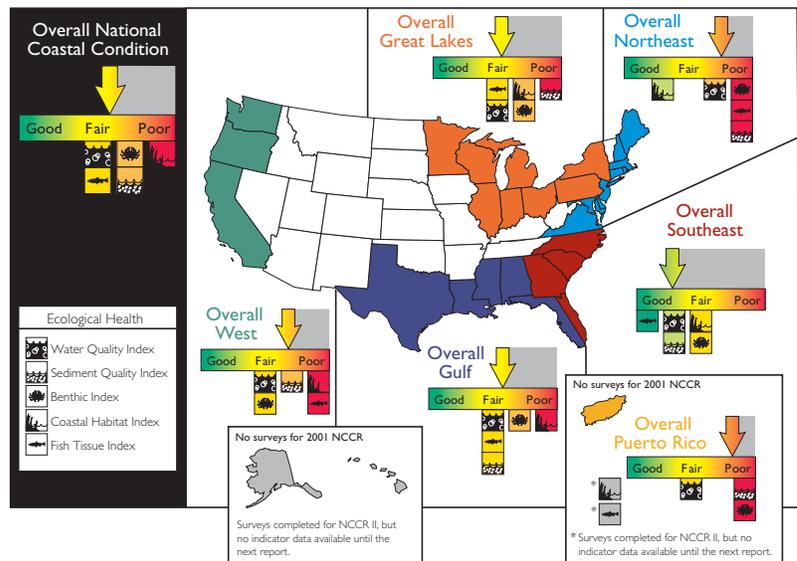
GULF OF MEXICO

The National Coastal Condition Report II released in 2005 describes the ecological and environmental conditions in U.S. coastal waters. It represents a coordinated effort among EPA, NOAA, the U.S. Geological Survey, the U.S. Fish and Wildlife Service, and coastal states. The 2005 Coastal Condition Report was based on data collected from a variety of federal, state, and local sources, most notably EPA's National Coastal Assessment Program. These data sets include samples taken from 1997 to 2000 at more than 191 locations across the Gulf of Mexico. The resulting

ecological assessment of the Gulf shows estuaries to be in fair condition. The condition of the Gulf of Mexico improved from 1.9 in the 2001 report to 2.4 in the 2005 report. There is a data gap of 2 years, with the next report to be released in 2007.

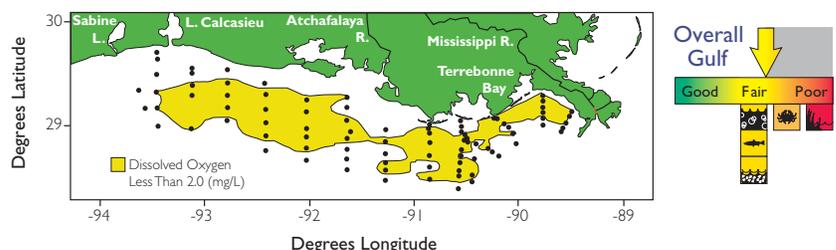
In 2006, the coast-wide extent of the Gulf of Mexico's hypoxic zone was mapped at 17,280 square kilometers (6,662 square miles). The low-oxygen waters extended from near the Mississippi River to the Louisiana-Texas border. The 5-year running average from 2002-2006 is now 14,994, up from the previous average of 14,128.

Overall National Coastal Condition



Source: US EPA National Coastal Condition Report II, December 2004. More information available at <http://www.epa.gov/owow/oceans/nccr2>

Area of Bottom Hypoxia, Gulf of Mexico, July 21-28, 2006



Data provided by N. Rabalais, Louisiana Universities Marine Consortium

EXPLANATION OF MISSED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.16: This goal was not met due to an increase in the hypoxic zone in the Gulf of Mexico. Seasonal formation of hypoxia is influenced by discharges and nutrient loads of Mississippi and Atchafalaya Rivers. The larger hypoxic zone in summer 2006 was attributed to nitrate loading in May. While there was a lower-than-average Mississippi River flow in 2006, the higher nitrate loading in May 2006 resulted in a larger hypoxic zone.

ADDITIONAL INFORMATION RELATED TO OBJECTIVE 4.3:

PROGRAM EVALUATIONS:

Chesapeake Bay Program—Improved Strategies Are Needed to Better Assess, Report, and Manage Restoration Progress, October 28, 2005. Additional information on this report is available in the Program Evaluation Section, Appendix A, page A-20.

GRANTS: 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

Wetland Program Development Grants (WPDG) are critical for building state, tribal and local government capacity to protect and manage 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.

The Great Lakes National Program Office program issues state and tribal grants for Lake-wide Management Plans and Remedial Action Plans (addressing Areas of Concern). The program issues competitive grants addressing Pollution Prevention and Reduction, Habitat (Ecological) Protection and Restoration, Invasive Species, and Strategic or Emerging Issues, Atmospheric Deposition, Fish Contaminants, and Biology. The program also addresses contaminated sediments through grants and through project agreements pursuant to the Great Lakes Legacy Act.

CWA Section 117(e) grants fund the full range of state water quality nutrient reduction programs. 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.

Chesapeake Bay Small Watershed Grants 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.

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.

PART: *The Chesapeake Bay Program is being assessed in the 2006 PART process and results will be included in the FY 2008 President’s Budget.*

Web Links:

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

<http://www.chesapeakebay.net/>

<http://www.ijc.org/php/publications/html/sedrem.html>

Achievements in the Gulf of Mexico

With the support of numerous federal, state, local, and private partners, the Gulf of Mexico Program in FY 2006 reduced impaired water-body listings in the 13 priority areas of the Gulf of Mexico by 20 percent. This achievement is largely attributable to measures the program has taken to improve states’ science and monitoring capabilities, advancing their ability to identify and remediate excess sources of non-point source pollution.

In FY 2006, the Harmful Algal Blooms (HABs) Observing System went “live” in South Florida. Launched in collaboration with the National Oceanic and Atmospheric Administration, the U.S. Geological Survey, and the National Aeronautic and Space Administration, the HABs system is recognized as a flagship model coastal ocean monitoring application for the Gulf Coast Ocean Observing System, currently used to identify and track Red Tide outbreaks in South Florida. The HABs system will provide state public health agencies with more effective tools for protecting the public from respiratory risks along affected bathing beaches and potential consumption of poisoned shellfish. In FY 2007, the application helps support HABs monitoring in South Texas and Veracruz, MX.

To advance best management practices for reducing nutrient discharges and loadings to the Mississippi River Basin, the Gulf of Mexico Program helped to establish a four-region (Dallas, Atlanta, Kansas City, and Chicago), two-office (Office of Water and Gulf of Mexico Program) cooperative. The cooperative is expected more effectively to engage major Mississippi River Basin agricultural producers in the Gulf Hypoxia Reduction Program.

The Gulf Program exceeded its cumulative goal to restore, protect, or enhance coastal and marine habitats by 3,000 acres for FY 2006. In collaboration with the National Oceanic and Atmospheric Administration’s Coastal Restoration Program, the Corporate Wetlands Restoration Program, The Nature Conservancy, and the National Fish and Wildlife Foundation, the Gulf Program has reached 16,458 acres toward a 20,000 acre goal by 2009.





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 a better understanding and characterization of environmental outcomes under Goal 4.

EPA's research programs continue to conduct leading-edge research to provide a sound scientific foundation for EPA's goal of protecting, sustaining, and restoring the health of people, communities, and ecosystems.

In FY 2006, EPA developed an interactive watershed toolkit (Watershed Health Assessment Tools Investigating Fisheries—What If²) to assist environmental managers in developing and implementing solutions to restore damaged areas and protect aquatic systems. By linking habitat quality and aquatic ecosystem response models with a regional hydrologic model that simulates habitat characteristics, managers can determine how fisheries would develop under differing management scenarios.

EPA also completed research to identify the species of mold responsible for causing and exacerbating asthma. This work is important for understanding human health risks and developing effective mitigation strategies following natural disasters. Human health researchers also developed biological models that will help evaluate human risk of exposure to environmental pollutants such as arsenic, based on experimental evidence from laboratory animals. Collaborative

STRATEGIC OBJECTIVE 4—ENHANCE SCIENCE AND RESEARCH		
APG #	APG Title	APG Status
4.17	Validating Assays for Endocrine Disruptors	X Goal Not Met for FY 2006
		X Goal Not Met for FY 2005
4.18	Human Health Risk Assessment Research	✓ Goal Met for FY 2006
4.19	Research on Endocrine Disrupting Chemicals	✓ Goal Met for FY 2006
4.20	Homeland Security Research	X Goal Not Met for FY 2006
		X Goal Not Met for FY 2005

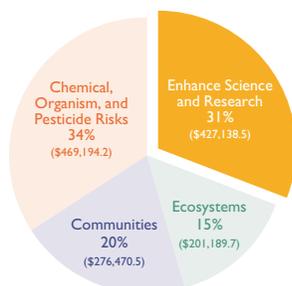
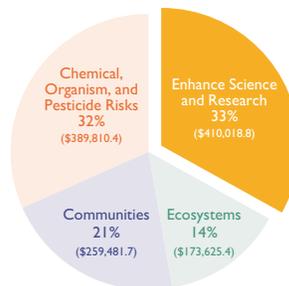
Detailed information on these APGs is provided in Section II.2—Annual Performance Goals and Measures: Detailed Results FY 2003–FY 2006, pages 174–177. Additionally, the data that EPA has used to measure its performance are described in the “Supplemental Information” to this report, provided on the Internet. See page B-131 at <http://www.epa.gov/ocfo/finstatement/2006PAR>.

efforts with other federal agencies have also identified the potential non-residential sources of exposures for several environmental agents known to produce developmental toxicity. This information is essential for risk managers responsible for developing mitigation and prevention strategies to prevent unnecessary exposure to toxic materials in non-residential settings.

Research under EPA's pesticides and toxics research program is directly influencing regulatory actions and risk assessment decisions. Research identifying pesticides to which the young are uniquely sensitive was critical to EPA's decisions to cancel or reduce household and agricultural uses of selected cholinesterase-inhibiting pesticides and to collect

data on comparative sensitivity to further evaluate the risk to infants and children. EPA created and validated a model for assessing the fate and transport of organophosphates as they move from natural source waters through municipal water treatment plants. Further, EPA created a cross-laboratory working group on perfluorinated chemicals (PFCs) research to foster communication and collaboration. PFC research products on characterizing the developmental toxicity and exposure levels in animals, developing analytical methods for characterizing their environmental distribution, and determining their environmental degradation have been incorporated into EPA's risk assessments. Additionally, EPA research found the first evidence for escape of

GOAL 4: OBJECTIVE 4—ENHANCE SCIENCE AND RESEARCH—FY 2006 RESOURCES

FY 2006 Obligations:
Enhance Science and Research
(in thousands)FY 2006 Costs:
Enhance Science and Research
(in thousands)

FY 2006 RESOURCES FOR PROGRAM PROJECTS SUPPORTING THIS OBJECTIVE*

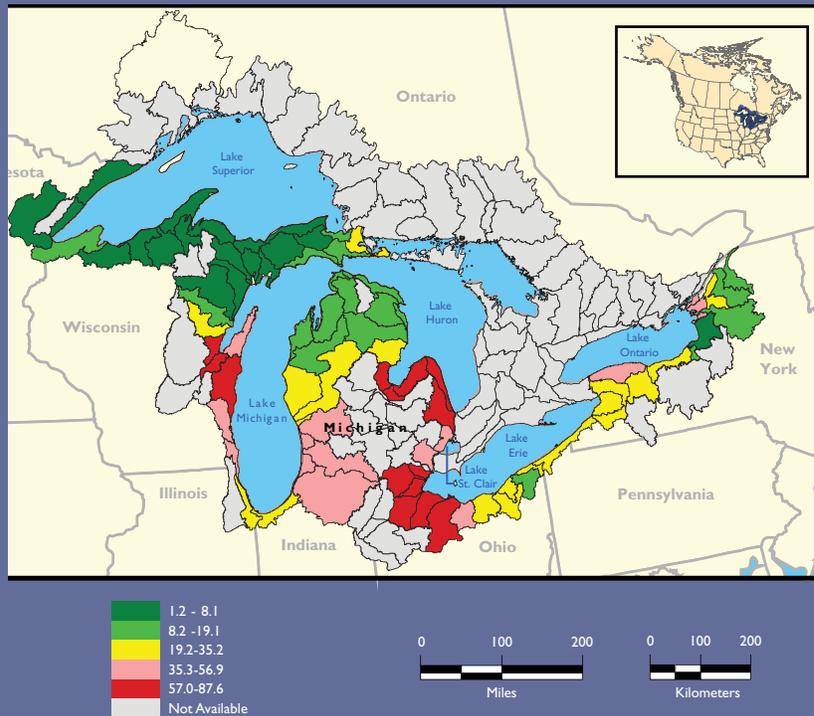
Program/Projects are EPA's fundamental unit for budget execution and cost accounting, and they serve as the foundation for the Agency's budget. Frequently, program/projects support multiple APGs and objectives. This table lists the program/projects and associated resources that support this objective.

PROGRAM PROJECT	FY 2006 OBLIGATIONS	FY 2006 COSTS
Congressionally Mandated Projects	\$16,723.3	\$14,976.6
Endocrine Disruptors	\$7,278.7	\$10,186.5
Homeland Security: Communication and Information	\$465.1	\$430.1
Homeland Security: Preparedness, Response, and Recovery	\$29,804.4	\$36,508.8
Homeland Security: Protection of EPA Personnel and Infrastructure	\$2,623.1	\$3,120.1
Human Health Risk Assessment	\$37,459.7	\$36,405.0
Research: Computational Toxicology	\$13,340.1	\$8,516.5
Research: Endocrine Disruptor	\$11,218.4	\$12,152.4
Research: Global Change	\$17,858.2	\$19,028.7
Research: Human Health and Ecosystems	\$170,479.2	\$173,756.5
Research: Pesticides and Toxics	\$28,675.3	\$30,841.4
Research: Fellowships	\$15,488.8	\$15,764.8
Science Policy and Biotechnology	\$2,041.5	\$2,261.1
Administrative Law	\$332.5	\$329.6
Alternative Dispute Resolution	\$93.8	\$111.8
Central Planning, Budgeting, and Finance	\$7,973.6	\$7,330.9
Civil Rights / Title VI Compliance	\$554.4	\$602.5
Congressional, Intergovernmental, External Relations	\$1,870.6	\$2,131.0
Exchange Network	\$2,458.3	\$1,145.8
Facilities Infrastructure and Operations	\$9,785.1	\$8,604.7
Acquisition Management	\$3,274.4	\$3,259.2
Human Resources Management	\$5,553.8	\$5,496.5
Information Security	\$695.8	\$724.1
IT / Data Management	\$30,573.6	\$5,228.4
Legal Advice: Environmental Program	\$3,264.2	\$3,494.2
Legal Advice: Support Program	\$1,462.4	\$1,596.9
Audits, Evaluations, and Investigations	\$2,727.3	\$2,924.4
Regional Science and Technology	\$87.2	\$179.2
Science Advisory Board	\$345.6	\$367.5
Small Minority Business Assistance	\$145.7	\$177.8
Financial Assistance Grants / IAG Management	\$1,220.4	\$1,229.3
Regulatory/Economic-Management and Analysis	\$1,264.0	\$1,136.4
TOTAL	\$427,138.5	\$410,018.7

*Resources associated with Program Projects may not match the Goal and Objective obligations and costs exactly due to rounding.

Great Lakes Basin Technology

In 2006, EPA developed the Great Lakes Basin (GLB) Landscape Ecology Metric Browser, a product that maps and interprets landscape-scale ecological metrics within 1, 5, and 10 kilometer regions of coastal land in the Great Lakes Basin. EPA's Region 5 and the Great Lakes National Program Office use the browser for planning and decision making.



engineered genes from genetically modified (GM) crops into wild plant populations within the United States. Experimental protocols will be used to help inform regulatory decisions regarding the environmental safety of GM crops.

In the study of endocrine disruptors, EPA scientists have developed cell lines and receptor binding assays to measure a chemical's ability to interact with estrogen (female hormone) and androgen (male hormone) receptors. Additional research has identified the best parameters to use from these assays to develop Quantitative Structure Activity Relationship models to predict whether an untested chemical

may interfere with these hormones. EPA's research is leading to the development of a "tool box" of assays and computational models that could be used to prioritize and screen large numbers of chemicals for their potential to interfere with normal estrogenic and androgenic activity, without having to use large numbers of laboratory animals.

To support homeland security efforts, EPA developed several tools, protocols and tested numerous technologies through the National Homeland Security Research Center that are being used by many federal, state and local organizations. EPA developed a decision support tool (DST) for disposing of residues

from the decontamination of buildings and water systems. The DST was successfully used in response to Hurricane Katrina to assess and locate landfill capacity within the affected regions. The decision to discontinue the burning of debris in favor of demolishing structures was based on the tool's estimates of landfill capacity. The DST also was used during the anthrax response of 2006 to generate a list of incinerators and landfills. However, under the direction of EPA, the contaminated material was sent to and processed at an autoclave in Oneonta, NY to sterilize the wastes according to procedures developed by EPA. Additionally, in the immediate aftermath of Hurricane Katrina, EPA quickly modified its Emergency Consequence Assessment Tool to evaluate risks to human health caused by the flooding. As a result, regional public health officials had instant access to critical information and were able to implement actions to protect public health from contaminants including vibrio cholera, tetanus, E. coli, hepatitis, shigella (dysentery), and vibrio vulnificus. EPA also tested multiple methods for fumigating buildings contaminated with *B. anthracis* spores. The results of these tests contributed to the method used for mold fumigation in Louisiana and Mississippi in response to flooding and for EPA's development of new or modified registration claims against *B. anthracis* spores for building decontamination. EPA also tested several low-cost liquids for the decontamination of H5N1 viruses on indoor and outdoor materials.

EPA's mercury research program continues to increase the accuracy, precision, and effectiveness of continuous emission monitors. This work is critically important to the implementation of the Clean Air Mercury Rule (CAMR), since it will assist EPA, states, and utilities in ensuring that necessary reductions will occur if certain technologies are installed. In 2006, the program conducted field tests of various mercury monitoring technologies at coal-fired utilities to demonstrate their ability to achieve required CAMR performance specifications. Additionally, EPA is evaluating the effectiveness of CAMR in protecting the environment and human health by collecting and analyzing mercury deposition data to study whether mercury "hot spots" already exist and may occur in the future as CAMR is implemented.

EPA continues to conduct research to understand the implications of global change—particularly climate change and variability—for air and water quality, ecosystems, and human health in the United States. The program also leads EPA's participation in the U.S. Climate Change Science Program (CCSP), which coordinates climate change research among federal agencies and produces statutorily mandated assessments of the state of climate change science. The program is producing two of the high-priority CCSP Synthesis and Assessment Products that address some of the CCSP's highest priority research and decision support needs.

In 2006, EPA's human health risk assessment program delivered 16 Integrated Risk Information System (IRIS) assessments to interagency or external peer review, along with 25 Provisional Peer Reviewed Toxicity Values and three microbial risk assessments. Additionally, the program completed the Ozone Air Quality Criteria Document (AQCD) to

support EPA's Office of Air and Radiation's National Ambient Air Quality Standards regulatory decision-making, and it is completing the first external review of the lead AQCD. The Hazardous Organic NESHAP relied on dozens of IRIS assessments, including those for ethylene oxide, butadiene, benzene, acrolein, toluene, and maleic anhydride.

Global Climate Change Research

EPA's Global Change Research Program developed a Climate Assessment Tool that has been incorporated into BASINS, a multi-purpose environmental analysis system that regional, state, and local agencies use to study watershed and water quality. The Climate Assessment Tool will help managers understand how water resources could be affected by a range of potential changes in climate and consider the effectiveness of management practices to increase the resilience of water resources to changes in climate.

Climate change influences the amount and quality of water available to meet human needs and, therefore, can affect a community's ability to meet the requirements of EPA's Combined Sewer Overflow (CSO) Control Policy. EPA completed research in 2006 to characterize the impact of climate change on CSO mitigation efforts in the Great Lakes and New England regions. Results suggest that projected climate change will reduce the effectiveness of CSO abatement measures based on historical precipitation characteristics.

Every day, publicly owned treatment works (POTWs) discharge billions of gallons of effluent to water bodies throughout the United States. Because POTW design and operating costs are closely tied to climatological conditions in the areas they serve, climate change may have important implications over long POTW lifetimes. In 2006, EPA completed a study that characterized the potential effects of climate change on operating costs at 147 POTWs that are discharging to impaired rivers and streams in the Great Lakes Region. Results suggest that climate change could have a significant effect on two of EPA's most important water programs—the National Pollutant Discharge Elimination System permitting and POTW financing through the State Revolving Fund.



EPA's recently completed *Report on the Environment* describes the current status of the human health and the environment using scientifically sound data. This data should ultimately enable the Agency to better articulate its strategic objectives in terms of measurable, meaningful environmental outcomes.

EXPLANATION OF MISSED GOAL (SEE SECTION II.2 FOR PERFORMANCE RESULTS AND TREND INFORMATION):

APG 4.17: The endocrine disruptor assay program discovered a requirement for additional scientific and technical evaluation that had not been anticipated in the original schedule for developing these assays (e.g., aromatase, steroidogenesis, androgen binding). The program also faced unanticipated delays in international decisions on assays being validated in coordination with the Organisation for Economic Co-operation and Development (OECD) (e.g., estrogen and androgen binding assays). Data are now available for several of the assays that were delayed because of scientific and technical issues, and the schedule for OECD participation is now

better understood. Using the FY 2004 PART evaluation as a basis, the program has reassessed its performance measures to account for these developments. The results of this process are reflected in EPA's 2006-2011 *Strategic Plan*.

ADDITIONAL INFORMATION RELATED TO OBJECTIVE 4.4:

PROGRAM EVALUATIONS:

Board of Scientific Counselors (BOSC) Subcommittee on Global Change Research: Review of ORD's Global Change Research Program at the U.S. Environmental Protection Agency. Additional information on this report is available in the Program Evaluation Section, Appendix A, page A-21.

GRANTS: *Columbia Center for Children's Environmental Health.* This research used biomarkers to estimate internal dose of exposure to environmental agents and was the first study to employ such biomarkers of prenatal exposure to assess the effectiveness of the integrated pest management approach for reducing pest infestation levels.

Reducing Uncertainty in Children's Risk Assessment. This research generated the first published physiologically based pharmacokinetic model for a pyrethroid insecticide. This research developed a quantitative approach to estimate internal dose following external exposure that will facilitate the dose-response analysis and risk assessment of a class of insecticides in high use by the American public.

PART: *The Human Health Research Program was assessed in the 2005 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include*

developing ambitious long-term performance targets that clearly define the outcomes that would represent a successful program. The program is also participating in a workgroup comprising representatives from OMB, ORD, and the BOSC to develop long-term measures derived from an independent panel review process.

The Ecological Research Program was first assessed in the 2003 PART process and initially received a rating of "results not demonstrated." The program was reassessed in the 2005 PART process and received a rating of "ineffective." In response to the PART process the program is conducting follow-up actions, which include refining the questions used in independent scientific reviews to improve EPA's understanding of program utility and performance in relation to environmental outcomes.

The Endocrine Disruptors Research Program was assessed in the 2004 PART process and received a rating of "adequate." In response to the PART process, the program is conducting follow-up actions which include clearly articulating R&D priorities to ensure compelling, merit-based justifications for funding allocations. The program's priorities are now clearly articulated in the Endocrine Disruptors Research Plan and a more detailed Multi-Year Plan in which priorities are specifically detailed from 2000 to 2012.

The Global Change Research Program is being assessed in the 2006 PART process and results will be included in the FY 2008 President's Budget.

The Human Health Risk Assessment Program is being assessed in the 2006 PART process and results will be included in the FY 2008 President's Budget.

Web Links:

<http://www.epa.gov/ord/>
<http://www.epa.gov/ord/html/researchstrategies.htm>

NOTES

1. The "fairly poor" rating for the benthic health component of the Great Lakes Index has not changed. Invasive species, particularly zebra and/or quagga mussels, are altering nutrient cycling in the environment and are likely linked to a re-emergence of nuisance algae on Great Lakes beaches and a major decline of the salmon fishery in Lake Huron. Responding to results from the GLNPO biological monitoring program, fisheries managers have cut back salmon stocking numbers in Lake Huron because there is insufficient food for the salmon. These problems are being investigated through monitoring and a proposed request for proposals.
2. Watershed Health Assessment Tools Investigating Fisheries: http://www.epa.gov/athens/research/modeling/cvi_files/WHAT%20IF%20factsheet.pdf#search=%22Watershed%20Health%20Assessment%20Tools%20Investigating%20Fisheries%20E2%80%93%20What%20IF%22.