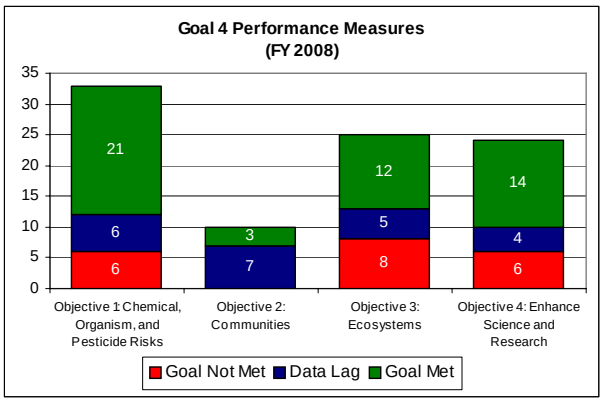
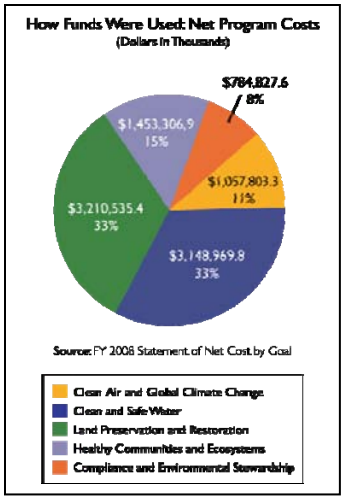
GOAL 4: HEALTHY COMMUNITIES AND ECOSYSTEMS

Goal at a Glance

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

Goal 4 FY 2008
Performance Measures
Met = 50 Not Met = 20 Data Available After November 17, 2008 = 22
(Total Measures = 92)





Goal 4 FY 2008 Performance and Resources		
Strategic Objective	**FY 2008 Obligations (in thousands)**	**% of Goal 4 Funds**
Objective 1 – Chemical, Organism, and Pesticide Risks Prevent and reduce pesticide, chemical, and genetically engineered biological organism risks to humans, communities, and ecosystems.	$475,850.1	33%
Objective 2 – Communities Sustain, clean up, and restore communities and the ecological systems that support them.	$298,998.4	21%
Objective 3 – Ecosystems Protect, sustain, and restore the health of natural habitats and ecosystems.	$272,638.5	19%
Objective 4 – Enhance Science and Research 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.	$405,819.9	28%
Goal 4 Total	$1,453,306.9	100%

"EPA has now completed the reassessment of all pesticides, including those in food and around homes, resulting in the most health-protective standards in the world for pesticide safety."

- Jim Gulliford, Assistant Administrator for the Office of Prevention, Pesticides, and Toxic Substances

Goal Purpose: Healthy Communities and Ecosystems

To protect, sustain, and restore the 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, that pesticides and chemicals already in commerce do not harm U.S. health or environment, and that action is taken to reduce risks from pesticides and chemicals of greatest concern.

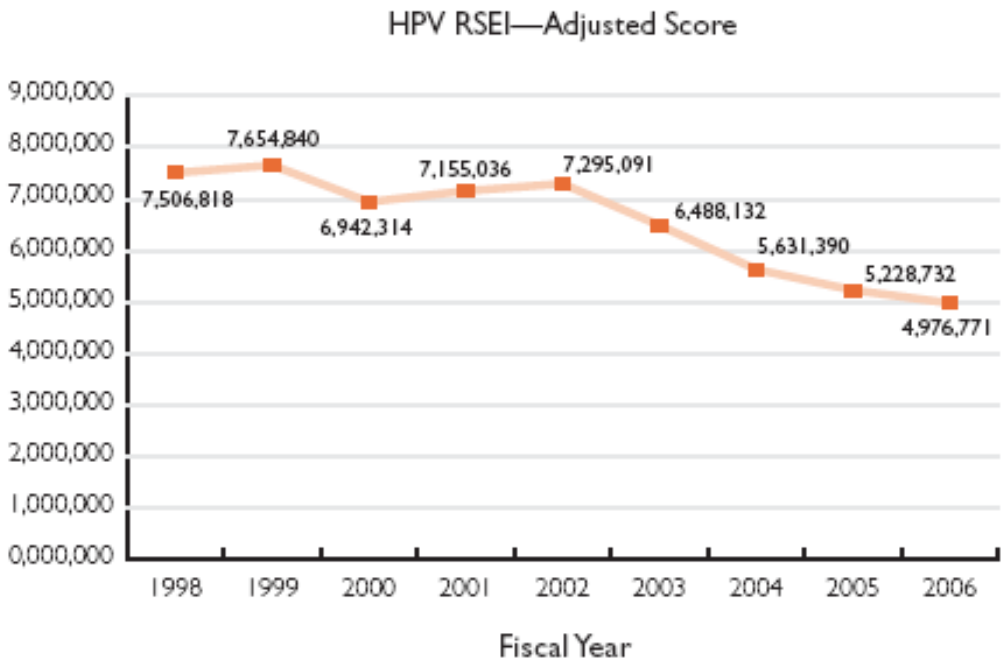
Many EPA programs to achieve and sustain healthy communities are designed to bring tools, resources, and approaches to bear at the local level. The Agency encourages community redevelopment by providing funds to identify, assess, and clean up the estimated hundreds of thousands of properties that lie abandoned or unused due to previous pollution. EPA helps promote public involvement and establishes a sense of environmental stewardship to sustain environmental improvements by forging partnerships with communities to address local pollution problems.

EPA also collaborates 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 partners and stakeholders, EPA has established special programs to protect and restore natural resources.

Some threats to Americans' health and environment originate outside U.S. borders. Many pollutants can easily travel 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 participating in bilateral programs, cooperating with multinational organizations, and contributing to a set of measurable environmental and health end points.

Sound science guides the Agency in identifying and addressing emerging issues and advances its understanding of long-standing human health and environmental challenges. EPA's cutting edge research helps it better characterize risks and benefits, furthers its ability to measure and describe environmental conditions, and encourages stewardship and sustainable solutions to environmental problems.

Data Trends



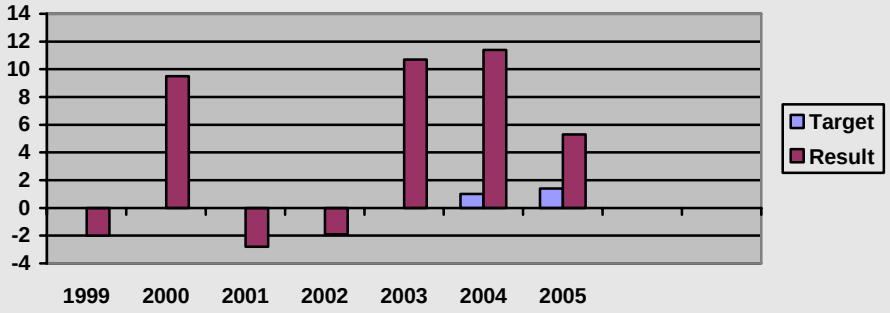
The Risk Screening Environmental Indicators model incorporates data from EPA's Toxics Release Inventory that is combined with release location, toxicity of the chemical, chemical fate and transport, extent of human exposure, and census population data. This information is used to create a numerical Risk Screening Environmental Indicators score that is unit-less and comparable across years. There are close to 650 chemicals included in the inventory and 222 of these are high-production volume chemicals. The Office of Pollution Prevention and Toxics first began targeting high-production volume chemicals through the High-Production Volume Challenge Program in 1998. From 1998 to 2006, the Risk Screening Environmental Indicators model scores for high-production volume chemicals have decreased 30.3 percent.

Data Quality

EPA uses data from its performance measurements to manage and ensure that the data are complete and reliable; they are subject to the Agency's Quality System policies and procedures. Every performance measure in this report has corresponding in-depth information to explain the data's source, limitations, and other factors. This report includes examples in each goal to better inform EPA's stakeholders. For a complete list of this information, visit www.epa.gov/ocfo/budget/2008/verify_validation.pdf. This is particularly helpful for performance measures with data lags in FY 2008 due to reporting cycles.

Performance Measure

Annual Reduction in the Production-Adjusted Risk Based Score of Releases and Transfers of High Production Volume Chemicals From Manufacturing Facilities



What This Shows: This trend is decreasing over time. From 1998 to 2005, Risk Screening Environmental Indicators scores for high-production volume chemicals have decreased 30.3 percent. This trend decreased at an accelerating rate starting in 2002 after the Office of Pollution Prevention and Toxics started making significant resource investments to implement the High-Production Volume Challenge Program.

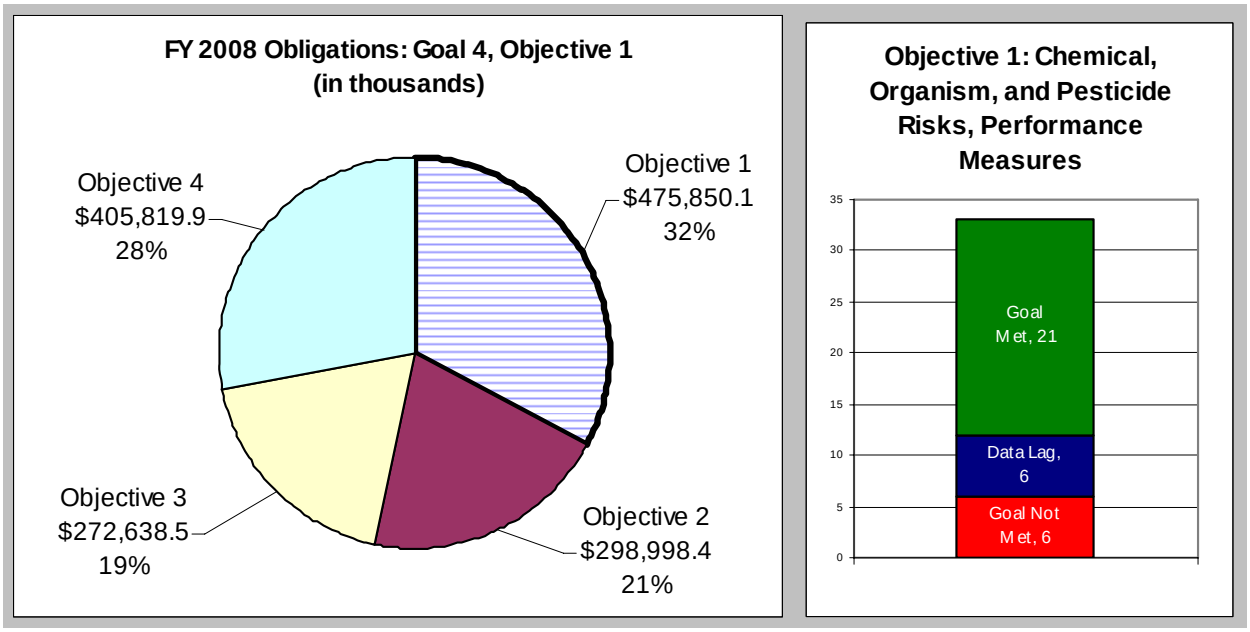
Source: The Risk Screening Environmental Indicators model incorporates data on chemical emissions and transfers and facility locations from EPA's Toxics Release Inventory; chemical toxicity data from EPA's Integrated Risk Information System; stack data from EPA's Aerometric Information Retrieval System/Facility Subsystem and National Emissions Trends Database and the Electric Power Research Institute; meteorological data from the National Climatic Data Center; stream reach data from EPA's Reach File 1 Database; data on drinking water systems from EPA's Safe Drinking Water Information System; fishing activity data from the U.S. Fish and Wildlife; exposure factors from EPA's Exposure Factor Handbook; and population data from the U.S. Census Bureau.

Data Limitations: The Risk Screening Environmental Indicators model relies on data from a variety of EPA and other sources. Toxics Release Inventory data may have errors that are not corrected in the standard inventory quality control process. In the past, the Risk Screening Environmental Indicators model has identified some of these errors and corrections have been made by reporting companies. Drinking water intake locations are not available for all intakes nationwide. In coastal areas, publicly owned treatment works (POTW) water releases may go directly to the ocean, rather than nearby streams. EPA is in the process of systematically correcting potential errors regarding these water releases.

Contributing Programs

Brownfields and Land Revitalization, 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 and Program Efforts, 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, Other Geographic Programs (including Lake Pontchartrain, Puget Sound, and South Florida), Persistent Organic Pollutants, Pesticides and Toxics Research, Pesticides Licensing and Implementation, Smart Growth, Research Fellowships, State and Local Prevention and Preparedness, Targeted Watersheds, U.S.-Mexico Border, Wetlands.

Objective 4.1: Chemical, Organism, and Pesticide Risks



Under the Toxic Substances Control Act (TSCA), EPA is charged with identifying and managing unreasonable risks to human health and the environment associated with chemicals in U.S. commerce. EPA conducts two major activities to fulfill this commitment:

1. Managing risks from new chemicals before they enter commerce.
2. Managing risks from existing chemicals already in commerce that appear on the Toxic Substances Control Act Inventory.

EPA Successfully Reviews 1,200 New Chemicals: Through the new chemicals program, EPA serves as America's gatekeeper, ensuring that new chemicals introduced into U.S. commerce do not pose unreasonable risks to humans or the environment. To mark progress, the program compares incoming Toxic Substances Control Act notices of substantial risk with previously assessed new chemical submissions, to determine whether initial EPA review properly identified those risks. This comparison did not identify any new unreasonable risks 109 out of 110 times from FY 2004 to FY 2007, providing strong testimony to the high-caliber analyses performed for approximately 1,200 new chemicals annually.

Risk Reduction Practices Lower Risk by 39.5 Percent for Major Chemicals: EPA is also charged with assessing and acting on the thousands of chemicals already in commerce. The Agency uses several performance measures to judge its progress, including two that are measured through the Risk Screening Environmental Indicators model, which combines manufacturing chemical data with chemical hazard and U.S. Census data to generate production-adjusted relative risk indices. The Risk Screening Environmental Indicators measure focuses on risk reductions for high-production volume chemicals, including many of the most commonly produced, and might best exemplify EPA's overall progress on existing chemicals over the past decade. Although 2008 results will not be available until FY 2010, due to reporting schedules, newly available data for 2006 show significant progress, bringing a cumulative risk

reduction to 39.5 percent for all chemicals since 2001. For High-production volume chemicals, an additional 1.8 percent reduction was realized for 2006.

New Program Helps Fill Gaps for Chemical Hazard Data: In March 2008, EPA introduced the Chemical Assessment and Management Program (ChAMP) to accelerate the assessment of thousands of unevaluated chemicals. The Chemical Assessment and Management Program formalizes a U.S. international commitment to assess and take action on 6,750 high- and moderate-production volume chemicals (HPVs and MPVs) by 2012, as well as additional initiatives to obtain hazard data for nearly 1,000 inorganic chemicals and to "reset" the Toxic Substances Control Act Inventory.

The Chemical Assessment and Management Program grew out of EPA's High-Production Volume Challenge Program. As of August 2008, chemical companies and industry consortia have voluntarily provided data for 1,386 U.S. high-production volume chemicals and 857 international chemicals under the Chemical Assessment and Management Program. These data are combined with newly available exposure and use information from the updated 2006 the Toxic Substances Control Act Inventory Update Reporting to develop screening level risk-based prioritizations. When exposure or use information is not available, as is the case for most moderate-production volume chemicals, screening-level hazard-based prioritizations are created. In FY 2008, 150 risk-based prioritizations and 14 hazard-based prioritizations were completed. Fifty-five hazard based prioritizations are on track to be completed in early FY 2009. Risk management action will be initiated immediately for chemicals identified under the Chemical Assessment and Management Program as high-priority special concerns.

More Companies Partner With EPA to Assess Risks of Nanotechnology: In January 2008, EPA launched the Nanoscale Materials Stewardship Program. This initiative seeks voluntary information on the hazards and risks of nanoscale materials from manufacturers, processors, users, or importers. Nanotechnology, the study and use of matter on an atomic or molecular scale, offers enormous promise as well as potential liability to impact human health and the environment. EPA is gathering information to support research for these substances while evaluating its regulatory responsibility to protect the environment and human health.

As of August 7, 2008, 20 companies and trade organizations have submitted information under the basic program, and 10 more have committed to submit information in the future. Three companies additionally committed to participate in a more in-depth program. This information is being made publicly available and outreach is ongoing to encourage further participation. In addition, EPA received and took regulatory action on 11 nanoscale materials through the Premanufacture Notice Review Program.

EPA Helps Reduce Perfluorooctanoic Acid (PFOA) Emissions: Under the global Perfluorooctanoic Acid Stewardship Program, the Agency continued its work to reduce the sources and pathways of exposure to perfluorooctanoic acid, a chemical used in many products including Teflon and microwave popcorn bags. Participating companies have committed to reducing perfluorooctanoic acid and related chemicals from emissions and products by 95 percent no later than 2010 and to work toward eliminating emissions and product content by 2015. As of February 2008, the first report shows substantial progress, with three of eight participating companies reporting reductions in perfluorooctanoic acid emissions and related chemicals of more than 98 percent.

EPA Makes Progress in Managing Risks From Legacy Chemicals: New risks issues posed by a set of prominent "legacy" chemicals continue to emerge and require EPA to launch national

efforts to reduce current and future exposure and associated risks. Significant progress has occurred in addressing risks from such as mercury, asbestos, formaldehyde, and polychlorinated biphenyls (PCBs) in FY 2008.

In FY 2008, EPA made progress on many of the commitments outlined in EPA's *Roadmap for Mercury*. Developed in 2006, this roadmap explains how the Agency plans to address mercury issues domestically and internationally. Highlights of progress include:

- Development and application of a mercury products and alternatives database to assess and initiate follow-up regulation action on certain mercury products.
- Publication of a Chemical Management Guide for school administrators.
- Work with states to promote recycling of fluorescent lamps and other best management practices for products such as dental amalgam and non-fever thermometers.

EPA promoted the purchase of non-mercury products through several partnership programs including Environmentally Preferable Purchasing and Partnership for Sustainable Healthcare. In 2008, EPA has also made substantial strides in promoting the reduction of mercury use in products globally through international Mercury Products Partnerships. EPA's work under these partnerships includes efforts to reduce or eliminate mercury in products by exchanging information and expertise, transferring and applying best management practices, developing and improving mercury use and emission inventories, providing technical assistance to implement mercury product substitution and reduction programs, and raising awareness of mercury in products through public education efforts. In addition to building capacity in products inventory development and reducing mercury use in hospitals and schools worldwide, EPA is working with the Basel Secretariat to build capacity in developing countries to address mercury waste.

EPA reviewed and responded to a Toxic Substances Control Act section 21 petition from numerous organizations and individuals concerned about risks to human health and the environment from exposure to formaldehyde in composite wood products. Thorough review during the 90-day petition review period raised new analyses indicating the potential for prolonged exposure to potentially irritating levels of formaldehyde in new homes due to the use of pressed wood products. After careful review, EPA granted the petition in part and denied it in part, deciding to initiate a proceeding to investigate whether and what type of regulatory or other action might be appropriate. EPA plans to issue an advance notice of proposed rulemaking (ANPR) in October 2008, which will focus on irritation concerns associated with formaldehyde exposure from use of pressed wood products in newly built homes. At the same time, EPA will work to develop a better understanding of the pressed wood industry and alternatives to formaldehyde and will initiate development of a more detailed exposure assessment and a hazard characterization that could be used to evaluate an emissions standard approach. EPA intends to hold a number of public meetings to obtain stakeholder input on this issue.

New Rule Reduces Children's Exposure to Lead-Based Paint Hazards: EPA along with other federal agencies such as the Centers for Disease Control and the Department of Housing and Urban Development are continuing to combat childhood lead poisoning. Eliminating this entirely preventable disease is a cross-agency priority as elevated blood lead levels cause neurological damage and developmental delays. The primary source of lead exposure for children is lead-based paint.

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. Because evidence has shown a higher incidence of childhood lead poisoning among low-income children compared to other children, EPA continues to measure this difference. In the early 1990's, there was a 37 percent difference in elevated blood lead levels between low-income and non-low income children. Most recently available data show that this difference has been reduced to 32 percent.

These data show that EPA is on track to meet ambitious federal governmentwide goals to eliminate childhood lead poisoning as a public health concern. The Agency plans to meet these goals by educating the public, establishing protective regulations, training a large workforce in lead-safe work practices, and making funding available. Through three competitive grant programs, EPA is focusing its funding assistance for lead on the most vulnerable populations in states, localities, and tribal areas. The funds from these grant programs enable communities to educate those at risk, provide lead-awareness training and develop local ordinances aimed at lead abatement.

To reduce children's exposure to hazards created by renovation, repair, and painting that disturb lead-based paint, EPA announced the Renovation, Repair, and Painting Rule, which requires renovation contractors to receive training and use lead-safe work practices renovating in housing and child-occupied facilities built prior to 1978. Affected contractors include builders, painters, plumbers, and electricians. Trained contractors must post warning signs, restrict occupants from work areas, contain work areas to prevent dust from spreading, conduct a thorough cleanup, and verify that cleanup was effective. The Renovation, Repair, and Painting Rule will become fully effective in April 2010, when all contractors covered by the rule must be certified in the use of lead-safe work practices. Prior to that time, EPA is currently working closely with the states, tribes, and territories to encourage them to apply for authorization.

Hazardous Chemicals Removed From 33 Indian Country Schools (Region 8)

Region 8 successfully removed more than 24,000 pounds of hazardous chemicals from 33 schools in Indian Country. Chemicals removed included neurotoxins, carcinogens, suspected carcinogens, strong oxidizers, flammable hydrocarbons, corrosive, caustic, toxic, and potentially explosive compounds, and flammable solids that can generate very high temperature and are a fire hazard. Chemicals removed were logged, transported, and disposed of at regulated Resource Conservation and Recovery Act Treatment, Storage, and Disposal Facilities. These efforts have made schools safer for 7,604 Native American schoolchildren and teachers.

Pesticide Concentration in General Population Decreases by 20 Percent: EPA's National Pesticide Program promotes public health, safe and abundant food, worker safety, and protection of land and other media from pesticide contamination. EPA's FY 2008 efforts put the Agency on a path to provide long-term health benefits by 2011 that include:

- Reducing the concentration of pesticides detected in the general population by 50 percent. The progress for FY 2008 shows a reduction rate of 20 percent.

- Protecting workers exposed to pesticides by maintaining or improving on the current low incident rate.

- Achieving a 50-percent reduction in moderate to severe incidents for six 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 National 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 Agency has completed its last Reregistration Eligibility Decision. This multi-year effort resulted in the identification of a wide range of potential risks and developed mitigation to address the risks. Final reregistration eligibility decisions will be implemented over the next five years. Other progress in FY 2008 includes completing 1,194 product reregistrations, as well as registering 12 reduced-risk chemicals and biopesticides, eight new active ingredients, and 327 new uses. The Agency fully achieved all registration review goals for the year, with 46 new dockets opened for public review and comment. EPA also met Pesticide Registration Improvement Act (PRIA) deadlines for 99.7 percent of over 1,600 pesticide registration applications received. This fast and consistent turnaround of registration actions helps increase protection of human health and the environment and achieve the social and economic benefits of using pesticides

Region Partners With Utah Department of Agriculture and Salt Lake City School District for First Region 8 School Integrated Pest Management Project

The Region 8's first school integrated pest management project was initiated with the Salt Lake City, Utah, school district. Salt Lake City schools successfully reduced pesticide applications by 90 percent without an increase in pest problems. The district soon implemented school integrated pest management in all of its school buildings and spearheaded the formation of the Utah Integrated Pest Management Coalition. Due to the overwhelming success of the Salt Lake City Integrated Pest Management program and the creation of the Utah Coalition, the Jordan School District, Utah's largest, also adopted a school integrated pest management policy.

EPA Completes Major Efforts in the Endocrine Disruptor Screening Program: Since the early 1990s, some chemicals found in the environment have been suspected of disrupting normal hormone development in animals, including humans. These chemicals have been termed "endocrine disruptors," and health effects from exposure to them can include reproductive and other hormone-related abnormalities. By the late 1990s, EPA implemented a program that will require industry to screen and test chemicals for their potential to interact with the endocrine system. The program involves:

1. Developing and validating tests for chemicals to be used for screening and testing chemicals.
2. Priority setting by selecting chemicals to be screened.
3. Developing and implementing procedures for requiring testing.

In FY 2008, EPA continued progress on all three of these components, as described below:

- The program completed validation of nine Tier 1 assays; the cumulative number of assays validated through FY 2008 is 12 of 20 assays. The proposed Tier 1 battery was reviewed by

the Federal Insecticide, Fungicide, and Rodenticide Act Scientific Advisory Panel in March 2008. The panel concluded that the set of Tier 1 assays are appropriate to begin screening for disruptors of Estrogen, Androgen, and Thyroid axes.

- The program reviewed public comments on the draft list of pesticide chemicals for Tier 1 screening and prepared the final list for publication.

- Following extended comment periods, the final draft of the implementation policies and procedures, including the draft information collection request and draft 408(p) orders, were completed and submitted for interagency review. As part of the public comment periods, the Agency was seeking and received comments on measures to minimize duplicative testing, promote fair and equitable cost sharing, protect data from inappropriate public disclosure, and other issues.

FY 2008 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 foundations for the Agency's budget. Frequently, Program Projects support multiple performance measures and objectives. This chart lists the Program Projects and associated resources that support this objective.

***Resources associated with Program Projects might not match the goal and objective obligations exactly because of rounding*

Goal 4: Objective 1 - Chemical, Organism, and Pesticide Risks			
Program Project	**FY 2006 Obligations**	**FY 2007 Obligations**	**FY 2008 Obligations**
Categorical Grant: Pesticides Program Implementation	$14,605.4	$13,172.1	$14,413.9
Categorical Grant: Lead	$14,961.5	$21,329.7	$14,785.2
Commission for Environmental Cooperation	$510.3	$355.4	($0.3)
Congressionally Mandated Projects	$3,117.8	$1,140.3	($103.6)
Endocrine Disruptors	$0.0	$9,870.4	$6,466.8
Homeland Security: Communication and Information	$645.8	$1,006.9	$797.5
Homeland Security: Preparedness, Response, and Recovery	$2,072.6	$5,085.8	$5,876.2
Homeland Security: Protection of EPA Personnel and Infrastructure	$4,324.7	$3,463.3	$3,106.9
International Capacity Building	$2,497.5	$3,193.8	$2,211.3
Pesticides: Field Programs	$25,171.1	$22,968.0	$5,807.0
Pesticides: Registration of New Pesticides	$54,496.6	$62,365.2	$1,904.8
Pesticides: Review / Reregistration of Existing Pesticides	$78,948.1	$74,150.5	$4,441.3
POPs Implementation	$1,953.3	$414.7	$29.0
Science Policy and Biotechnology	$0.0	$1,208.1	$1,650.5
State and Local Prevention and Preparedness	$11,425.1	$12,428.7	$11,122.0
Toxic Substances: Chemical Risk Management	$9,658.2	$8,294.1	$6,529.4

Toxic Substances: Chemical Risk Review and Reduction	$43,070.5	$46,152.7	$49,709.1
Toxic Substances: Lead Risk Reduction Program	$12,022.5	$13,720.3	$12,701.7
TRI / Right to Know	$13,887.5	$14,626.8	$15,064.3
Administrative Law	$461.7	$537.4	$614.1
Alternative Dispute Resolution	$130.3	$130.9	$149.0
Central Planning, Budgeting, and Finance	$6,319.8	$7,127.4	$8,419.2
Children and other Sensitive Populations	($0.1)	$0.0	$0.0
Civil Rights / Title VI Compliance	$862.0	$848.1	$826.2
Congressional, Intergovernmental, External Relations	$3,241.6	$3,343.6	$3,270.8
Exchange Network	$3,413.6	$3,738.2	$2,583.1
Facilities Infrastructure and Operations	$78,308.5	$76,955.9	$67,787.9
Acquisition Management	$4,072.8	$4,537.5	$5,498.1
Human Resources Management	$7,267.7	$6,891.6	$7,165.1
Information Security	$914.9	$949.9	$1,310.7
IT / Data Management	$56,618.7	$58,348.0	$52,961.2
Legal Advice: Environmental Program	$4,559.5	$5,075.4	$5,218.5
Legal Advice: Support Program	$1,946.3	$1,721.9	$1,951.6
Audits, Evaluations, and Investigations	$2,228.8	$2,372.0	$2,834.5
Regional Science and Technology	$197.0	$207.5	$105.3
Science Advisory Board	$480.4	$520.7	$600.6
Small Minority Business Assistance	$202.3	$256.3	$310.3
Financial Assistance Grants / IAG Management	$2,844.7	$1,840.8	$2,074.5
Regulatory/Economic-Management and Analysis	$1,755.2	$1,884.8	$1,821.8
Pesticides: Protect Human Health from Pesticide Risk	$0.0	$0.0	$85,098.3
Pesticides: Protect the Environment from Pesticide Risk	$0.0	$0.0	$53,442.0
Pesticides: Realize the Value of Pesticide Availability	$0.0	$0.0	$15,294.1
Total	**$469,194.2**	**$492,234.7**	**$475,849.9**

Additional Information Related to Objective 1

Grants:

Lead Categorical Grants contribute significantly to reductions in the incidence of childhood lead poisoning. They are used primarily to support state and EPA direct implementation of the TSCA Section 404(g) lead-based paint professionals certification and training program, grants to reduce lead risks on tribal lands, and two programs targeting populations of children deemed most at risk of exposure to lead-based paint.

Web Links:

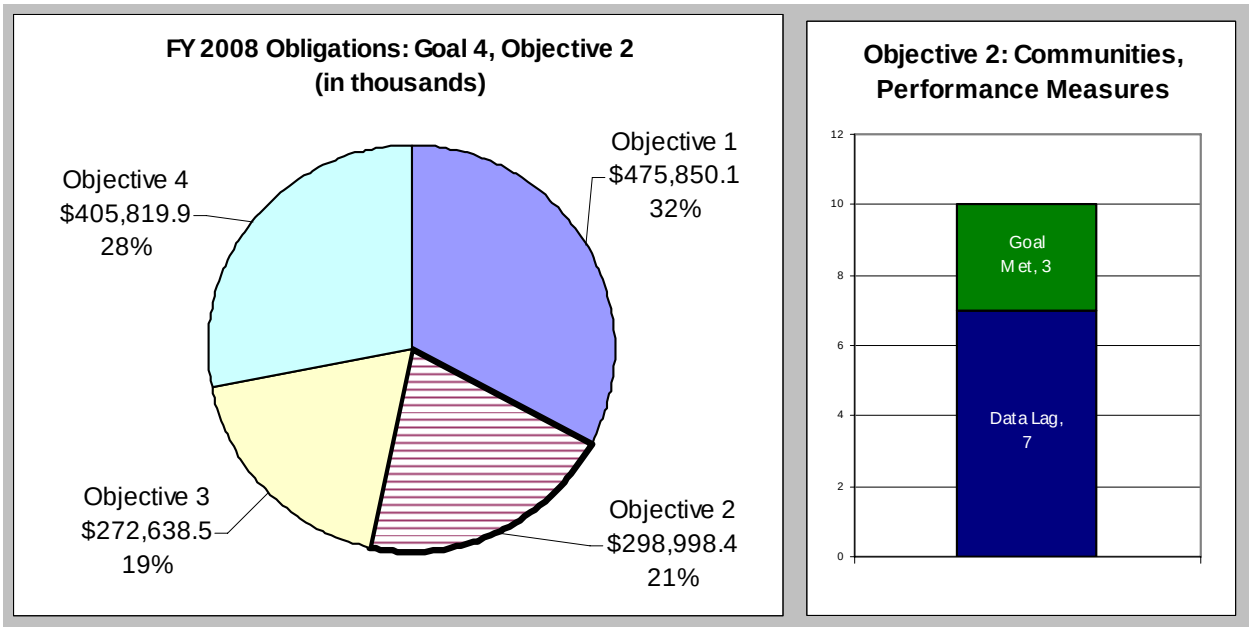
Office of Pollution Prevention and Toxics: www.epa.gov/oppt

New Chemicals Program: www.epa.gov/oppt/newchems
Chemical Information and Data Development: www.epa.gov/oppt/chemtest
Lead in Paint, Dust, and Soil: www.epa.gov/oppt/lead
Lead Professionals: www.epa.gov/lead/pubs/traincert.htm

Program Assessment Rating Tool (PART):

In FY 2008, EPA developed and implemented an action plan for all Agency Program Assessment Rating Tool measures in response to a government-wide Agency Program Assessment Rating Tool measure review. The plan leveraged ongoing strategic and annual planning and reflected performance measure improvements. The tables of measures and results provided in Section II of this report, "Performance Results," identify all Program Assessment Rating Tool measures, which make up more than two-thirds of EPA's performance measures. Please refer to www.expectmore.gov for more detailed information.

Objective 4.2: Communities



EPA Continues to Revitalize Contaminated Property and Leverage Jobs: EPA's Brownfields and Land Revitalization Program is dedicated to revitalizing real properties where expansion, redevelopment, or reuse may be complicated by hazardous substances, pollutants, or contaminants. The Brownfields program works in partnership with states, tribes, and localities to promote the assessment, cleanup, and sustainable reuse of brownfields and other contaminated properties.

Although complete FY 2008 performance information will not be available until March 2009 due to grantee reporting schedules, EPA is on track to achieve its FY 2008 Brownfields performance goals. FY 2007 results now available show that the program achieved its FY 2007 performance goals, assessing 1,371 properties, cleaning up 77 properties, and leveraging 5,209 jobs and $1.7 billion in cleanup and redevelopment funds. In addition, the Agency made 2,399 acres ready for reuse through site assessment or property cleanup. Progress the Brownfields program made in FY 2008 includes:

- Started an initiative to work with communities and incorporate sustainable development into the planning, design, and implementation of their Brownfields projects.
- Announced and awarded four geographically based technical assistance Brownfields grants, which will help communities better understand the health impacts of brownfield sites and science and technology related to brownfield activities.
- Trained and conducted outreach to more than 5,500 communities and stakeholders at the Brownfields 2008 National Conference in Detroit, Michigan.

Agency Expands Emergency Response Plans and Provides 15,000 More Homes With Wastewater Sanitation: The U.S.-Mexico Environmental Program (Border 2012) is a collaboration between the United States and Mexico to improve the environment and protect the health of the nearly 12 million people living along the border. Progress includes improvements to wastewater infrastructure systems, creation of greenhouse gas emission inventories, removal of 4 million scrap tires, establishment of a post-graduate degree program at Mexico's Institute of Public Health, and implementation of 15 sister cities' emergency response plans to better protect residents along the border.

US-Mexico Border Drinking Water Improvements

In 2008, following finalization of a fiscal management policy for the US-Mexico Border Water Infrastructure Program in August 2007, the program has:

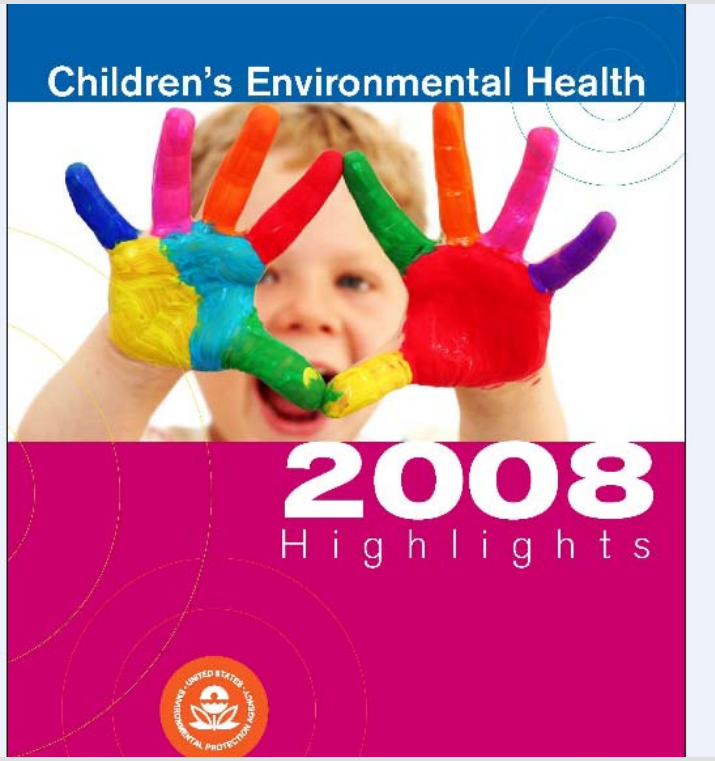
- Made 5,162 new drinking water connections
- Made 31,686 new wastewater connections

The program met the FY 2008 target of 2,500 drinking water connections with a total of 5,162 connections made in 2008. The program also met the FY 2008 target of 15,000 additional homes served with adequate wastewater sanitation with 31,686 wastewater connections completed in 2008.

Through Work Within Eurasia, EPA Continues to Strengthen International Environmental Efforts: To meet many of our domestic environmental protection goals, we must address international sources of pollutants. For example, in 2008 EPA developed the 10 Year Framework with China for Energy and Environment Cooperation. The U.S. and China created the Framework out of the Strategic Economic Dialog to ensure that shared, priority energy and environment issues continue to receive long-term, high-level attention. To facilitate development and implementation of the Framework, the U.S. and China established a joint working group including, the White House, Treasury, Department of State, Energy, and EPA. The White House designated EPA to lead the development and implementation of environmental and health action plans on clean water and clean air under the Framework.. Also, EPA, in partnership with United Nations Environment Programme (UNEP) and over 100 additional partners, has encouraged the phase-out of leaded gasoline in over 175 countries impacting a population of over 6 billion and introduced low-sulfur levels to over 40 countries benefiting approximately 4 billion people.

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, over 4,100 tons of obsolete pesticides have been inventoried and placed into safe storage in 10 Arctic and sub-Arctic regions of Russia since 2003. This includes safe storage of over 70 tons of mercury-containing pesticides, over 320 tons of POPs-containing pesticides and over 1,500 tons of POPs and mercury mixes. The safe storage of these pesticides reduces environmental releases and exposure to a population of over 17 million people residing in these ten regions.

The publication *Children's Environmental Health: 2008 Highlights* provides updates on actions that EPA is taking to protection children from environmental dangers. For example:



Latino Outreach to Prevent Pesticide Poisoning: An outreach campaign during National Poison Prevention Week targeted Latino families and reached 32 million people in the United States and Latin America with the message "Children act fast, and poisons do, too!" American Association of Poison Control Centers data show that more than 50 percent of the 2 million incidents of exposure to chemicals and other materials each year involve children younger than six, with 90 percent of calls concerning home exposures. EPA's Pesticides Hispanic Outreach Initiative reduces exposure risk by showing how to minimize exposure, defining the symptoms of pesticide poisoning, and providing information on where to get help. To read more about how all programs in the Agency are acting to protect children's environmental health, see: http://yosemite.epa.gov/ochp/ochpweb.nsf/content/2008_highlights.htm/$File/OCHP_2008_Highlights_508.pdf

FY 2008 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 foundations for the Agency's budget. Frequently, Program Projects support multiple performance measures and objectives. This chart lists the Program Projects and associated resources that support this objective.

***Resources associated with program projects might not match the goal and objective obligations exactly because of rounding.*

Goal 4: Objective 2 - Communities			
Program Project	**FY 2006 Obligations**	**FY 2007 Obligations**	**FY 2008 Obligations**
Categorical Grant: Brownfields	$52,993.5	$49,267.2	$52,612.1
Brownfields	$8,670.7	$16,717.8	$15,382.1
Commission for Environmental Cooperation	$3,686.5	$3,855.6	$4,291.4
Congressionally Mandated Projects	$2,239.8	$492.5	($49.8)
Environment and Trade	$2,329.6	$3,860.0	$4,007.9
Environmental Justice	$5,286.1	$7,468.2	$4,813.3
Geographic Program: Other	$1,726.6	$3,590.2	$4,433.3
Homeland Security: Communication and Information	$99.7	$157.7	$127.6
Homeland Security: Protection of EPA Personnel and Infrastructure	$456.0	$326.0	$297.9
Brownfields Projects	$100,288.4	$115,480.9	$97,046.6
Infrastructure Assistance: Mexico Border	$48,929.1	$53,967.2	$65,100.5
POPs Implementation	$0.0	$1,698.6	$2,099.2
Regulatory Innovation	$2,702.4	$3,175.8	$3,681.2
US Mexico Border	$8,003.0	$5,727.9	$6,043.6
Administrative Law	$72.0	$85.6	$99.4
Alternative Dispute Resolution	$20.8	$22.6	$24.9
Central Planning, Budgeting, and Finance	$1,958.7	$2,092.1	$2,483.7
Children and other Sensitive Populations	$969.4	($57.0)	($24.1)
Civil Rights / Title VI Compliance	$177.5	$181.6	$179.0
Congressional, Intergovernmental, External Relations	$817.2	$858.0	$850.4
Exchange Network	$529.0	$588.7	$415.0
Facilities Infrastructure and Operations	$9,943.4	$10,041.7	$9,217.9
Acquisition Management	$524.7	$673.6	$729.1
Human Resources Management	$834.7	$799.3	$836.8
Information Security	$78.0	$84.1	$132.9
IT / Data Management	$5,697.5	$6,130.9	$5,772.7
Legal Advice: Environmental Program	$703.5	$775.2	$818.2
Legal Advice: Support Program	$257.0	$246.4	$274.8
Audits, Evaluations, and Investigations	$2,086.2	$2,312.4	$2,625.7
Regional Geographic Initiatives	$7,734.1	$6,281.4	$5,529.5
Regional Science and Technology	$64.7	$58.2	$54.4
Science Advisory Board	$75.0	$82.9	$97.2
Small Minority Business Assistance	$31.6	$40.8	$50.2
Financial Assistance Grants / IAG Management	$1,628.0	$1,264.8	$1,431.5

Children and Other Sensitive Populations: Agency Coordination	$4,582.3	$4,978.9	$7,217.5
Regulatory/Economic-Management and Analysis	$273.8	$300.1	$294.8
Total	**$276,470.5**	**$303,627.9**	**$298,998.4**

Additional Information Related to Objective 2

Grants:

Grants provided to the Border Environment Cooperation Commission and the North American Development Bank support development of water infrastructure. In FY 2008, the U.S.-Mexico Border Program received an appropriation for new projects were certified in FY 2008 to begin construction while existing projects continued to make progress in providing safe drinking water and sanitation to citizens on the border.

In FY 2008, EPA selected 195 Brownfields Assessment Grants for inventory, planning, and assessment activities. EPA selected 112 Brownfields Cleanup Grants for work at identified properties. In addition, 12 grants were selected to capitalize revolving loan funds that provide loans and subgrants for property cleanup; 13 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 response programs. FY 2007 data that became available in FY 2008 showed that the state and tribal grants contributed 241 properties assessed and 22 properties cleanup toward the program's national accomplishments. Additionally, EPA estimates that more than 18,900 sites were cleaned, with required institutional controls in place, through state and tribal response programs, totaling more than 250,000 acres, according to the recently release data based on data from 2006 and 2007.

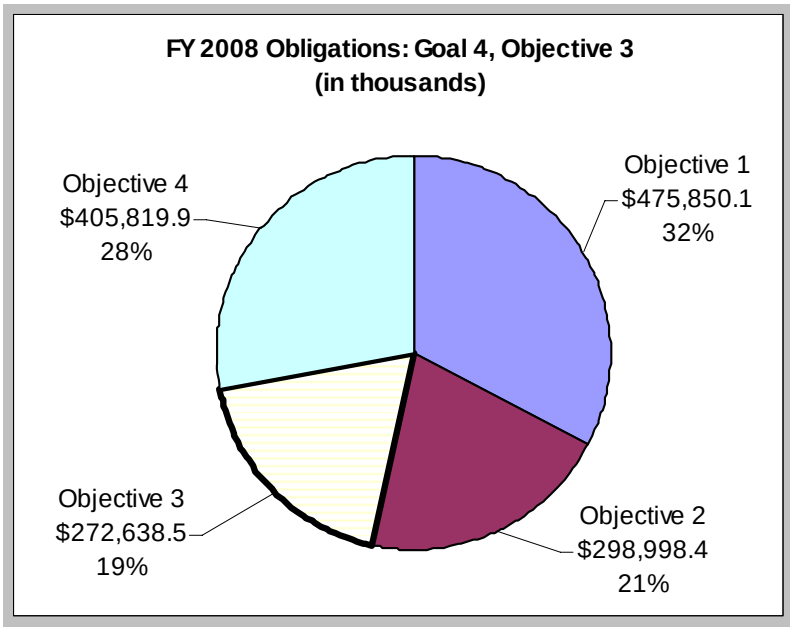
Web Links:

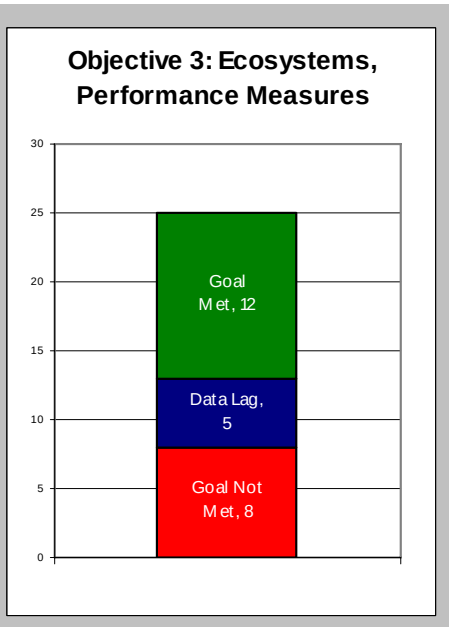
U.S.-Mexico Border Program: www.epa.gov/border2012
Brownfields Information: www.epa.gov/brownfields

Program Assessment Rating Tool (PART):

In FY 2008, EPA developed and implemented an action plan for all Agency Program Assessment Rating Tool measures in response to a governmentwide Agency Program Assessment Rating Tool measure review. The plan leveraged ongoing strategic and annual planning and reflected performance measure improvements. The tables of measures and results provided in Section II of this report, "Performance Results," identify all Program Assessment Rating Tool measures, which make up more than two-thirds of EPA's performance measures. Please refer to www.expectmore.gov for more detailed information.

Objective 4.3: Ecosystems





National Estuary Program Finds Programmatic and Financing Successes: The National Estuary Program and its federal, state, and local partners implement Comprehensive Conservation and Management Plans to protect and restore water quality, ecological integrity, and critical habitats. National Estuary Program data for FY 2008 show that the 28 National Estuary Programs and their partners protected or restored more than 83,490 acres of habitat. Leveraging data also show that the National Estuary Program played a primary role in leveraging $12.6 million of EPA Section 320 and earmark funds to obtain an additional $160 million, which is a ratio of $13 raised for every $1 of Section 320 and earmark funds provided.

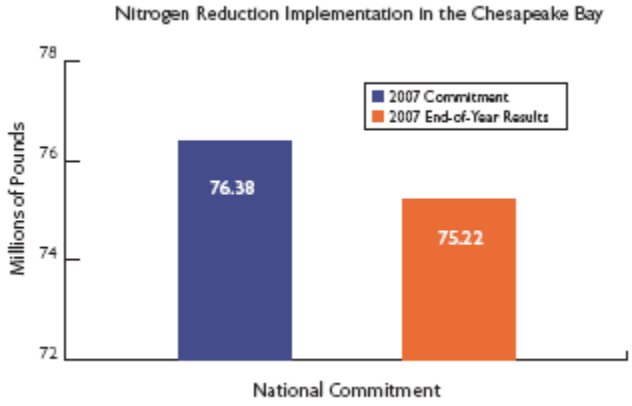
EPA Focuses on Coastal Wetlands: The 2006 National Wetlands Inventory Status and Trends Report showed that from 1998 to 2004, wetland gains exceeded wetland losses in the United States at a rate of 32,000 acres per year, aggregated across all wetland categories. In FY 2008, EPA reported on cumulative wetland acres gained by applying the most recent annual rate. The Agency is hopeful that the next Status and Trends Report—to be released in 2010—will show that EPA met or exceeded its goals in FY 2008. Although the increase in wetlands acres shown by the 2006 report is positive, one category of wetlands, coastal wetlands, continues to decline at a rate of about 60,000 acres per year. EPA, together with the U.S. Fish and Wildlife Service, intends to focus on addressing the trends in coastal wetlands in

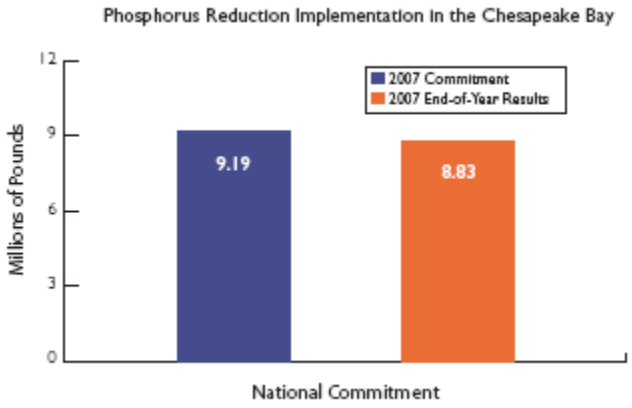
Water Quality Criteria That Reflect Natural Background Conditions

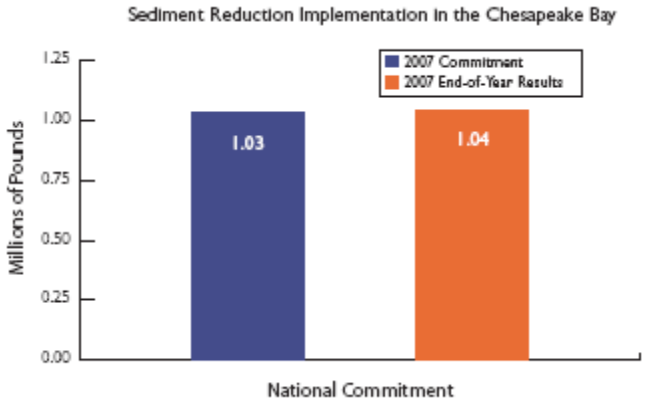
EPA Region 6 and the Louisiana Department of Environmental Quality worked together to complete cooperative studies that support a use attainability analysis for all freshwater and tidal bayous, and coastal waters throughout the Bayou Barataria and Terrebonne basins. The studies document that indigenous fish species are able to tolerate low levels of dissolved oxygen that fall far below EPA's recommended criteria. The study results will support water quality standards revisions.

2009 and beyond. 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 nonregulatory wetlands programs, EPA works with states and other federal agencies and partners to protect and restore wetlands.

Nutrient Loads and Clean Air Interstate Rule Impact the Chesapeake Bay: The Chesapeake Bay Program partners have achieved 47 percent, 62 percent, and 64 percent of the goals to implement nitrogen, phosphorus, and sediment reduction practices, respectively (based on Chesapeake Bay Program Watershed Model 2007 Progress Run; 2008 results will be available in March 2009).







New challenges include increases in nutrient loads from agricultural lands due to corn-based ethanol production as well as continued air deposition of nitrogen oxides from power plants.

Great Lakes Health Improves, Impacting Fish, Drinking Water, and Beaches: Improvements in the Great Lakes Index score indicate that: toxins entering the food chain are continuing to decline; ecosystem and human health are better protected; fish are safer to eat; water is safer to drink; and beaches are safer for swimming. From a baseline score of 20, EPA's Great Lakes Index target score of 23.7 out of a possible 40 indicates long-term progress in improving the condition of the Great Lakes ecosystem.

The Great Lakes Index uses assessments of the condition of ecosystem indicators (i.e., coastal wetlands, phosphorus concentrations, area of concern sediment contamination, benthic health, fish tissue contamination, beach closures, drinking water quality, and air toxics deposition) to assess the overall condition of the Great Lakes. The most recent improvement in the index is a specific result of having achieved a milestone in contaminated sediment remediation: from calendar years 1997 to 2007, EPA and its partners remediated a cumulative total of 5.5 million cubic yards of contaminated sediments (more than 10 percent of the total requiring remediation). Partners remediated approximately 450,000 cubic yards of contaminated sediments in 2008. This resulted in the removal of more than 1.5 million pounds of contaminants, such as polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and metals (including mercury) from the environment, thereby reducing risk to aquatic life and human health.

In the Great Lakes, phosphorus is the limiting nutrient that controls algae growth. Elevated phosphorus concentrations are linked to some areas of low dissolved oxygen in the bottom waters, such as in the Lake Erie dead zone. In recent years, phosphorus concentrations in Lake Erie exceeded guideline levels, including in its central basin, in which annual anoxia problems persist. FY 2007 data now available indicate that the targeted phosphorus concentration levels were not met. Exploration of this problem by the Great Lakes National Program Office, the National Oceanic and Atmospheric Administration (NOAA), Environment Canada, the state of Ohio, and others show that changes in the Lake Erie ecosystem are due to the invasive zebra and quagga mussels and increased amounts of phosphorus entering from tributaries.

Gulf of Mexico Receives Recognition on Ocean Issues and Approves Hypoxia Action Plan: On February 27, 2008, the Joint Ocean Commission Initiative released its 2007 Report Card on the Administration's efforts to address the Commission's recommendations. The Joint Ocean Commission Initiative commended the gulf states' leadership and achievements in regional ocean governance reform as well as the active engagement by federal agencies to

support progress in the region, and assigned the highest grade of A- for these efforts. (See Chart 2.)

JOINT OCEAN COMMISSION INITIATIVE 2007 U.S. OCEAN POLICY REPORT CARD		
Subject	Grade	Comments
Regional and State Ocean Governance Reform (2006=A-)	A - Promising strides in regions and states on a variety of ocean issues.	**Notable Progress** • Progress establishing and implementing state ocean legislation in MA, NJ, and NY and noteworthy progress in AK, CA, FL, HI, LA, OR, and WA. • Significant progress in Gulf of Mexico and West Coast regions. **Improvements Needed** • Strengthen existing initiatives, including expanding state commitment and federal support. • Implement regional initiatives in the Southeast and Mid-Atlantic.

Chart 2.

The Gulf Hypoxia Task Force approved the 2008 Hypoxia Action Plan, signed in June 2008. The revised coastal goal states that subject to the availability of additional resources, EPA strives to reduce or make significant progress towards reducing the hypoxic zone's five-year running average aerial extent off the Gulf of Mexico to less than 5,000-square kilometers by the year 2015 by implementing specific, practical, and cost- effective voluntary actions by all states and tribes. Additionally, EPA will address all categories of sources and removals within the Mississippi/Atchafalaya River Basin to reduce the annual discharge of nitrogen and phosphorus into the Gulf of Mexico.

Long Island Sound Exceeds Goals for Restoration and Protection: Overall performance for the restoration and protection of Long Island Sound exceeds expectations, as measured by point source nitrogen reduction, habitat restoration/protection, and diadromous fish passage. The states continue to make progress in upgrading their wastewater treatment plants to control nitrogen discharges, which improves water quality and lessens the threat of hypoxia from excess nitrogen. The Long Island Sound program (states of New York and Connecticut, EPA Regions 1 and 2, and other partners) has generally been on target for nitrogen reduction (see Chart 3); however, New York City is now under a consent order to upgrade its wastewater treatment plants for nitrogen removal, which will cause a short-term bulge in discharges of nitrogen due to the cessation of interim nitrogen removal activities during the construction schedule.

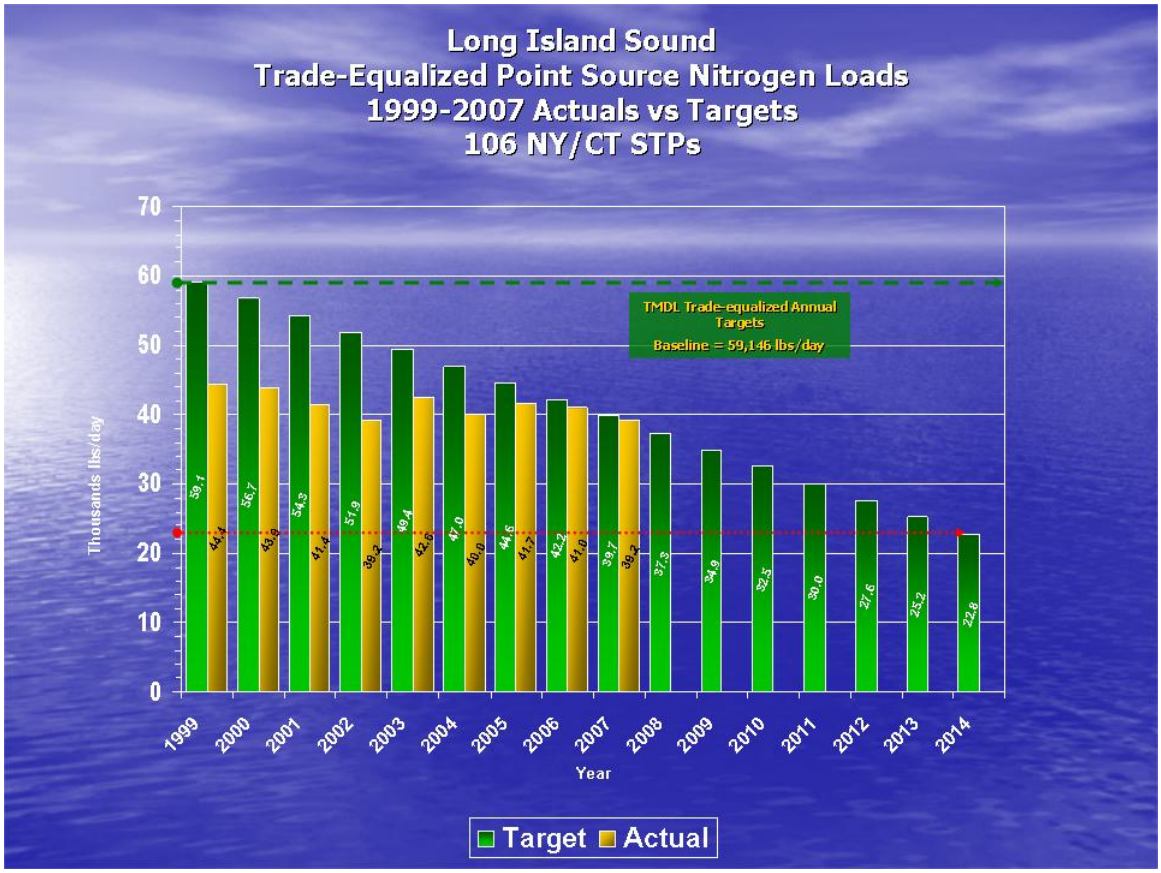


Chart 3. ***[2008 data available in March 2009]***

The Long Island Sound program has exceeded its planned goals for habitat restoration/protection and fish passage, restoring or protecting a total of 1,151 acres of habitat versus a goal of 862 acres to be restored by 2011, and reopening 124.4 miles of river corridor to fish passage versus a 2011 goal of 131 miles to be reopened. Progress is made by working with local entities to match and exceed federal funding for restoration, protection, and enhancement as well as fish passage projects.

As the Long Island Sound program continues to reduce point and nonpoint source pollution, the total cost of necessary infrastructure improvements remains an issue. A planned revision to the Total Maximum Daily Load (TMDL) program to include the states of Massachusetts, New Hampshire, and Vermont will require close cooperation and significant financial commitment by those states' taxpayers, who have no direct Long Island Sound shoreline access. Options for flexible implementation on a total watershed basis must be evaluated. EPA is involving the upstream states in Total Maximum Daily Load discussions to evaluate ways and means of achieving water quality standards in an economically realistic and environmentally responsible manner. Connecticut's innovative nitrogen credit trading program has been highly successful in controlling costs and meeting standards, which, if expanded to a regional basis, could potentially help financially stressed communities meet local commitments to clean water.

Columbia River Improves Significant Habitat Acreage: The Lower Columbia River Estuary Partnership is leading the effort in achieving the overall objective of improving 16,000 acres of habitat in the Lower Columbia River watershed by 2011. Progress in 2008 is well on track to meeting the overall objective with a total of 12,986 acres of habitat protected, enhanced, and

restored. The collaborative nature of the efforts of the Lower Columbia River Estuary Partnership, EPA, and other partners has attracted substantial leveraged resources, an important success.

EPA is writing a *State of the River Report* with the help of its state, tribal, federal, and local partners to tell the story of the toxics problems and solutions for the Columbia River Basin. The final report, expected December 31, 2008, will be used to educate people about the problems in the Columbia River Basin and to garner support for toxics reduction efforts.

FY 2008 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 foundations for the Agency's budget. Frequently, Program Projects support multiple performance measures and objectives. This chart lists the Program Projects and associated resources that support this objective.

***Resources associated with Program Projects might not match the goal and objective obligations exactly because of rounding.*

Goal 4: Objective 3 - Restore and Protect Critical Ecosystems			
Program Project	**FY 2006 Obligations**	**FY 2007 Obligations**	**FY 2008 Obligations**
Categorical Grant: Wetlands Program Development	$13,336.9	$16,082.5	$16,722.3
Categorical Grant: Targeted Watersheds	$15,670.4	$4,578.6	$21,289.0
Congressionally Mandated Projects	$7,377.3	$2,131.4	($129.1)
Geographic Program: Chesapeake Bay	$22,273.7	$20,094.9	$36,394.0
Geographic Program: Great Lakes	$20,044.0	$24,212.4	$22,710.3
Geographic Program: Gulf of Mexico	$3,712.3	$4,373.0	$4,422.0
Geographic Program: Lake Champlain	$3,980.8	$995.5	$2,915.4
Geographic Program: Long Island Sound	$958.6	$1,326.0	$4,822.9
Geographic Program: Other	$6,520.8	$6,140.0	$13,462.1
Great Lakes Legacy Act	$32,567.0	$44,072.1	$22,049.4
Homeland Security: Communication and Information	$130.2	$205.6	$173.5
Homeland Security: Protection of EPA Personnel and Infrastructure	$213.1	$173.8	$167.2
National Estuary Program / Coastal Waterways	$26,298.5	$20,744.7	$25,820.1
Wetlands	$20,449.3	$60,666.8	$70,156.6
Administrative Law	$93.1	$109.7	$133.6
Alternative Dispute Resolution	$26.3	$26.7	$32.4
Central Planning, Budgeting, and Finance	$5,053.1	$5,538.0	$7,934.6
Civil Rights / Title VI Compliance	$269.1	$276.5	$282.5
Congressional, Intergovernmental, External Relations	$1,245.7	$1,282.7	$1,322.9
Exchange Network	$688.3	$763.4	$562.1
Facilities Infrastructure and Operations	$10,889.4	$10,765.3	$10,567.6
Acquisition Management	$349.0	$351.6	$425.6
Human Resources Management	$797.8	$688.0	$729.1
Information Security	$44.8	$47.3	$100.9
IT / Data Management	$4,231.4	$4,570.9	$4,506.9

Legal Advice: Environmental Program	$958.9	$1,023.7	$1,105.0
Legal Advice: Support Program	$298.1	$305.1	$336.2
Audits, Evaluations, and Investigations	$1,363.3	$1,345.4	$2,170.0
Regional Geographic Initiatives	($282.2)	($99.1)	($27.5)
Regional Science and Technology	$100.8	$90.0	$112.1
Science Advisory Board	$96.9	$106.3	$130.7
Small Minority Business Assistance	$40.8	$52.3	$67.5
Financial Assistance Grants / IAG Management	$1,038.4	$615.3	$774.1
Regulatory/Economic-Management and Analysis	$353.9	$384.9	$396.4
Total	**$201,189.8**	**$234,041.3**	**$272,638.4**

Additional Information Related to Objective 3

Grants:

- Section 320 of the Clean Water Act provides for annual grants to National Estuary Programs (NEPs). National Estuary Programs 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 are critical for building state, tribal, and local government capacity to protect and manage wetlands. Established in 1990, this grant program provides 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 issues state and tribal grants for Lakewide 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, strategic or emerging issues, atmospheric deposition, fish contaminants, and biology. The program also addresses contaminated sediments through grants and project agreements pursuant to the Great Lakes Legacy Act.
- Clean Water Act Section 117(e) grants fund the full range of state water quality nutrient reduction programs in the Chesapeake Bay watershed. In particular, the grants emphasize state tributary strategies to improve water quality and help meet the goals of the Chesapeake 2000 agreement.
- 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.

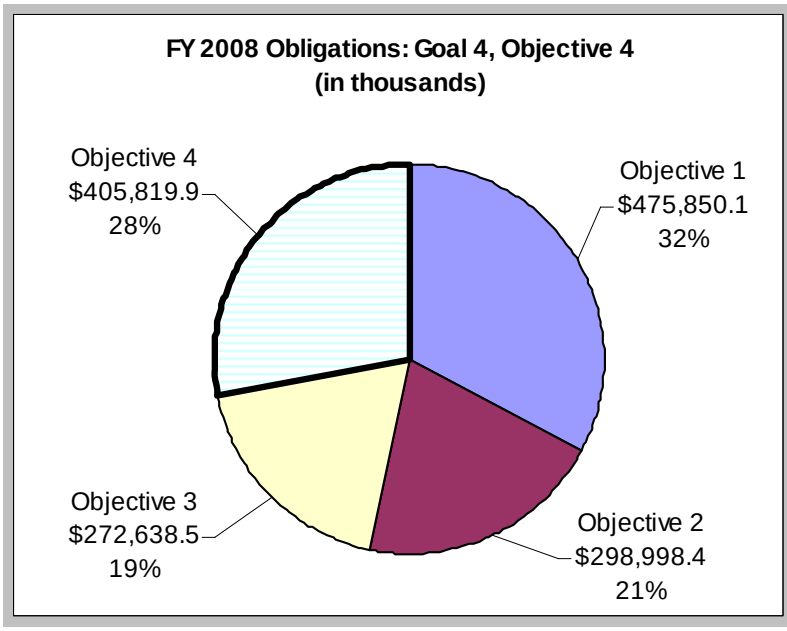
Web Links:

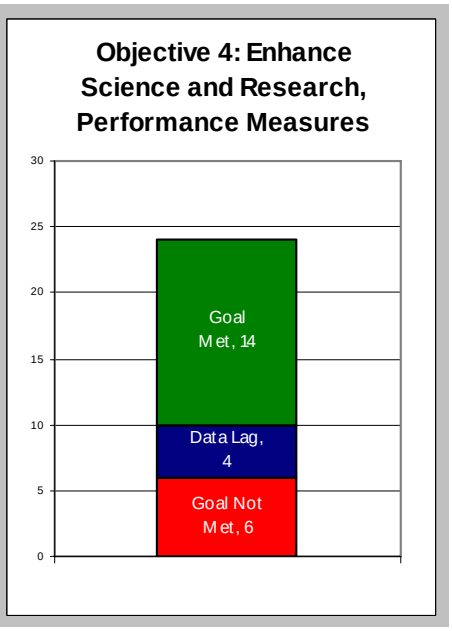
Great Lakes National Program Office: www.epa.gov/glnpo
Chesapeake Bay Grants: www.epa.gov/region03/chesapeake/grants.htm
Sediment White Paper: www.ijc.org/php/publications/html/sedrem.html

Program Assessment Rating Tool (PART):

In FY 2008, EPA developed and implemented an action plan for all Agency Program Assessment Rating Tool measures in response to a governmentwide Agency Program Assessment Rating Tool measure review. The plan leveraged ongoing strategic and annual planning and reflected performance measure improvements. The tables of measures and results provided in Section II of this report, "Performance Results," identify all Program Assessment Rating Tool measures, which make up more than two-thirds of EPA's performance measures. Please refer to www.expectmore.gov for more detailed information.

Objective 4.4: Enhance Science and Research





EPA's research programs support a sound scientific foundation for decisions to protect, sustain, and restore human and ecosystem health.

Research Informs Risk Assessors and Protects Human Health: In FY 2008, EPA's Human Health Research Program furthered the Agency's understanding of how exposures to environmental pollutants can impact human health. In addition to providing new tools for measuring human exposures, this research is providing EPA regulators and risk assessors with new useful information about how chemicals like flame retardants and pesticides (conazoles and pyrethroids) act in the body. This research uses new genomics approaches to better inform risk assessments.

Through this program, EPA also furthered society's understanding of how children react to certain types of environmental pollution. EPA released a summary of research findings, *A Decade of Children's Health Research*, based on more than 100 research projects conducted in the Children's Environmental Health Centers, funded by EPA's Science to Achieve Results program. This report highlights 10 years of research on how exposures vary for newborn to school-age children and how responses can be based on genetics. The report complements the progress of other EPA research studying the factors that affect children's exposures, the biological markers that indicate exposure or effects, and the steps to identify and prevent harmful exposures to children.

Ecological Research Develops New Tools for Assessing Water Bodies: In 2008, EPA's Ecological Research Program reached its goal of providing tools and models to document the condition of lakes, streams, rivers, wetlands, and estuaries in all 50 states. In 2008, the program transitioned to helping local, regional, and national environmental managers understand how their choices affect the type, quality, and magnitude of the goods and services society receives from ecosystems. Examples of new tools delivered include:

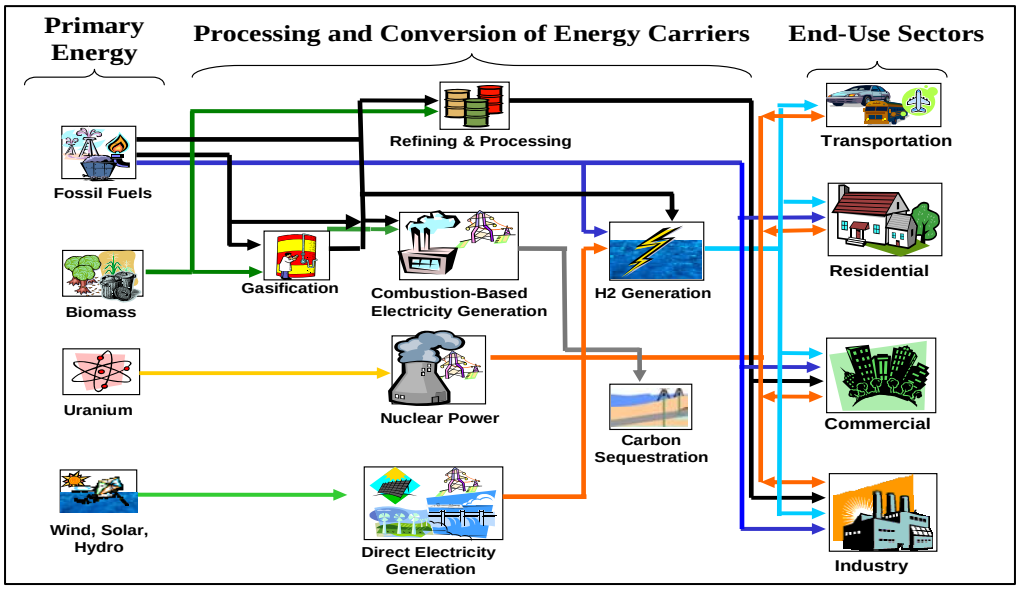
- The third National Coastal Condition Report, showing that 6 percent of the coastal waters are in poor condition, 35 percent are in fair condition, and 59 percent are in good condition. The report also showed a slight improvement in overall condition since the first National Coastal Condition Report in 2001.

- An analytical mapping tool that provides valuable information about stream and river characteristics that support different classes of fisheries and assists environmental managers in decision-making to conserve ecosystem services. This tool, endorsed by the Michigan Department of Environmental Quality, is being used in the Lake Michigan Lakewide Management Plan and meets the Great Lakes Water Quality Agreement as well as the Critical Programs Act, both important initiatives for improving the health of the Great Lakes.

- A *Future Midwestern Landscapes Study*, which was initiated to examine different management strategies for biofuels production in a 12-state area of the Midwest. This study will help us understand how current and projected land uses affect the ecosystem services provided by Midwestern landscapes. It will provide spatially explicit information that will enable EPA to articulate sustainable approaches to environmental management. The ultimate outcome will be Web-based tools depicting alternative scenarios, so users can evaluate trade-offs affecting ecosystem services.

EPA Undertakes Major Steps to Understand Full Impact of Climate Change: EPA's Global Change Research Program continues to assess the potential impacts of climate change and climate variability on the United States and to evaluate alternative adaptation strategies. In support of the U.S. Climate Change Science Program, EPA completed two major assessments: *Preliminary Review of Adaptation Options for Climate-Sensitive Ecosystems and Resources* and *Analyses of the Effects of Global Change on Human Health and Welfare and Human Systems.*

The program also completed a major draft report for public review assessing the impacts of global change on regional U.S. air quality and completed an assessment of the potential impacts of climate change on combined sewer overflow events in the Great Lakes and New England regions. The program and the EPA Office of Air and Radiation are exploring how to incorporate the findings of the air quality assessment into state implementation plan guidelines. Additionally, the program is helping EPA regional offices and city planners to incorporate the findings of the combined sewer overflow report into the design of new combined sewer systems.



EPA's Global Change research program has developed a first-of-a-kind, nine-region Market Allocation, or MARKAL model of the United States that can be used by decision-makers to explore future scenarios of energy system development and the associated emissions. A key feature of the model is that it allows trading of energy supplies, electricity, petroleum products, and other fuels across regions. In support of EPA's Air Quality Assessment, this model has been used to evaluate the impacts of technological change on air pollutant emissions for the contiguous United States at the scale of the nine U.S. Census Bureau regions. The model is also being used to understand the impact of the expanded production and use of biofuels in the Midwest.

EPA Researches Risks From Chemical Exposure: EPA's Safe Pesticides/Safe Products Research Program is providing environmental managers and decision-makers with data needed to reduce or prevent unreasonable risks to humans, wildlife, and non-target plants from exposures to pesticides, toxic chemicals, and products of biotechnology. FY 2008 example accomplishments include:

- EPA scientists produced a publicly available Web-based modeling application that can be used to inform ecological risk assessments. For example, the application can model the potential effects on endangered and threatened species by estimating toxicity for untested species using data from tested species.

- EPA scientists continued to conduct research to support assessments of perfluorinated chemicals. Researchers worked to determine the perfluorooctanoic acid (PFOA) content in consumer products, identify major indoor perfluorooctanoic acid sources to which the general United States population is exposed, and understand concentrations of perfluorinated chemicals in domestic and foreign soils. EPA began investigating perfluorooctanoic acid, because it is persistent in the environment; was being found at very low levels both in the environment and in the blood of the general U.S. population; and causes developmental and other adverse effects in laboratory animals.

- Agency research in biotechnology improved EPA's and other agencies' abilities to characterize and monitor the impacts of genetically modified crops on the environment and human health.

Toxicology Research Makes Critical Step Toward Decreasing Amount of Animal Testing: In FY 2008, EPA's Computational Toxicology Research Program completed a series of studies that show how new genomic technology can improve data used in risk assessments. Specifically, the program evaluated the chemical class of conazole fungicides to identify toxic pathways, or how the chemicals react within humans. Identifying these pathways allows scientists to interpret lab findings into possible human reactions and will move the Agency toward using genomic data in its risk assessment process. This work is a critical step toward producing more relevant data, while using fewer resources and decreasing the number of animals involved in toxicity testing.

EPA Completes Major Milestone in Research for Evaluating Endocrine Disruptors: EPA's Endocrine Disruptors Research Program continues to provide the Agency with the scientific information it needs to reduce or prevent unreasonable risks to humans and wildlife from exposures to pesticides, toxic chemicals, and environmental mixtures of chemicals that interfere with the function of the endocrine system. FY 2008 example accomplishments include:

- EPA completed research in developing assays for Tier 1 of the Agency's Endocrine Disruptors Screening Program. This research has resulted in tests that use fewer animals than traditional toxicity tests. The assays are also being considered for use internationally by the Organization for Economic Cooperation and Development.

- Research began across all of EPA's laboratories in collaboration with other government scientists to characterize the environmental impact of hormones (natural and synthetic) from concentrated animal feeding operations. This research will inform EPA and other federal and state agencies that are mandated to oversee the environmental impact of concentrated animal feeding operations.

- Research funded through EPA's Science to Achieve Results program determined that lowered thyroid hormone levels during development affected the sensitive balance of cells in the developing brain in rats. The results should help EPA better understand the neurological and behavioral deficits in children born to mothers with thyroid dysfunction.

Human Health Risk Assessments Inform EPA Decision-Making: The peer-reviewed products of EPA's Human Health Risk Assessment Program are used extensively by EPA programs, EPA regions, and other parties to support the development of regulatory standards and to manage environmental cleanups and risk management efforts. In FY 2008, EPA delivered 16 Integrated Risk Information System (IRIS) assessments to interagency review or external review and met 83 percent of its goal to post five of six final health assessment documents (see below).

Review Level	Integrated Risk Information System (IRIS) Assessment
Interagency Review	Copper, acrylonitrile, platinum, ethyl tert-butyl ether
External Review	Tetrahydrofuran, 1,2,3-trichloropropane, 2-hexanone, acrylamide, kepone, propionaldehyde, thallium, beryllium, carbon tetrachloride, cerium, ethylene glycol monobutyl ether, and tetrachloroethylene
Delivered and Finalized	Tetra-polybrominated diphenyl ether, penta-polybrominated diphenyl ether, hexa-polybrominated diphenyl ether, deca-polybrominated diphenyl ether, and propionaldehyde

In addition to Integrated Risk Information System assessments, the Human Health Risk Assessment Program completed 32 percent new or revised Provisional Peer-Reviewed Toxicity Values, which support waste site decision-making. EPA also met court-ordered deadlines for completed Integrated Science Assessments for nitrogen oxides and sulfur oxides and provided significant scientific support to the Administrator and Office of Air and Radiation for the National Ambient Air Quality Standards-setting decisions for ozone and lead.

Integrated Risk Information System (IRIS)

The Integrated Risk Information System is a compilation of electronic reports on specific substances found in the environment and their potential to cause chronic adverse human health effects. The system was initially developed for EPA staff in response to a growing demand for consistent information on substances for use in risk assessments, decision-making, and regulatory activities. The information in the Integrated Risk Information System is intended for those without extensive training in toxicology but with some knowledge of health sciences.

EPA Works With Homeland Security to Develop Contaminant Detection Tools and Cleanup Approaches: In 2008, EPA partnered with Sandia National Laboratories to develop and release data analysis software to assist water utilities in detecting contamination. The CANARY software, named for its analogy to the canary in a coal mine, evaluates standard water quality data (e.g., free chlorine, pH, and total organic carbon) over time and uses mathematical and statistical techniques to identify suspicious changes in water quality. The CANARY software is available as a free download from the National Homeland Security Research Center Web site.

In FY 2008, researchers also completed several reports that support sound scientific decisions on how to clean up contaminants of interest. Researchers examined the persistence of contaminants on surfaces if left untreated, as well as the impacts of two decontamination technologies—vaporized hydrogen peroxide and chlorine dioxide—on the integrity of common building materials. This work follows previous studies that showed both vaporized hydrogen peroxide and chlorine dioxide to be effective decontamination technologies. Testing indicated that persistence is affected by temperature, humidity, time, and building materials and that building materials only showed minor structural changes after application of these technologies.

EPA Evaluates Cutting-Edge Science on Nanotechnology: Nanotechnology is a cutting-edge field of science that centers on controlling matter at the level of atoms or molecules. It works with structures that are measured in "nanometers" and the development of materials or devices that are characterized by this extremely tiny size. Nanotechnology offers great potential in many sectors. In the environmental sector, it can be used to remove toxins or reduce pollution. This technology also poses many questions, however, such as how toxic some of the nanomaterials are and whether they will pose adverse ecological and environmental health impacts.

Grants

EPA-funded researchers at Rice University have produced iron oxide nanocrystals capable of removing toxic arsenic from drinking water. Results reported in 2008 indicate that after two hours, iron oxide nanocrystals removed between 98.4 and 99.2 percent of the arsenic present. These results indicate nanotechnology has the potential to provide reliable, cost-effective approaches to remediate soil and water contaminated with toxic compounds.

In 2008, EPA's research office developed a Nanomaterial Research Strategy to help guide Agency research to better understand nanomaterials movement and transformation in the environment. In addition, EPA-led research continues to publish findings on the performance of nanomaterials in removing toxins from water, building on several years of work on the use of nanomaterials to remove pollution.

FY 2008 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 foundations for the Agency's budget. Frequently, Program Projects support multiple performance measures and objectives. This chart lists the Program Projects and associated resources that support this objective.

***Resources associated with Program Projects might not match the goal and objective obligations exactly because of rounding.*

Goal 4: Objective 4 - Enhance Science and Research			
Program Project	**FY 2006 Obligations**	**FY 2007 Obligations**	**FY 2008 Obligations**
Congressionally Mandated Projects	$0.0	$349.2	($78.5)
Homeland Security: Communication and Information	$0.0	$722.6	$571.6
Homeland Security: Preparedness, Response, and Recovery	$0.0	$35,111.2	$37,976.2
Homeland Security: Protection of EPA Personnel and Infrastructure	$0.0	$1,922.6	$1,449.3
Human Health Risk Assessment	$0.0	$39,415.2	$41,401.9
Research: Computational Toxicology	$0.0	$12,424.8	$14,071.1
Research: Endocrine Disruptor	$0.0	$10,609.4	$11,239.7
Research: Global Change	$0.0	$20,317.3	$17,834.9
Research: Human Health and Ecosystems	$0.0	$169,831.5	$146,075.3
Research: Pesticides and Toxics	$0.0	$29,949.8	$24,790.6
Research: Fellowships	$0.0	$11,982.4	$9,387.4
Administrative Law	$0.0	$385.7	$445.1
Alternative Dispute Resolution	$0.0	$94.0	$111.3
Central Planning, Budgeting, and Finance	$0.0	$7,925.5	$8,507.3
Civil Rights / Title VI Compliance	$0.0	$533.2	$527.7
Congressional, Intergovernmental, External Relations	$0.0	$1,908.3	$1,913.2
Exchange Network	$0.0	$2,674.7	$1,858.8
Facilities Infrastructure and Operations	$0.0	$17,797.2	$33,771.2
Acquisition Management	$0.0	$3,688.9	$5,159.2
Human Resources Management	$0.0	$5,341.5	$5,820.0
Information Security	$0.0	$754.8	$1,061.5
IT / Data Management	$0.0	$31,341.6	$28,875.8
Legal Advice: Environmental Program	$0.0	$3,654.3	$3,765.8
Legal Advice: Support Program	$0.0	$1,268.6	$1,447.8
Audits, Evaluations, and Investigations	$0.0	$2,521.0	$2,797.8
Regional Science and Technology	$0.0	$106.5	$12.2
Science Advisory Board	$0.0	$373.7	$435.4
Small Minority Business Assistance	$0.0	$184.0	$225.0

Financial Assistance Grants / IAG Management	$0.0	$2,709.9	$3,044.9
Regulatory/Economic-Management and Analysis	$0.0	$1,352.6	$1,320.6
Total	**$0.0**	**$417,252.0**	**$405,820.1**

Additional Information Related to Objective 4

Grants:

- EPA grantee research led to an improved cumulative assessment of pesticides. This work has resulted in policy and procedural changes within local governments, grower associations, and produce shippers that will reduce the risks of exposures to multiple pesticides. (Supported by the following two grants: (1) *Centers of Excellence in Children's Environmental Health and Disease Prevention Research*, and (2) *Centers for Children's Environmental Health and Disease Prevention Research*.)

- EPA grantee research has identified wide population variability in a gene that produces enzymes for detoxifying organophosphate pesticides; these results show that some people, especially young children, are more sensitive to the adverse health effects of these pesticides. (Supported by the following two grants: (1) *Centers of Excellence in Children's Environmental Health and Disease Prevention Research*, and (2) *Centers for Children's Environmental Health and Disease Prevention Research*.)

- In 2007, EPA research grants supported Native American tribes by conducting the science to determine potential risks unique to their populations because of their customs, occupations, and lifestyles. (Supported by the grant entitled: *Lifestyles and Cultural Practices of Tribal Populations and Risks From Toxic Substances in the Environment.*)

- In 2007, an EPA-funded study of the Willamette River in Oregon found that restoration of the river's floodplain has the potential to cool thermal discharges to the river, as well as to create many other benefits such as flood control, increased aquatic habitat, and increased recreational opportunities. The researchers continue to work with local stakeholders to determine the pros and cons of alternative restoration options. (Supported by the grant entitled: *Harnessing the Hydrologic Disturbance Regime: Sustaining Multiple Benefits in Large River Floodplains in the Pacific Northwest*.)

- EPA grantee findings indicate that global change will have significant impacts on air quality in the United States, including higher ozone concentrations. Consequently, EPA is working to incorporate global change impacts in the air quality management process. (Supported by the following four grants: (1) *Modeling Heat and Air Quality Impacts of Changing Urban Land Uses and Climate*, (2) *Development and Evaluation of a Methodology for Determining Air Pollution Emissions Relative to Geophysical and Societal Changes*, (3) *Impacts of Global Climate and Emission Changes on U.S. Air Quality*, and (4) *Application of a Unified Aerosol-Chemistry-Climate GCM to Understand the Effects of Changing Climate and Global Anthropogenic Emissions on U.S. Air Quality*.)

Web Links:

Children's Research Center White Paper:
yosemite.epa.gov/ochp/ochpweb.nsf/content/CEHRC_Findings.htm/$file/CEHRC%20Findings.doc
Wilamette Ecosystem Marketplace Development:
www.mwvcog.org/WillamettePartnership/WillamEcoMarket.asp
Human Health Research Program: www.epa.gov/hhrp
Climate Change Program: www.epa.gov/climatechange/index.html
Endocrine Disruptors Research Initiative: www.epa.gov/endocrine
National Center for Environmental Research: www.epa.gov/ncer/fellow
Board of Scientific Counselors: http://www.epa.gov/OSP/bosc/

Program Assessment Rating Tool (PART):

In FY 2008, EPA developed and implemented an action plan for all Agency Program Assessment Rating Tool measures in response to a governmentwide Agency Program Assessment Rating Tool measure review. The plan leveraged ongoing strategic and annual planning and reflected performance measure improvements. The tables of measures and results provided in Section II of this report, "Performance Results," identify all Program Assessment Rating Tool measures, which make up more than two-thirds of EPA's performance measures. Please refer to www.expectmore.gov for more detailed information.

Goal 4: Healthy Communities and Ecosystems

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

OBJECTIVE: 4.1: CHEMICAL AND PESTICIDE RISKS

By 2011, prevent and reduce pesticide and industrial chemical risks to humans, communities, and ecosystems.

Performance Measures Met	Performance Measures Not Met	Data Available After November 17, 2008	Total Performance Measures
21	6	6	33

SUB-OBJECTIVE: 4.1.1: Reduce Chemical Risks

By 2011, prevent and reduce chemical risks to humans, communities, and ecosystems.

Strategic Target (1)

By 2011, eliminate or effectively manage risks associated with 100 percent of High Production Volume (HPV) chemicals for which unreasonable risks have been identified through EPA risk assessments.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(248) Percentage of HPV chemicals identified as priority concerns through assessment of Screening Information Data Sets and other information with risks eliminated or effectively managed.	N/A	N/A	100	100	100	100	100	100	Percent of HPV Chems.
Baseline - The baseline for the HPV measure is zero chemicals in 1998. EPA screening of data obtained through the HPV Challenge Program is commencing in 2006; actions to obtain additional information needed to assess risks will commence subsequently as chemicals are identified as priority concerns through the screening process.									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Explanation – 2 chemicals were identified as high priority chemicals of special concern last year. Both chemicals have been the subject of targeted initiation of risk management actions.									

Strategic Target (2)

Through 2011, ensure that new chemicals introduced into commerce do not pose unreasonable risks to workers, consumers, or the environment.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(247) Percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment.	Baseline	100	100	100	100	96	100	Data Available FY 2009	Percent
Baseline - The baseline for percent of new chemicals or organisms introduced into commerce that do not pose unreasonable risks to workers, consumers, or the environment was developed from a 2 year analysis from 2004-2005 comparing 8(e) reports to New Chemical submissions and is 100 percent.									
Explanation – In FY 2007, OPPT analyzed 21 TSCA 8(e) notices of substantial risk that related back to 24 previously reviewed New Chemical submissions. This self evaluation compared newly available information from the 8(e) notices with original OPPT decisions on new chemicals, essentially challenging the program 24 times. One of the 24 chemicals suggested an unreasonable risk upon reassessment and 23 of 24 chemicals did not pose an unreasonable risk upon reassessment, leading to performance of 96 percent.									

Strategic Target (3)

By 2011, achieve a 31 percent cumulative reduction of chronic human health risk from environmental releases of industrial chemicals in commerce since 2001.

Strategic Target (4)

By 2010, eliminate childhood lead poisoning cases as a public health concern by reducing to zero the number of cases of children (aged 1-5 years) with elevated blood lead levels (>10µg/dl).

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(10A) Annual percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process.	N/A	89	N/A	90	90	92	91	91	Percent Certif/ and Refund
Baseline- Baseline for percentage of lead-based paint certification and refund applications that require less than 20 days of EPA effort to process is 77 percent in 2004, which is taken from the Federal Lead Based Paint Program database records.									
Explanation- Measure was met due to sustained attention to Regional components of processing time, the primary contributor to this measure. Sustained high-level of customer service was achieved in processing applications in a timely fashion.									
(196) Number of cases of children (aged 1-5 years) with elevated blood lead levels (>10 µg/dl).	Bi-annual	Bi-annual	216,000	Data Unavailable	Bi-annual	Bi-annual	90,000	Data Unavailable	Children
Baseline - Data released by CDC from the National Health and Nutritional Evaluation Survey in May of 2005 estimated a population of 310,000 children aged 1 - 5 with lead poisoning (blood lead levels of 10 µg/dl or greater).									
Explanation - CDC has not officially released 2003-2004, 2005-2006 and 2007-2008 information.									

Strategic Target (5)

By 2010, reduce to 28 percent the percent difference in the geometric mean blood lead level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(10D) Percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old.	Bi-annual	Bi-annual Data	29	Data Lag	Bi-annual	Bi-annual Data	29	Data Unavailable	Percent
Baseline - Baseline for percent difference in the geometric mean blood level in low-income children 1-5 years old as compared to the geometric mean for non-low income children 1-5 years old is 37% in 1991-1994.									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Explanation - CDC has not officially released 2003-2004, 2005-2006 and 2007-2008 information.									

Strategic Target (6)

By 2011, through work with international partners, eliminate the use of lead in gasoline in the remaining 35 countries that still use lead as an additive, affecting over 700 million people. (Baseline: As of January 2006, 35 countries still need to phase lead out of gasoline. Information source: United Nations Environment Program and the Partnership for Clean Fuels and Vehicles maintain a global database on fuel quality, which is updated periodically).

Strategic Target (7)

By 2011, through work with international partners, over 3 billion people will have access to low-sulfur fuel in 10 countries, including China, India, Mexico and Brazil. (Baseline: As of January 2006, none of the developing countries has access to low-sulfur fuel, according to the United Nations Environment Program and the Partnership for Clean Fuels and Vehicles.)

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(097) Safe Disposal of Transformers	8000	7,015	5000	6,480	N/A	N/A	N/A	N/A	Transformers
Explanation – Disposal is voluntary and is compiled from Regional reporting. The disposal of this electrical equipment is not driven by any regulatory requirement. Therefore reporting is unpredictable and varies from year to year. This measure was discontinued after FY 2006.									
(098) Safe Disposal of Capacitors	6,000	1,457	9000	343	N/A	N/A	N/A	N/A	Capacitors
Explanation - Disposal is voluntary and is compiled from Regional reporting. The disposal of this electrical equipment is not driven by any regulatory requirement. Therefore reporting is unpredictable and varies from year to year. This measure was discontinued after FY 2006.									
(241) Annual number of chemicals with proposed values for Acute Exposure Guidelines Levels (AEGL)	20	29	24	23	24	33	24	28	Chemicals
Baseline EPA developed Proposed AEGL values for 78 chemicals through 2002. In 2007, a total of 218 chemicals with proposed AEGL Values were reported for the AEGL Program (cumulative count).									
Explanation – The FY 08 target was exceeded through increased program efficiency in reviewing and presenting chemicals at international									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
meetings.									
(239) Annual number of chemicals with final values for Acute Exposure Guideline levels.	N/A	N/A	N/A	N/A	N/A	N/A	Baseline	37	Chemicals
Baseline- Baseline from program initiation in 1996 through 2008 is 37 chemicals.									
(72A) Percent reduction from baseline year in total EPA cost per chemical for which proposed AEGL value sets are developed.	N/A	N/A	Baseline	$38,178	2	19.1	4	17.4	Percent Cost Savings
Baseline - Total EPA cost per chemical for which proposed AEGL values sets are developed is $38,178 using a 3 year average of AEGL program costs from FY 2005 through FY 2007.									
Explanation - Given that proposed AEGLs completed for FY 2008 is 28, exceeding target of 24, the efficiency measure target of 4% will be exceeded. OPPT will pursue target increases in the Fall PART update.									
(249) Cumulative number of chemicals for which the Voluntary Children's Chemical Evaluation Program data needs documents are issued by EPA in response to Industry sponsored Tier 1 risk assessments.	N/A	N/A	8	6	9	14	10	15	Cum. Chems.
Baseline - Baseline for the Voluntary Children's Chemical Evaluation Program is 0 for FY 2003.									
Explanation - In FY 2008, OPPT completed one additional data needs document for Voluntary Children's Chemical Evaluation Program chemicals bringing the cumulative total to 15. In FY 2007, OPPT was able to continue and complete work on data needs documents for Voluntary Children's Chemical Evaluation Program chemicals which were not ready to report at the end of FY 2006. Also, the program was able to group similar chemicals into one group, issuing one data needs documents for this group.									
(270) Annual number of High Production Volume (HPV) chemicals with Risk Based Prioritizations Completed.	N/A	N/A	N/A	N/A	Baseline	0	150	150	HPV Chemicals

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Baseline - The baseline for the number of HPV chemicals with risk based prioritizations completed in 2007 is zero.									
(296) Annual number of Moderate Production Volume (MPV) chemicals with Hazard Based Prioritizations Completed.	N/A	N/A	N/A	N/A	Baseline	0	55	14	MPV Chemicals
Baseline - The baseline for the number of MPV chemicals with hazard based prioritizations completed in 2007 is zero.									
Explanation - Finalization and publication of hazard based prioritizations was complicated by Confidential Business Information concerns regarding hazard data for MPV and supporting analogue chemicals. The program is on track to finalize and post 55 Hazard Based Prioritizations by early FY09.									
(278)Cumulative number of High Production Volume (HPV) chemicals with Screening Level Hazard Characterization Reports completed.	N/A	N/A	Baseline	522	781	733	1,152	1,013	HPV Chemicals
Baseline – The baseline for the number of chemicals with Screening Level Hazard Characterization Reports was developed using data from internationally sponsored HPV chemicals through 2006. EPA assisted with the development and finalization of reports for these 359 chemicals.									
Explanation - Original baseline assumption were incorrect because OPPT can only count Hazard Characterizations completed through the international process that are manufactured in the U.S. and part of the Chemical Assessment and Management Program chemical universe. Relative targets remain at the same interval but are decreased over time. In FY 2007, Hazard Characterizations began to be developed solely by EPA. These added to ongoing international work and provide the beginning step for risk based prioritizations.									
(282) Annual reduction in the production-adjusted risk-based score of releases and transfers of High Production Volume (HPV) chemicals from manufacturing facilities.	1.4	5.3	3.0	1.8	2.6	Data Unavailable	2.5	Data Unavailable	Percent RSEI Risk
Baseline - The baseline for the percent reduction in the risk based score for HPV chemicals is zero percent in 1998, which was the year the HPV program began. A cumulative 30.3 percent reduction has been observed between 1998 and 2005.									
Explanation - RSEI scores are dependent on TRI data which are subject to a 2 year data lag. FY05 actuals were recalculated based on									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
new assumptions resulting in slightly different results for FY 06. Overall progress toward long term target is accelerating due to a reduced release of the chemical diaminotolune in a high exposure area.									
(D5C) Percent increase from baseline year in cost savings due to new chemical prescreening.	N/A	N/A	6.67	15.1	13.4	-42	20	-40	Percent Cost Savings
Baseline - The baseline was developed from 2004 and 2005 data showing an average cost savings of $51,000 from chemical pre-screening.									
Explanation – FY 08 is the last year that OPPTS will be reporting on this measure. Fewer Sustainable Futures trainings were offered during FY 2008 due to slow implementation of MOU which passed SF training off to third party. This resulted in fewer pre-screened new chemicals submitted. While some cost savings were realized from pre-screening, they did not equal the baseline cost savings of $51,000. Only approximately $20,000 or 40 percent of baseline savings were realized.									
(226)Reduction in time required to issue Reregistration Eligibility Decisions.	7	75	10	62	40	40	60	60	Percent Reduction
Baseline – Baseline for reduction in time required to issue Registration Eligibility Decisions (REDs) decisions is 30 months in FY 2002									
(281) Reduction in cost of managing Pre-Manufacture Notice (PMN) submissions through the Focus meeting as a percentage of baseline year cost	N/A	N/A	N/A	N/A	Baseline	$459,800	N/A	N/A	Percent Reduction
Baseline - Percent reduction from baseline year in managing PMN submissions through the Focus meeting is $459,800 in 2007.									
(280) Percent reduction from baseline year in average cost of Toxic Substance Control Act 8(e) processing and searches.	N/A	N/A	N/A	N/A	Baseline	$14.88	N/A	N/A	Percent Reduction
Baseline - Baseline for the percent reduction from baseline year in the average cost of processing and searching TSCA 8(e) reports was $14.88 in 2007.									
Explanation - No target for FY 08. Measure was pushed back to 09, IT improvements haven't happened.									
(250) Reduction in the current year production-adjusted risk-based	2.5	-0.3	4.5	-0.3	4.0	Data Unavaila	3.5	Data Unavail	Percent RSEI

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
score of releases and transfers of toxic chemicals from manufacturing facilities.						ble		able	Risk
Baseline -Baseline for the Risk Screening Environmental Indicators Model Program in 2001 was zero percent. 2001 was selected as the baseline year because of changing TRI reporting thresholds for persistent, bioaccumulative, toxic chemicals that took effect in 2001. These changes significantly affect the RSEI model, making comparisons with years prior to 2001 inappropriate. A consistent set of chemicals can be used from 2001 forward. Cumulative reduction reported through 2005 is 29.3 percent.									
Explanation - RSEI scores are dependent on TRI data which are subject to a 2 year data lag. Updates to the RSEI model have improved underlying assumptions regarding air dispersion models. While FY 2005 and 2006 performance has not been met, overall progress toward long term target is accelerating largely due to a reduced released of chemical diaminotoluene in a high exposure area. Since 2001, cumulative reductions through 2006 are 39.5 percent.									

SUB-OBJECTIVE: 4.1.2: Reduce Chemical Risks at Facilities and in Communities

By 2011, protect human health, communities, and the environment from chemical releases through facility risk-reduction efforts and building community preparedness and response capabilities.

Strategic Target (1)

By 2011, continue to maintain the Risk Management Plan prevention program and further reduce by 5 percent the number of accidents at Risk Management Plan facilities. (The baseline is an annual average of 340 accidents, based on Risk Management Plan program data through 2003.)

Strategic Target (2)

By 2011, reduce by 5 percent the consequences of accidents at Risk Management Plan facilities, as measured by injuries, fatalities, and property damage. (The baseline is an annual average of 358 injuries, 13 fatalities, $143,487,189 property damage at Risk Management Plan facilities from 1995-2003.)

Strategic Target (3)

By 2011, vulnerability zones surrounding Risk Management Plan facilities will be reduced by 5 percent from the 2004 baseline, which will result in the reduction of risk for over 4 million people in the community. (The 2004 baseline is 33,504 miles of total cumulative radius of all vulnerability zones).

Strategic Target (4)

By 2011, improve by 10 percent from the 2007 baseline the capabilities of Local Emergency Planning Committees to prevent, prepare for, and respond to chemical emergencies (as measured by a survey of those planning committees), thereby reducing the risk to communities from the potentially devastating effects of chemical accidents.

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(CH2) Number of risk management plan audits and inspections completed.	400	730	400	885	400	550	400	628	Audits
Baseline - 2820 Risk Management Plan audits were completed between FY 2002 and FY 2006.									

SUB-OBJECTIVE: 4.1.3: Protect Human Health from Pesticide Risk

Through 2011, protect human health by implementing our statutes and taking regulatory actions to ensure pesticides continue to be safe and available when used in accordance with the label.

Strategic Target (1)

By 2011, reduce the concentration of pesticides detected in the general population by 50 percent. Baselines are determined from 1990-1992 Centers for Disease Control-National Health and Nutrition Examination Survey data.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(266) Percent reduction in concentrations of pesticides detected in general population.	N/A	N/A	N/A	N/A	10	5	Biannual	Biannual	Percent cum. reduction
Baseline - According to National Health and Nutrition Examination Survey data for 1999-2002 the concentration of pesticides residues detected in blood samples from the general population are: Dimethylphosphaste = 0.41 µg/L; Dimethylthiophosphate = 1.06 µg/L; Dimethyldithiophosphate = 0.07 µg/L; Diethylphosphate = 0.78 µg/L; Diethylthiophosphate = 0.5 µg/L; Diethyldithiophosphate = 0.07 µg/L; and 3,5,6-Trichloro-2-pyridinol = 1.9 µg/L.									
Explanation - Data Limitations have been identified and OPPTS is working to resolve these limitations.									

Strategic Target (2)

Through 2011, protect those occupationally exposed to pesticides by improving upon or maintaining a rate of 3.5 incidents per 100,000 potential risk events. Baseline: There were 1385 occupational pesticide incidents in 2003 out of 39,850,000 potential pesticide risk events/year.

Strategic Target (3)

By 2011, improve the health of those who work in or around pesticides by reaching a 50 percent targeted reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate: chlorpyrifos, diazinon, malathion, pyrethrins, 2,4-dichlorophenoxy acetic acid (2,4-D), and carbofuran. Baselines will be determined from the Poison Control Center Toxics Exposure Surveillance System database for 1999-2003.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(143) Percentage of agricultural acres treated with reduced-risk pesticides.	13.5	16	17	18	18	20	18.5	Data Available 2009	Percent acre-treatments
Baseline - The baseline for acres-treated is 3.6 percent of total acreage in 1998, when the reduced-risk pesticide acre treatments was 30,332,499 and total (all pesticides) was 843,063,644 acre-treatments. Each year's total acre-treatments, as reported by Doane Marketing Research, Inc serve as the basis for computing the percentage of acre-treatments using reduced risk pesticides. Acre-treatments count the total number of pesticides treatments which acre receives each year.									
Explanation - Data is collected on CY basis. FY 08 data will be available by EOY FY 09. FY07 actual exceeded target due to market conditions and an increased use of corn.									

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(001) Register reduced risk pesticides, including biopesticides.	14	14	14	15	14	14	10	12	Registrations
Baseline - Zero in 1996. Cumulative total in FY 2007 is 200 registrations.									
(002) New Chemicals	8	3	8	19	8	16	12	8	Registrations

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(Active Ingredients)									
Baseline - Zero in 1996. Cumulative total in FY 2007 is 117 new chemicals (active ingredient).									
Explanation - Active ingredients withdrawn and renegotiated due dates to FY 09.									
(265) Incidents per 100,000 potential risk events in population occupationally exposed to pesticides.	N/A	N/A	N/A	N/A	N/A	N/A	<=3.5/100,000	<=3.5/100,000	Incidents
Baseline - There were 1,388 incidents out of 39,850,000 potential risk events for those occupationally exposed to pesticides in FY 2003.									
(267) Percent reduction in moderate to severe incidents for six acutely toxic agricultural pesticides with the highest incident rate.	N/A	N/A	N/A	N/A	N/A	N/A	20	43	Cum. Percent Reduction
Baseline - The rates for moderate to severe incidents for exposure to agricultural pesticides with the highest incident rates base on FY 1999 -2003 data were: Chlorpyrifos, 67 incidents; diazinon, 51 incidents; malathion, 36 incidents; pyrethrins, 29 incidents; 2, 4-D, 27 incidents; carbofuran, 24 incidents, based on data from Poison Control Centers' Toxic Exposure Surveillance System, and the National Institute of Occupational Safety and Health's Sentinel Event Notification System for Occupational Risk.									
Explanation – Exceeded due to cancellation of residential uses process.									
(244) Percent reduction in review time for registration of conventional pesticides.	7	7	8	34	9	5	10	-37	Percent Reduction
Baseline – The baseline for review time for registration of convention pesticides is FY 2002 turnaround time of 44 months (pre-PRIA); Percent reduction from the prior year.									
Explanation -Two active ingredients, pyridalyl and iodomethane, were received in FY04 when the allowable review timeframes under PRIA were the greatest (38 months) - whereas other AIs received that fiscal year were registered in a timeframe significantly shorter than the 38 months allowed, these two chemicals had serious risk issues to address and were									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
problematic for EPA to register. The PRIA dates for both of these chemicals were renegotiated thus the legally allowable timeframe for review was actually greater than the 38 months that was assumed when the target for the efficiency measure was developed. To a lesser degree, this is also the case for flubendiamide, which was renegotiated beyond the original timeframe of 24 months.									
(273) Reduced cost per pesticide occupational incident avoided.	N/A	N/A	N/A	N/A	N/A	N/A	2	2	Cum. Percent Reduction
Baseline - Based on FY 2001- 2003 data, the cost avoided for occupational pesticide incidents is $11,550 per incident avoided.									
(005) New Uses	200	164	200	235	200	235	250	327	Actions
Baseline - Zero in 1996. Cumulative total in FY 2007 is 3,774 new use actions.									

SUB-OBJECTIVE: 4.1.4: Protect the Environment from Pesticide Risk
Through 2011, protect the environment by implementing our statutes and taking regulatory actions to ensure pesticides continue to be safe and available when used in accordance with the label.

Strategic Target (1)
By 2011, reduce the percentage of urban watersheds sampled by the US Geological Survey's National Water Quality Assessment (USGS NAWQA) program that exceed the National Pesticide Program aquatic life benchmarks for three key pesticides of concern (diazinon, chlorpyrifos, malathion). The 1992 - 2001 baselines as a percentage of urban watersheds sampled that exceeded benchmarks are Diazinon: 40 percent; Chlorpyrifos: 37 percent; and Malathion: 30 percent.

Strategic Target (2)
By 2011, reduce the number of agricultural watersheds sampled by the USGS NAWQA program that exceed EPA aquatic life benchmarks for 2 key pesticides (azinphos-methyl and chlorpyrifos). Based on 1992-2001 data, 18 percent of agricultural watersheds sampled exceeded benchmarks for Azinphos-methyl and Chlorpyrifos.

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(268) Percent of urban watersheds that exceed EPA aquatic life benchmarks for three key pesticides of concern.	N/A	N/A	N/A	N/A	N/A	N/A	25 Diazinon; 25 chlorpyrifos; 20 malathion	40 diazinon; 0 chlorpyrifos; 30 malathion	Percent Reduction
Baseline – The 1992–2001 baselines as a percentage of urban watersheds sampled that exceeded benchmarks are: diazinon, 40 percent; chlorpyrifos, 37 percent; and malathion, 30 percent.									
Explanation – Variance from target associated with phase out process of chemicals and with variability in monitoring data.									
(010) Cumulative percent of Reregistration Eligibility Decisions Completed.	81.4	82	93.5	91	97	95.4	100	100	Percent Decisions
Baseline - Baseline for cumulative percent of Registration Eligibility Decisions (REDs) completed is 613 REDs completed by FY 2008. Twenty-seven (27) of these decisions were completed during FY 2008.									
(275) Average cost and average time to produce or update an Endangered Species Bulletin	N/A	N/A	N/A	N/A	10 ($3,600 & 90 hrs)	N/A	19 ($3,240 & 81 hrs)	N/A	Cum. Percent Reduction
Baseline – Average cost and average time to produce or update an Endangered Species Bulletin in FY 2004 is $4,000 and 100 hours.									
Explanation – No bulletins issued.									
(226)Reduction in time required to issue Reregistration Eligibility Decisions.	7	75	10	62	40	40	60	60	Percent reduction
Baseline – Baseline for reduction in time required to issue Registration Eligibility Decisions (REDs) decisions is 30 months in FY 2002									
(011) Product Reregistration	400	501	545	545	545	962	1075	1194	Actions
Baseline - FY 05 actual is 501 product reregistrations.									
Explanation – Target exceeded due to external review of product reregistration process done to streamline the process and expedite timely implementation of risk mitigation measures.									

SUB-OBJECTIVE: 4.1.5: Realize the Value from Pesticide Availability
Through 2011, ensure the public health and economic benefits of pesticide availability and use are achieved.

Strategic Target (1)
By 2011, annually avoid $900M in termite structural damage by ensuring that safe and effective pesticides are registered/re-registered and available for termite treatment.

Strategic Target (2)
By 2011, avoid $1.5 billion of crop loss by ensuring that effective pesticides are available to address emergency pest infestations.

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(271) Millions of dollars in termite structural damage avoided annually by ensuring safe and effective pesticides are registered/reregistered and available for termite treatment.	N/A	N/A	N/A	N/A	N/A	N/A	900M	900M	Dollars Saved
Baseline - Based on U.S Census housing data, industry data, and academic studies on damage valuation, EPA calculates that in FY 2003 there were $900 million in annual savings from structural damage avoided due to availability of registered termiticides.									
(272) Billions of dollar in crop loss avoided by ensuring that effective pesticides are available to address pest infestations.	Baseline	1.5B	N/A	N/A	N/A	N/A	1.5B	1.5B	Dollars Loss Avoided
Baseline - According to EPA and USDA data for the years FY 2000-2005, emergency exemptions issued by EPA resulted in $1.5 billion in avoided crop loss.									
(274) Reduce cost per acres using reduced risk pest management practices compared to the grant and/or contract funds expended on environmental stewardship.	Baseline	2.63	N/A	N/A	N/A	N/A	2	2	Cum Reduction ($/acre)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Baseline - For FY 2005, funding of Strategic Agriculture Initiative grants resulted in $2.63 per acre impacted.									
(240) Maintain timeliness of S18 decisions	45	42	45	48	45	36.6	45	34	Days
Baseline - The Section 18's 2005 baseline is 45 days.									
Explanation - Target exceeded as a result of the emergency exemption streamlining rule that was completed in 2006.									

OBJECTIVE-LEVEL MEASURES

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(108) Contract cost reduction per study for assay validation efforts in the Endocrine Disruptor Screening Program.	N/A		N/A		1	63	1	3	Percent
Baseline - The average cost per study was calculated based on contract costs over a five year period (2002-2006). A laboratory study was defined as conduct of an assay with a single chemical in a single lab, and represents standardized study costs based on a mix of in vitro and in vivo studies, as well as detail review papers. The baseline average cost per study is $62,175 in FY 2006.									
(257) Cumulative number of assays that have been validated.	N/A		11/20	2/21	8/20	3/20	13/20	12/20	Assays
Baseline - Zero assays validated in FY 2005.									
Explanation - Target not met due to one of the planned assay validations being delayed because of contract and technical issues that arose during the conduct of the interlaboratory validation study.									

OBJECTIVE: 4.2: COMMUNITIES

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

Performance Measures Met	Performance Measures Not Met	Data Available After November 17, 2008	Total Performance Measures
3	0	7	10

SUB-OBJECTIVE: 4.2.1: Sustain Community Health
By 2011, reduce the air, water, and land impacts of new growth and development through use of smart growth strategies in 30 communities that will achieve significant measurable environmental and/or public health improvements. The baseline will be established in 2006.

SUB-OBJECTIVE: 4.2.2: Restore Community Health Through Collaborative Problem-Solving
Make significant environmental improvements in communities with potential disproportionately high and adverse environmental and/or public health effects ("areas with potential environmental justice concerns") and foster the ability of communities to address local environmental concerns with other stakeholders through collaborative problem solving.

SUB-OBJECTIVE: 4.2.3: Assess and Clean Up Brownfields
Working with state, tribal, and local partners, promote the assessment, cleanup, and sustainable reuse of brownfields properties.

Strategic Target (1)
By 2011, conduct environmental assessments at 13,900 properties. (FY 2005 baseline is 7,900.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(B29) Brownfield properties assessed.	1,000	1,381	1,000	2,139	1,000	1,371	1,000	Data Available FY 2009	Assessments
Baseline—In FY 2005, the Brownfields program assessed 1,381 properties.									
Explanation—Due to grantee reporting cycle, complete FY 2008 data will not be available until May 2009. EPA exceeded its target in FY 2007 for this measure									

Strategic Target (2)
By 2011, make 1,125 acres (cumulative) of brownfields ready for reuse.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(B33) Acres of Brownfield properties made ready for reuse.	NA	NA	NA	1,598	NA	2,399	225	Data Available FY 2009	Acres
Baseline - In FY 2006, the Brownfields program made 1,598 acres ready for reuse.									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Explanation - Due to grantee reporting cycle, complete FY08 data will not be available until May 2009. EPA exceeded its target in FY 2007 for this measure									

Strategic Target (3)

By 2011, leverage $12.9 billion (cumulative) in assessment, cleanup, and redevelopment funding at brownfields properties. (FY 2005 baseline is $7.5 billion.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(B37) Billions of dollars of cleanup and redevelopment funds leveraged at brownfields sites.	0.9B	1.0	0.9B	1.4	1B	1.7	0.9	Data Available FY 2009	$ Funds
Baseline—In FY 2005, the Brownfields program leveraged $1.0 billion in cleanup and redevelopment funding.									
Explanation—Due to grantee reporting cycle, complete FY 2008 data will not be available until May 2009. EPA exceeded its target in FY 2007 for this measure									

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(B34) Jobs leveraged from brownfields activities.	2,000	6,128	5,000	5,504	5,000	5,209	5,000	Data Available FY 2009	Jobs
Baseline—In FY 2005, the Brownfields program leveraged 6,128 jobs.									
Explanation—Due to grantee reporting cycle, complete FY 2008 data will not be available until May 2009. EPA exceeded its target in FY 2007 for this measure									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(B32) Number of properties	60	68	60	88	60	77	60	Data	Properties

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
cleaned up using Brownfields funding.								Available FY 2009	
Baseline - In FY 2005, the Brownfields program cleaned up 68 properties.									
Explanation - Due to grantee reporting cycle, complete FY08 data will not be available until May 2009. EPA exceeded its target in FY 2007 for this measure									

SUB-OBJECTIVE: 4.2.4: Sustain and Restore the U.S.-Mexico Border Environmental Health
By 2012, sustain and restore the environmental health along the U.S.-Mexico border through implementation of the "Border 2012" plan.

Strategic Target (1)
By 2012, achieve a majority of currently exceeded water quality standards in impaired transboundary surface waters. (2002 Baseline: 17 currently exceeded water quality standards were identified for 10 transboundary segments of U.S. surface waters.)

Strategic Target (2)
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. (2003 Baseline: 98,515 homes lacked access to safe drinking water.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(SP-24) Number of additional homes provided safe drinking water in the Mexican border area that lacked access to drinking water in 2003.							2,500	5,162	Homes
Baseline - In 2003, 98,515 homes lacked access to safe drinking water.									
Explanation - – In 2003, 98,515 homes lacked access to safe drinking water.									

Strategic Target (3)
By 2012, provide adequate wastewater sanitation to 25 percent of homes in the Mexican border area that lacked access to wastewater sanitation in 2003. (2003 Baseline: 690,723 homes lacked access to wastewater sanitation.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(SP-25) Number of additional homes provided adequate wastewater sanitation in the Mexican border area that lacked access to wastewater sanitation in 2003.							15,000	31,686	Homes
Baseline - In 2003, 690,723 homes lacked access to wastewater sanitation.									
Explanation - In 20032008, 690,723 homes lacked access to wastewater sanitation									

Strategic Target (4)

By 2012, cleanup five waste sites (two abandoned waste tires sites and three abandoned hazardous waste sites) in the U.S.-Mexico border region.

SUB-OBJECTIVE: 4.2.5: Sustain and Restore Pacific Island Territories

By 2011, sustain and restore the environmental health of the U.S. Pacific Island Territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands (CNMI).

Strategic Target (1)

By 2011, 95 percent of the population in each of the U.S. Pacific Island Territories served by community drinking water systems will receive drinking water that meets all applicable health-based drinking water standards throughout the year. (2005 Baseline: 95 percent of the population in American Samoa, 10 percent in the Commonwealth of the Northern Mariana Islands, and 80 percent of Guam served by community water systems received drinking water that meets all applicable health-based drinking water standards throughout the year.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(SP-26) Percent of population in each of the U.S. Pacific Island Territories served by community water systems will receive drinking water that meets all applicable health-based drinking water							72	Data Available 12/2008	Percent Population

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
standards throughout the year.									
Baseline - In 2005, 95 percent of American Samoa; 10 percent of the Commonwealth of the Northern Mariana Islands; and 80 percent of Guam were served by community water systems receiving drinking water that meets all applicable health-based drinking water standards.									
Explanation – Data available December 2008.									

Strategic Target (2)

By 2011, the sewage treatment plants in the U.S. Pacific Island Territories will comply 90 percent of the time with permit limits for biochemical oxygen demand (BOD) and total suspended solids (TSS). (2005 Baseline: The sewage treatment plants in the U.S. Pacific Island Territories complied 59 percent of the time with the biochemical oxygen demand and total suspended solids permit limits.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(SP-27) Percent of the time that the sewage treatment plants in the U.S. Pacific Island Territories will comply with permit limits for biochemical oxygen demand (BOD) and total suspended solids (TSS.)							67	Data Available FY 2009	Percent Time
Baseline - In 2005, sewage treatment plants complied with permit limits 59 percent of the time.									
Explanation – Data available in 2009.									

Strategic Target (3)

By 2011, beaches in each of the U.S. Pacific Island Territories monitored under the Beach Safety Program will be open and safe for swimming 96 percent of days of the beach season. (2005 Baseline: Beaches were open and safe 64 percent of the 365-day beach season in American Samoa, 97 percent in the Commonwealth of the Northern Mariana Islands, and 76 percent in Guam.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(SP-28) Percent of days of the beach season that beaches in each of the U.S. Pacific Island Territories monitored under the Beach Safety Program will be open and safe for swimming.							70	80	Percent Days
Baseline – In 2005, 84 percent of beach days were open and safe for swimming.									
Explanation - Beach data appears to be more influenced by seasonal rains and nonpoint sources than wastewater compliance and spills.									

SUB-OBJECTIVE: 4.2.6: Reduce Persistent Organic Pollutants (POPs) Exposure
By 2011, reduce the mean maternal serum blood levels of persistent organic pollutant contaminants in indigenous populations in the Arctic.

Strategic Target (1)
By 2011, reduce mean maternal blood levels of polychlorinated biphenyls (PCBs) (measured as Aroclor 1260) in indigenous populations in the Arctic to 5.6 µg/l.

Strategic Target (2)
By 2011, reduce mean maternal blood levels of chlordane (measured as the metabolites oxychlordane and trans-nonachlor) in indigenous populations in the Arctic to 1.1 µg/l.

OBJECTIVE: 4.3: RESTORE AND PROTECT CRITICAL ECOSYSTEMS

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

Performance Measures Met	Performance Measures Not Met	Data Available After November 17, 2008	Total Performance Measures
12	8	5	25

SUB-OBJECTIVE: 4.3.1: Increase Wetlands
By 2011, working with partners, achieve a net increase in wetlands acres with additional focus on assessment of wetland condition.

Strategic Target (1)

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. (2004 Baseline: 32,000 acres annual net wetland gain based on new U.S. Fish and Wildlife Service National Wetlands Inventory Status and Trends Report, 1998-2004.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(4F) Working with partners, achieve a net increase of acres of wetlands per year with additional focus on biological and functional measures and assessment of wetland conditions. (cumulative)	100,000	Data unavailable	100,000	Data unavailable	200,000	Data unavailable	100,000	Data Available 2011	Acres/Year
Baseline - The United States achieved a net cumulative increase of 32,000 acres per year of wetlands over a 6-year period, from 1998 through 2004, as measured by the U.S. Fish and Wildlife Service and reported in Status and trends of Wetlands in the Conterminous United States, 1998 to 2004. (Dahl, T.E. 2006. Status and Trends of Wetlands in the Conterminous United States, 1998 to 2004. U.S. Department of the Interior; Fish and Wildlife Service, Washington, D.C. 112 pp.)									
Explanation - Data available in 2011.									

Strategic Target (2)

By 2011, in partnership with the U.S. Army Corps of Engineers (the Corps), states, and tribes, achieve "no net loss" of wetlands each year under the Clean Water Act Section 404 regulatory program, beginning in 2007. (Baseline: new baseline to be determined in 2008)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(4E) In partnership with the U.S. Army Corps of Engineers, states, and tribes, achieve no net loss of wetlands each year under the Clean Water Act Section 404 regulatory program	No Net Loss	Data lag	No Net Loss	Data lag	No Net Loss	Data lag	No Net Loss	Data Available 2009	Acres
Baseline - No Net Loss: FY 2003: 1:1.12 (ELI 2005 Status Report on Compensatory Mitigation in the U.S., pg. 24;									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
www.epa.gov/owow/wetlands/pdf/ELIMitigation2005.pdf									
Explanation - EPA will have data to report under this measure once the EPA interface for the ORM 2.0 Database is complete (estimated 01/01/2009)									

SUB-OBJECTIVE: 4.3.2: Facilitate the Ecosystem-Scale Restoration of Estuaries of National Significance
By 2011, working with partners, protect or restore an additional (i.e., measuring from 2007 forward) 250,000 acres of habitat within the study areas for the 28 estuaries that are part of the National Estuary Program. (2005 Baseline: 449,242 acres of habitat protected or restored; cumulative from 2002.)

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(202) Acres protected or restored in NEP study areas.	25,000	103,959	25,000	140,033	50,000	102,462.9	50,000	83,490	Acres
Baseline - In 2002, 0 acres were protected or restored in NEP study areas.									
Explanation - It is difficult to determine an accurate number of habitat acres that will be protected and restored because of many unforeseen and uncontrollable factors such as delays in funding, multiple partners involved, weather, timing of permits, availability of materials, contract bid process, and negotiations with willing landowners. EPA works with the NEPs to set the most realistic acreage target possible, but many issues can arise which may change the actual number of acres NEPs report.									

SUB-OBJECTIVE: 4.3.3: Improve the Health of the Great Lakes
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. (2005 Baseline: Great Lakes rating of 21.5 on the 40-point scale where the rating uses select Great Lakes State of the Lakes Ecosystem indicators based on a 1 to 5 rating system for each indicator, where 1 is poor and 5 is good.)

Strategic Target (1)
Through 2011, maintain or improve an average annual 5 percent decline for the long-term trend in average concentrations of PCBs in whole lake trout and walleye samples. (Baseline: decline from 1990 levels.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(620) Average annual percentage decline for the long-term trend in concentrations of PCBs in whole lake trout and walleye samples.	5	6	5	6	5	6	5	6	Annual Percent Decrease
Baseline - On average, total PCB concentrations in whole Great Lakes top predator fish have recently declined 5 percent annually - average concentrations at Lake sites from 2002 were: L Superior-9ug/g; L Michigan- 1.6ug/g; L Huron- .8ug/g L Erie- 1.8ug/g; and L Ontario- 1.2ug/g. 9iv)									

Strategic Target (2)

Through 2011, maintain or improve an average 7 percent annual decline for the long-term trend in average concentrations of toxic chemicals (PCBs) in the air in the Great Lakes basin. (Baseline: Decline from 1992 levels measured through Integrated Atmospheric Deposition Network data.47)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(621) Average annual percentage decline for the long-term trend in concentrations of PCBs in the air in the Great Lakes Basin.	7	7	7	7	7	8	7	7	Annual Percent Decrease
Baseline - Average concentrations of toxic chemicals in the air (PCBs) from 2002 were; L Superior- 60 pg/m2; L Michigan- 87 pg/m2; L Huron-19 pg/m2; L Erie- 183 pg/m2; and L Ontario- 36 pg/m2.									
Explanation – All Lakes declined except for Lake Michigan. Cleanup of contaminated sediment is contributing to progress.									

Strategic Target (3)

By 2010, restore and delist a cumulative total of at least 8 Areas of Concern within the Great Lakes basin (2005 Baseline: 0 areas of concern de-listed as of 2005 of the 31 total areas of concern.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(622) Number of Areas of Concern in the Great Lakes Basin which	3	0	2	1	1	1	3	1	Number of AOCs

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
are restored and de-listed.									
Baseline - In 2002, no Areas of Concern had been delisted.									
Explanation - Measure delayed because of lag time between cleanup (such as the 5 completed Legacy Act sediment remediations) and monitored environmental response. EPA is working with states to address Beneficial Use Impairments through target setting and delistings.									

Strategic Target (4)

By 2011, remediate a cumulative total of 7 million cubic yards of contaminated sediment in the Great Lakes. (2005 Baseline: 3.7 million cubic yards of contaminated sediments from the Great Lakes have been remediated from 1997 through 2004 of the 75 million yards estimated to need remediation.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(606) Cubic yards of contaminated sediment remediated (cumulative) in the Great Lakes.	2.9	3.7	4.5	4.1	4.5	4.5	5.5	5.5	M Cubic Yards
Baseline - 2.1 million cubic yards of contaminated sediments were remediated from 1997 through 2001 of the 40 million requiring remediation.									

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(433) Improve the overall ecosystem health of the Great Lakes by preventing water pollution and protecting aquatic systems.	21	21.9	21	21.1	21	22.7	22	23.7	Scale
Baseline - Great Lakes rating of 20.9 reported in 2003, based on most current data available, generally from 2001) on a 40 point scale where the rating uses select Great Lakes State of the Lakes Ecosystem indicators based on a 1 to 5 rating system for each indicator, where 1 is poor and 5 is good.									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Explanation - Sediments component improved (>10 percent remediated) due to Legacy and other remediation; other components maintained progress.									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(623) Number of Beneficial Use Impairments removed within Areas of Concern.							16	11	Number of BUIs Removed
Baseline – In 2006, six BUIs were removed within Areas of Concern.									
Explanation – Following development of delisting targets by December 2008, states will be able to apply those targets toward BUI listings.									

SUB-OBJECTIVE: 4.3.4: Improve the Aquatic Health of the Chesapeake Bay Ecosystem
By 2011, prevent water pollution and protect aquatic systems so that the overall aquatic system health of the Chesapeake Bay is improved.

Strategic Target (1)
By 2011, achieve 45 percent (83,250 acres) of the long-term restoration goal of 185,000 acres of submerged aquatic vegetation. (2005 Baseline: 39 percent (72,935 acres) of submerged aquatic vegetation goal achieved.)

Strategic Target (2)
By 2011, achieve 40 percent (29.92 cubic km) of the long-term restoration goal of 100 percent attainment of the dissolved oxygen water quality standards in all tidal waters of the Bay. (2005 Baseline: 34 percent (25.40 cubic km) of dissolved oxygen goal achieved.)

Strategic Target (3)
By 2011, achieve 59 percent (95.88 million pounds) of the long-term goal to reduce annual nitrogen loads 162 million pounds from 1985 levels.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(230) Percent of point source nitrogen reduction goal of 49.9 million pounds achieved.			65	68	70	69	74	69	Percent Goal Achieved
Baseline – 61percent of point source nitrogen goal achieved in 2005.									
Explanation - Maintained reductions demonstrated in the FY 07 result. The process of incorporating nutrient limits into permit cycles is ongoing as well as upgrades of wastewater treatment plants.									
(cb3) Percent of goal achieved for implementation of nitrogen reduction practices (expressed as progress meeting the nitrogen reduction goal of 162.5 million pounds).			44	44	47	46	50	47	Percent Goal Achieved
Baseline – 41percent of nitrogen goal achieved in 2005.									
Explanation - Improvements to this measure as compared to 2007. Efforts to reduce pollution from agricultural practices are occurring but not at a sufficient enough pace due to increasing loads from urban/suburban growth. The process of Incorporating nutrient limits into permit cycles is ongoing as well as upgrades of wastewater treatment plants.									

Strategic Target (4)

By 2011, achieve 74 percent (10.63 million pounds) of the long-term goal to reduce annual phosphorus loads 14.3 million pounds from 1985 levels.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(231) Percent of point source phosphorus reduction goal of 6.16 million pounds achieved.			82	84	84	87	85	87	Percent Goal Achieved
Baseline – 80 percent of point source phosphorus goal achieved in 2005.									
Explanation - Load reductions maintained.									
(cb4) Percent of goal achieved for implementation of phosphorus			61	61	64	62	66	62	Percent Goal

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
reduction practices (expressed as progress meeting the phosphorus reduction goal of 14.36 million pounds).									Achieved
Baseline – 58 percent of phosphorus goal achieved in 2005.									
Explanation - Improvements to this measure as compared to 2007. Efforts to reduce pollution from agricultural practices is occurring but not at a sufficient enough pace due to increasing loads from urban/suburban growth. The process of Incorporating nutrient limits into permit cycles is ongoing as well as upgrades of wastewater treatment plants.									

Strategic Target (5)

By 2011, achieve 74 percent (1.25 million tons) of the long-term goal to reduce annual land-based sediment loads 1.68 million tons from 1985 levels.

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(cb5) Percent of goal achieved for implementation of sediment reduction practices (expressed as progress meeting the sediment reduction goal of 1.69 million pounds).			57	57	61	62	64	64	Percent Goal Achieved
Baseline – 54 percent of sediment goal achieved in 2005.									

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(232) Percent of forest buffer planting goal of 10,000 miles achieved.			46	46	53	53	60	57	Percent Goal Achieved

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Baseline – 38 percent of goal achieved in 2005.									
Explanation - FY 08 target was not met due to funding and resources available at levels less than previously estimated.									

SUB-OBJECTIVE: 4.3.5: Improve the Aquatic Health of the Gulf of Mexico

By 2011, the overall health of coastal waters of the Gulf of Mexico will be improved from 2.4 to 2.6 on the good/fair/poor" scale of the National Coastal Condition Report. (2004 Baseline: Gulf Coast rating of fair or 2.4 where the rating is based on a 4-point system where 1 is poor and 5 is good.)

Strategic Target (1)

By 2011, restore water and habitat quality to meet water quality standards in 71 impaired segments (cumulative) in 13 priority coastal areas (i.e., 20 percent of the 354 impaired segments identified in 13 priority coastal areas). (2005 Baseline: 28 segments restored)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Restore water and habitat quality to meet water quality standards in impaired segments in 13 priority coastal areas (cumulative starting FY 07).							64	Data Available FY 2009	Impaired Segments
Baseline – In 2005, 28 segments restored									
Explanation - Data from the 303(d) Reports of all five Gulf states is not available. Data will be available in January 2009									

Strategic Target (2)

By 2011, restore, enhance, or protect 20,000 acres of important coastal and marine habitats. (2005 baseline: 16,000 acres restored, enhanced, or protected; Gulf of Mexico coastal wetland habitats include 3,769,370 acres.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Restore, enhance, or protect a cumulative number of acres of important coastal and marine							18,200	25,215	Acres

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
habitats.									
Baseline – In 2005, 16,000 acres restored, enhanced, or protected; Gulf of Mexico coastal wetland habitats include 3,769,370 acres.									

Strategic Target (3)
By 2015, reduce releases of nutrients throughout the Mississippi River Basin to reduce the size of the hypoxic zone in the Gulf of Mexico to less than 5,000 km2, as measured by the 5-year running average of the size of the zone. (Baseline: 1996-2000 running average size = 14,128 km2.)

No Strategic Target

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(22b) Improve the overall health of coastal waters of the Gulf of Mexico on the "good/fair/poor" scale of the National Coastal Condition Report.	0.1	2.4	2.4	2.4	2.4	2.4	2.5	Data Available December 2008	Scale
Baseline - In 2004, the Gulf of Mexico rating of fair/poor was 2.4 where the rating is based on a 5-point system in which 1 is poor and 5 is good and is expressed as an aerially weighted mean of regional scores using the National Coastal Condition Report II indicators: water quality index, sediment quality index, benthic index, coastal habitat index, and fish tissue contaminants.									
Explanation - The National Coastal Condition Report III is still in draft format and is scheduled to be released in December 2008.									

SUB-OBJECTIVE: 4.3.6: Restore and Protect Long Island Sound
By 2011, working through the Long Island Sound Study Management Conference partnership, prevent water pollution, improve water quality, protect aquatic systems, and restore the habitat of Long Island Sound.

Strategic Target (1)
By 2014, reduce point source nitrogen discharges to Long Island Sound by 58.5 percent as measured by the Long Island Sound Nitrogen Total Maximum Daily Load. (Annual reduction target: 8,303 lbs/day. TMDL baseline: 212,899 lbs/day; 2014 target: 88,353 lbs/day.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(li1) Reduce point source nitrogen discharges to Long Island Sound as measured by the Long Island Sound Nitrogen Total Maximum Daily Load (TMDL).							37,323	Data Available FY 2009	Pounds Per Day
Baseline – In 1999, point source nitrogen discharges reduced to 211,724 lbs/day. Baseline updated from 2006-2011 Strategic Plan.									
Explanation – Point source discharge data will not be available until March 2009.									

Strategic Target (2)
By 2011, reduce the size of hypoxic area in Long Island Sound (i.e., the average maximum July-September <3mg/l DO) by 25 percent; reduce average duration of maximum hypoxic event by 25 percent. (2005 baseline derived from 19-year averages as of December 2005. Size: 203 sq/mi. Duration: 58 days.)

Strategic Target (3)
By 2011, restore or protect an additional 300 acres of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands from the 2005 baseline. (2005 baseline: 562 acres restored and 150 acres protected.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(li3) Restore or protect areas of coastal habitat, including tidal wetlands, dunes, riparian buffers, and freshwater wetlands.							862	1,199	Acres
Baseline – In 2005, 562 acres restored and 150 acres protected.									
Explanation – FY 2008 acreage achieved was an additional 176 acres restored/protected.									

Strategic Target (4)
By 2011, reopen an additional 50 miles of river and stream corridor to anadromous fish passage from the 2005 baseline through removal of dams and barriers or installation of by-pass structures such as fishways. (2005 baseline: 81 miles.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(li4) Reopen miles of river and stream corridor to anadromous fish passage through removal of dams and barriers or installation of by-pass structures such as fishways.							105.9	124.3	Miles
Baseline – In 2005, 81 miles of river and stream corridor to anadromous fish passage were open.									
Explanation – 1.3 additional river miles reopened in 2008.									

SUB-OBJECTIVE: 4.3.7: Restore and Protect the South Florida Ecosystem
Protect and maintain the South Florida Ecosystem, including the Everglades and coral reef ecosystems.

Strategic Target (1)
By 2011, achieve "no net loss" of stony coral cover (mean percent stony coral cover) in the Florida Keys National Marine Sanctuary and in the coastal waters of Dade, Broward, and Palm Beach Counties, Florida, working with all stakeholders (federal, state, regional, and local). (2005 baseline: Mean percent stony coral cover 6.7 percent in the Florida Keys National Marine Sanctuary and 5.9 percent in Southeast Florida.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(sf1) Achieve “no net loss” of stony coral cover in FL Keys Nat’l Marine Sanctuary and in the coastal waters of Dade, Broward, and Palm Beach Counties, FL working with all stakeholders.							6.7/5.9	6.4/5.1	Mean Percent of Area
Baseline – 6.8% in the Florida Keys National Marine Sanctuary (Strategic Plan baseline of 6.7% was revised to 6.8%. The Coral Reef Evaluation and Monitoring Project for the Florida Keys National Marine Sanctuary was modified in 2006 by dropping one hardbottom monitoring site because of the very small percentage of stony coral cover present (less than 0.2%) resulting in an increase of .1% in the mean percent stony coral cover for the entire Sanctuary. Statistical analyses of the Coral Reef Evaluation and Monitoring Project indicated that sampling a reduced number of stations at sites with low stony coral cover would still produce statistically valid results); 5.9% in SE Florida in 2005.									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Explanation – The corals of the Florida Keys National Marine Sanctuary and southeast Florida have been impacted by multiple stressors. The target was not met because of the following causes: mechanical damage from tropical storms and hurricanes in 2005; bleaching as a result of increased water temperatures in 2006; and coral diseases remain relatively high.									

Strategic Target (2)

By 2011, maintain the overall health and functionality of sea grass beds in the Florida Keys National Marine Sanctuary each year beginning in 2008, as measured by the long-term sea grass monitoring project that addresses composition and abundance, productivity, and nutrient availability. (Baseline index of sea grass health to be determined using information collected and analyzed in FY 2005.)

Strategic Target (3)

By 2011, maintain the overall water quality of the near shore and coastal waters of the Florida Keys National Marine Sanctuary each year, beginning in 2008. (Baseline concentrations for inorganic nitrogen [nitrate, nitrite, and ammonium], soluble reactive phosphorus, water clarity [turbidity and light attenuation], and chlorophyll a to be determined using information collected and analyzed in FY 2005 as measured by the long-term water quality monitoring project.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(sf3) Maintain the overall water quality of near shore and coastal waters of the Florida Keys Nat'l Marine Sanctuary.							Maintain	Maintain	Water Quality
Baseline – Elemental Indicator = 8.3; Species Composition Index = 0.48 in 2005.									
Explanation – Light attenuation – 25 sites/Chlor – 49/DIN – 348/TP – 362. For DIN and TP, increase was regional in scope and persistent.									

Strategic Target (4)

By 2011, maintain the water quality of the Everglades ecosystem each year, beginning in 2008, as measured through water quality monitoring of total phosphorus. (Baseline is 1995 water quality.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(sf4) Improve the water quality of the Everglades ecosystem as measured by total phosphorus, including meeting the 10 ppb total phosphorus criterion throughout the Everglades Protection Area marsh.							Maintain	Not Maintained	Parts Per Billion
Baseline – The average annual geometric mean phosphorus concentrations were 5 ppb in Everglades National Park, 10 ppb in Water Conservation Area 3A, 13 ppb in Loxahatchee National Wildlife Refuge, and 18 ppb in Water Conservation Area 2A; annual average flow – weighted total phosphorus discharges from Stormwater Treatment Areas (STAs) ranged from 13 ppb for area ¾ and 98 ppb for area 1W in 2005.									
Explanation – TP for four areas are as follows: 10.6, 12.0, 8.5, and 5.2. Effluent limits were met in five STAs and exceeded in one STA. 10 ppb criterion not met throughout Everglades Protection Area (two areas met the limit and two did not). Only one STA of six did not meet effluent limits.									

SUB-OBJECTIVE: 4.3.8: Restore and Protect the Puget Sound Basin
By 2011, improve water quality, air quality, and minimize the adverse impacts of rapid development in the Puget Sound Basin.

Strategic Target (1)
By 2011, improve water quality and lift harvest restrictions in 1,000 acres of shellfish bed growing areas impacted by degraded or declining water quality. (Baseline: As of January 2006, approximately 30,000 shellfish bed growing areas had harvest restrictions due to water quality impairments in Puget Sound.)

Strategic Target (2)
By 2011, 200 acres of prioritized contaminated sediments are remediated. (Baseline: as of January 2006, approximately 5,000 acres of remaining contaminated sediments required some level of remediation.)

Strategic Target (3)
By 2011, 3,500 acres of tidally- and seasonally-influenced estuarine wetlands are restored. (Baseline: total intertidal and near shore habitat acres identified in the 2006 Puget Sound Near Shore Restoration Site Inventory Database.)

Strategic Target (4)
By 2011, through coordinated diesel emission mitigation efforts, reduce total diesel emissions in the Puget Sound airshed by 8 percent. (Baseline will be determined in 2006.)

SUB-OBJECTIVE: 4.3.9: Restore and Protect the Columbia River Basin
By 2011, prevent water pollution, and improve and protect water quality and ecosystems in the Columbia River Basin to reduce risks to human health and the environment.

Strategic Target (1)
By 2011, protect, enhance or restore 13,000 acres of wetland habitat and 3,000 acres of upland habitat. (2005 Baseline: 96,770 acres of wetland and upland habitat available for protection, enhancement, or restoration.)

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(cr1) Protect, enhance, or restore acres of wetland habitat and acres of upland habitat in the Lower Columbia River watershed (cumulative starting in FY 05.)							3,000	12,986	Acres
Baseline – In 2005, 96,770 acres of wetland and upland habitat available for protection, enhancement, or restoration.)									
Explanation – Target exceeded due to significant collaborative efforts by the Lower Columbia River Estuary Program.									

Strategic Target (2)
By 2011, clean up 150 acres of known highly contaminated sediments. (Baseline: 400 acres of known highly contaminated sediments in the main-stem of the Columbia River and Lower Willamette River as of 2006.)

Strategic Target (3)
By 2011, demonstrate a 10 percent reduction in mean concentration of contaminants of concern found in water and fish tissue. (Chemical-specific baseline will be available in 2006 from the following sources: Pesticide Stewardship Partnership Studies for Oregon as of 200649; Total Maximum Daily Load (TMDL) studies for Washington50; 2002 EPA Columbia River Basin Fish Contaminant Survey51; Lower Columbia River Estuary Partnership 2006 Monitoring Study52; and Washington Ecology's March 2005 Report: Concentrations of 303(d) Listed Pesticides, PCBs, PAHs, Measured with Passive Samplers Deployed in the Lower Columbia River.)

OBJECTIVE: 4.4: ENHANCE SCIENCE AND RESEARCH

Through 2011, identify and synthesize the best available scientific information, models, methods, and analyses to support Agency guidance and policy decisions related to the health of people, communities, and ecosystems. Focus research on pesticides and chemical toxicology; global change; and comprehensive, cross-cutting studies of human, community, and ecosystem health.

Performance Measures Met	Performance Measures Not Met	Data Available After November17, 2007	Total Performance Measures
14	6	4	24

OBJECTIVE-LEVEL MEASURES

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(H13) Number of states using a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of programs and policies.	20	22	25	25	30	30	35	35	States
Baseline - The Ecological Research Program developed a common monitoring design and appropriate indicators to determine the status and trends of ecological resources and the effectiveness of national programs and policies. In 2005 when usage data were first available, 22 states were using this Environmental Monitoring and Assessment Program. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the ecosystems.									
(H40) Improved protocols for screening and testing	2	2	1	1	6	3	2	2	Reports
Baseline - In 2001, the program began tracking improved protocols for screening and testing and produced 9 of 9 reports on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems, with regard to chemical toxicology.									
Explanation - The computational toxicology grants that originally supported this measure were relocated to EPA's Safe Pesticides/ Safe Products Research Program during Multi-Year Plan revisions.									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
(H41) Effects and exposure milestones met	5	5	9	9	4	5	5	4	Reports
Baseline - In 2001, the program began tracking reports related to effects and exposure and produced 22 of 22 reports on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems, with regard to chemical toxicology.									
Explanation - One research project was delayed and is expected to be complete by April 2009. This research will support OPPTS, OW and the Regional decision makers in predicting vulnerability of the neuroendocrine system to contaminant-induced effects.									
(H43) Risk management milestones met	5	5	3	3	3	2	1	1	Reports
Baseline - In 2001, the program began tracking reports related to risk management and produced 2 of 2 reports on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems, with regard to chemical toxicology.									
Explanation - The scope of the work in this area was revised during the Endocrine Disruptors Research Program's Multi-Year Plan Revision process. The work in this area was relocated to the EPA's Safe Pesticides/ Safe Products Research Program.									
(H72) Percentage of planned outputs delivered in support of efficient and effective clean-ups and safe disposal of contamination wastes.	100	100	100	100	100	100	100	92	Percent
Baseline - EPA's homeland security research provides appropriate, effective, and rapid risk assessment guidelines and technologies to help decision-makers prepare for, detect, contain, and decontaminate building and water treatment systems against which chemical and/or biological attacks have been directed. The Agency intends to expand the state of the knowledge of potential threats, as well as its response capabilities, by assembling and evaluating private sector tools and capabilities so that preferred response approaches can be identified, promoted, and evaluated for future use by first responders, decision-makers, and the public. This APG will provide guidance documents for the restoration of buildings and water systems and the establishment of remediation goals. These products will enable first responders to better deal with threats to the public and the environment posed by the intentional release of toxic or infectious materials.									
Explanation – The program completed 10 out of 11 planned outputs intended to support the Office of Solid Waste and Emergency Response, regions, and other stakeholders in their ability to respond to terrorist attacks affecting buildings and the outdoor environment. The final output is scheduled to be complete in late 2008 and will include updates to the Support for Rapid Risk Assessment (SERRA) internet knowledgebase of biological agents. The SERRA database version 2.0 has undergone peer review and includes four biothreat									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
agents. The comments are being addressed and will be reflected in SERRA version 4.0, with an expected delivery of January 2009.									
(H73) Percentage of planned outputs delivered in support of water security initiatives.	100	100	100	100	100	100	100	83	Percent
Baseline - EPA's homeland security research provides appropriate, effective, and rapid risk assessment guidelines and technologies to help decision-makers prepare for, detect, contain, and decontaminate building and water treatment systems against which chemical and/or biological attacks have been directed. The Agency intends to expand the state of the knowledge of potential threats, as well as its response capabilities, by assembling and evaluating private sector tools and capabilities so that preferred response approaches can be identified, promoted, and evaluated for future use by first responders, decision-makers, and the public. This APG will provide guidance documents for the restoration of buildings and water systems and the establishment of remediation goals. These products will enable first responders to better deal with threats to the public and the environment posed by the intentional release of toxic or infectious materials.									
Explanation – The program completed 5 out of 6 planned outputs intended to support the Office of Water, regions, and water utilities in making decisions regarding the transport and health effects of contaminants in water systems. The final study is currently underway and is expected to be completed by December 2008.									
(H78) Percent progress toward completion of a framework linking global change to air quality.	45	47.5	60	65	75	75	85	Data Available July 2009	Percent
Baseline - In 2001, the program began work on a framework linking global change to air quality and completed 0% of the hierarchy. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems, with regard to global change.									
(H79) Percentage of planned outputs delivered.					Baseline	100	100	100	Percent
Baseline - In FY 2007, the Global Change research program began measuring the percentage of outputs delivered. This measure will contribute to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems, with regard to global change.									
(H81) Percentage of planned outputs delivered in support of Air Quality Criteria/Science Assessment documents.	N/A	100	N/A	100	90	100	90	75	Percent

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
Baseline - In 2004, the program began work on delivering outputs in support of the Air Quality/Science Assessment document and had an output delivery of 0 percent. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems.									
Explanation—In 2008, the program had 4 major milestones associated with releasing draft and final Integrated Science Assessments (ISA). Due to court ordered deadlines that were more stringent than initially planned by EPA, release of the first draft ISA for particulate matter was delayed to ensure that the other assessments would be released on time as planned. EPA expects to release the first draft ISA for particulate matter in the first quarter of FY 2009.									
(H82) Percentage of planned outputs delivered in support of human health risk assessments (HHRAs) health assessments.	N/A	108	N/A	63	90	100	90	100	Percent
Baseline - In 2004, the program began work on delivering outputs in support of HHRA health assessments and delivered 73 percent or 8 of 11 planned assessments on time. This measure tracks the program's ability to release a targeted 16 draft health hazard assessments of high priority chemicals for interagency review or external peer review each year and contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems.									
(H83) Percentage of planned outputs delivered in support of HHRA Technical Support Documents.	N/A	44	N/A	81	90	100	90	89	Percent
Baseline - In 2004, the program began work on delivering outputs in support of HHRA Technical Support Documents and delivered 83 percent of outputs on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to the health of people, communities, and ecosystems.									
Explanation – The program completed 8 of 9 planned annual outputs in support of its long term goal to deliver HHRA Technical Support Documents to program partners. The delayed project is awaiting peer review and acceptance for publication. Seven manuscripts were developed under this research project: One manuscript has been published, five have been accepted but not published, and one is awaiting acceptance. All manuscripts should be accepted and published by spring 2009.									
(H29) Percentage of planned outputs delivered in support of the public health outcomes long term goal	100	100	100	100	100	100	100	100	Percent
Baseline – In FY 2002, the program began tracking its planned outputs supporting its public health outcomes long-term goal and									

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
completed 100 percent of its outputs on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to human health.									
(H31) Percentage of planned outputs delivered in support of the aggregate and cumulative risk long term goal	100	86	100	100	100	100	100	100	Percent
Baseline - In FY 2000, the program began tracking its planned outputs supporting its aggregate and cumulative risk long term goal and completed 80 percent of its outputs on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to human health.									
(H32) Percentage of planned outputs delivered in support of mechanistic data long term goal	100	93	100	92	100	100	100	100	Percent
Baseline - Baseline - In FY 2000, the program began tracking its planned outputs supporting its mechanistic data long term goal and completed 100 percent of its outputs on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to human health.									
(I06) Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data to prioritize testing requirements; enhance interpretation of data to improve human health and ecological risk assessments; and inform decision-making regarding high priority pesticides and toxic substances.	100	86	100	80	100	86	100	100	Percent
(I08) Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides	100	100	100	100	100	100	100	100	Percent

Annual Performance Measures and Baselines	FY 2005		FY 2006		FY 2007		FY 2008		
	Target	Actual	Target	Actual	Target	Actual	Target	Actual	Unit
and Toxic Substances' and other organizations' needs for methods, models, and data for probabilistic risk assessments to protect natural populations of birds, fish, other wildlife, and non-target plants.									
(I21) Percentage of planned outputs delivered in support of state, tribe, and relevant EPA office needs for causal diagnosis tools and methods to determine causes of ecological degradation and achieve positive environmental outcomes.	100	100	100	86	100	100	100	91	Percent
Explanation - The program missed 2 of its 22 planned outputs under the program's long term goal to assist States, tribes, and relevant EPA offices in diagnosing and determining the causes of ecological degradation, thus helping partners achieve positive environmental outcomes. The two delayed outputs are joint projects with non-EPA organizations. The first is a joint project with USDA Forest Service and the final draft of this report is expected by December 2008. The second output is a joint project with The National Council on Economic Education (NCEE). Unfortunately, NCEE is not able to provide the recourses necessary to fully co-develop the valuation strategy. EPA's clients would like to see a valuation strategy; therefore, the research program will continue work on this project at a slower pace than originally intended.									
(I22) Percentage of planned outputs delivered in support of state, tribe, and relevant EPA office needs for environmental forecasting tools and methods to forecast the ecological impacts of various actions and achieve positive environmental outcomes.	100	83	100	100	100	100	100	100	Percent
(I23) Percentage of planned outputs delivered in support of	100	50	100	100	100	100	100	100	Percent

state, tribe, and relevant EPA office needs for environmental restoration and services tools and methods to protect and restore ecological condition and services to achieve positive environmental outcomes.									

(I10) 'Percentage of planned outputs delivered in support of the Office of Prevention, Pesticides and Toxic Substances' and other organizations' needs for methods, models, and data to make decisions related to products of biotechnology.	100	86	100	100	100	80	100	100	Percent

(H30) 'Percentage of planned outputs delivered in support of the susceptible subpopulations long term goal	100	100	100	92	100	100	100	100	Percent
Baseline - In FY 2000, the program began tracking its planned outputs supporting its susceptible subpopulations long term goal and completed 100 percent of its outputs on time. This measure contributes to EPA's goal of providing scientifically sound guidance and policy decisions related to human health.									
(I11) Percentage of SP2 publications rated as highly cited publications.			Baseline	22.2	Biennial Measure	Biennial Measure	23.2	Data Available July 2009	Percent
Baseline - In 2006, EPA's Office of Research and Development obtained baseline data for the percentage of program publications rated as highly cited papers, finding that 22.2 percent of papers fit this criteria.									
Explanation - This metric provides a systematic way of quantifying research performance and impact by counting the number of times an article is cited within other publications. The "highly cited" data are based on the percentage of all program publications that are cited in									

the top 10 percent of their field, as determined by "Thomson's Essential Science Indicator." Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "highly cited" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels—such as the BOSC— in their program evaluations.

(I11) Percentage of SP2 publications rated as highly cited publications.			Baseline	22.2	Biennial Measure	Biennial Measure	23.2	Data Available July 2009	Percent
(I12) Percentage of SP2 publications in "high impact" journals.			Baseline	35.2	Biennial Measure	Biennial Measure	36.2	Data Available July 2009	Percent

Baseline - In 2006, EPA's Office of Research and Development obtained baseline data for the percentage of program publications rated as high impact papers, finding that 35.2 percent of papers fit this criteria.
Explanation - This measure provides a systematic way of quantifying research quality and impact by counting those articles that are published in prestigious journals. The "high impact" data are based on the percentage of all program articles that are published in prestigious journals, as determined by "Thomson's Journal Citation Reports" (JCR). Each analysis evaluates the publications from the last ten year period, and is timed to match the cycle for independent expert program reviews by the Board of Scientific Counselors (BOSC). This "high impact" metric provides information on the quality of the program's research, as well as the degree to which that research is impacting the science community. As such, it is an instructive tool both for the program and for independent panels—such as the BOSC— in their program evaluations.