

# NATIONAL WATER PROGRAM

## FY 2005 PERFORMANCE REPORT

Office of Water  
Environmental Protection Agency  
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## **APPENDIX:**

Slides of Program Activity Measures Including National/Regional FY 2005 Data

## **I) INTRODUCTION**

The Environmental Protection Agency (EPA) published a new *Strategic Plan* in the Fall of 2003, in April 2004, the National Water Program published *National Water Program Guidance* describing how EPA, States, Tribes, and others would work together in FY 2005 to implement the new *Strategic Plan*. This *FY 2005 Performance Report* describes the progress made in FY 2005 toward the goals and objectives described in the *Guidance* and the EPA *Strategic Plan*. The *Strategic Plan* and the FY 2005 *Guidance* are available on the Internet at [www.epa.gov/water/waterplan](http://www.epa.gov/water/waterplan)), as is this *Report*.

This *FY 2005 Performance Report* is based on materials and analysis developed by teams of Headquarters and EPA Regional staff addressing each of ten subobjectives within the EPA *Strategic Plan* related to the National Water Program (see Table I, below). The briefing materials developed by these Subobjective Teams provide data concerning progress toward environmental and public health goals and accomplishment of key program activities along with recommendations for needed actions. Much of this work is accomplished through grants and this *Report* serves as the Office of Water's primary summary of progress under the Environmental Results Grants Order.

This *Report* includes three key elements:

- performance overviews, highlights, and next steps for each subobjective;
- overall conclusions and recommendations; and
- an appendix of data for environmental and program related measures, including national, and in many cases, EPA Region data.

**TABLE I**  
**NATIONAL WATER PROGRAM – KEY SUBOBJECTIVES**

- 1) Water Safe to Drink**
- 2) Fish and Shellfish Safe to Eat**
- 3) Water Safe for Swimming**
- 4) Restore and Improve Water Quality on a Watershed Basis**
- 5) Protect Coastal and Ocean Waters/Estuaries**
- 6) Protect Wetlands**
- 7) Protect Mexico Border Water**
- 8) Protect the Chesapeake Bay**
- 9) Protect the Great Lakes**
- 10) Protect the Gulf of Mexico**

## **II END-OF-YEAR PERFORMANCE BY SUBOBJECTIVE: OVERVIEW, HIGHLIGHTS AND NEXT STEPS**

This section provides a summary of the progress toward accomplishment of environmental and program goals described in the *National Water Program Guidance for FY 2005*.

Each subobjective report includes some or all of the following key information:

- a brief narrative summary of performance with respect to the outcome (i.e. environmental or public health goal) stated in the EPA *Strategic Plan*;
- a list of “Best Practices” with respect to program implementation, including both areas of success and areas needing attention;
- key next steps of “Needed Adjustments” to strengthen implementation of the subobjective and improve performance for the future; and
- steps on “Strengthening the Link Between Budget and Performance” with specific references to the use of EPA contracts and grants to implement the Agency’s Strategic goals.

It is important to note that more detailed information concerning performance under each of the outcome and program measures is provided in the Appendix to this Report and is available on the Internet at [www.epa.gov/water/waterplan](http://www.epa.gov/water/waterplan).



## **SUBOBJECTIVE: WATER SAFE TO DRINK**

**Subobjective: Percent of the population served by community water systems (CWSs) that receive drinking water that meets all applicable health-based drinking-water standards through effective treatment and source water protection.**

**2002 Baseline: 93.6%      2005 Commitment: 93%      2008 Target: 95%**  
**2003 Report: 89.6%**  
**2004 Report: 90.0%**  
**2005 Report: 88.5%**

### **Performance Overview**

The rate of compliance with drinking water standards by community water systems remains high at 88.5%. The overall compliance rate improved slightly between 2003 and 2004 (from 89.6% to 90%), but has not returned to the 2002 baseline rate of 93%. Attainment of the 2008 target of 95% compliance will be a major challenge.

### **Performance Highlights**

Examples of progress for the end-of-year include:

- Community water systems are making significant progress in minimizing risk through the development and implementation of source water protection strategies. By the end of 2002, about 8% of community water systems had implemented source water protection plans. In 2005, the program met the goal of having 20% of water systems implementing source water strategies. Accomplishment of the target of 50% of systems implementing strategies in 2008, however, will be a major challenge.
- Tribal community water systems reported compliance with drinking water standards in 2005 by 86.3% of systems. This compliance rate is below that of previous years.
- 48 States and 42 of 48 Tribes completed sanitary surveys for community water systems.
- Although the Underground Injection Control Programs are making good progress in identifying wells and addressing violations in the case of Class I, II, and III wells, EPA did not meet 2005 commitments for V wells or Class V motor vehicle waste disposal wells. EPA exceeded their commitment for Class I, II, and III wells.

- EPA is on track to develop baseline information concerning the adoption (under the Clean Water Act) of public water supply uses for surface waters uses as sources of drinking water, and expects to be able to implement measures to coordinate Clean Water Act programs for the benefit of source waters in FY 2007.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.

## **Next Steps**

Key next steps identified by the Subobjective Team include:

- Expand efforts to support community water systems and States in implementation of source water protection plans. EPA is working with the Trust for Public Lands and other stakeholders to develop a “Roadmap” for Source Water Protection program implementation. A key element of this effort includes stressing the importance of protection of source water on a watershed basis which can be found at:  
<http://www.epa.gov/safewater/protect.html>.
- EPA has initiated expanded efforts to support effective implementation of the Underground Injection Control Program with respect to Class V wells, including motor vehicle wells. EPA will expand technical assistance and monitor program progress with the goal of identifying the most significant non-compliance problems.
- The EPA Office of Water will expand efforts to coordinate with the EPA Office of Enforcement and Compliance Assurance to help community water systems comply with new regulations.
- EPA recognizes that many States face funding limitations and will work to remove barriers to States’ use of funds set-aside from State Revolving Loan Funds for technical assistance, capacity building, and source water protection where appropriate.
- EPA has identified as particularly successful a program developed by the State of Kansas that provides training for members of Boards of local water systems. In this program, water systems that provide Board members training earn points toward State Revolving Loan Funds.

## **SUBOBJECTIVE: FISH AND SHELLFISH SAFE TO EAT**



**Subobjective (Part A): Improve the quality of water and sediments to allow for increased consumption of safe fish in a percentage of the river miles/lake acres identified by States or Tribes as having a fish consumption advisory in 2002.**

**2002 Baseline: 485,205 river miles and 11,277,276 lake acres under advisory**

**2005 Commitment: 1% of advisory waters improved**

**2005 End-of-Year: Data unavailable**

**By 2008: 3%**

**Subobjective (Part B): Increase the percentage of shellfish-growing acres monitored by States that are approved or conditionally approved for use.**

**1995 Baseline: 77% of 21.6 million acres open for use**

**2005 Commitment: 80% acres open for use**

**2003 Report: 91%**

**2005 End-of-Year: Data unavailable**

**By 2008: 85%**

### **Performance Overview**

EPA is not able to report results for measures related to fish consumption and shellfish acres due to limitations in data systems.

### **Performance Highlights**

Examples of progress for the end-of-year include:

- States made good progress in increasing the number of river miles where fish tissue is assessed for consumption advisories, increasing the miles assessed from 16% in 2002 to 24% in 2005, just short of the 2005 commitment of 25%. The percent of lake acres assessed, however, rose only slightly from 34.5% in 2002 to 35% in 2005, short of the 2005 commitment of 37%.
- EPA is continuing to work with States to help them adopt fish tissue monitoring and assessment guidelines that are consistent with national guidance. As of the end of 2005, 92% of States had adopted national guidance, up from 82% in 2002.

- EPA supported Tribes in development of fish tissue monitoring capability and increased the number of Tribes using national guidance from 3 in 2002 to 5 in 2005.
- A total of 12 States have adopted the fish tissue criterion for mercury, published by EPA in January of 2001. Although EPA has not set a target for State adoption of the mercury criterion, EPA generally expects that States will adopt new criteria within 5 years. Many States, however, are awaiting EPA publication of supporting guidance for the mercury criterion.
- States are making good progress in the adoption of shellfish data systems that provide the geographic location of shellfishing areas as well as the overall condition of shellfish areas. A total of 13 States out of 22 shellfishing States have now adopted the Shellfish Information Management System (SIMS), greatly increasing the ability of EPA and State agencies to identify pollution sources contributing to closure of shellfishing areas and to design strategies to reopen these valuable resources.

Additional information concerning performance under outcome measures and program activity measures is provided in FY 05 End-of-Year slides at the end of this report.

### **Needed Adjustments**

Key next steps identified by the Subobjective Team include:

- The Office of Water is developing guidance concerning the new mercury criterion and will expand efforts to assist States in adoption of this more scientifically sound criterion.
- The Office of Water will continue cooperative efforts with the Office of Air and Radiation concerning air deposition of mercury, including refinement of maps of air deposition of mercury and regional mercury models and will continue cooperation in Agency mercury reduction strategies.
- The Office of Water will expand efforts involving the Office of Research and Development and other Federal agencies to improve consistency of assessments of pathogens in shellfish beds.

## **SUBOBJECTIVE: WATER SAFE FOR SWIMMING**



**Subobjective: Restore water quality to allow swimming in waters identified by States in 2000 as unsafe for swimming:**

**2000 Baseline: 90,000 stream miles/2.6 million lake acres**

**2005 Commitment: 2% of impaired waters restored**

**2005 End-of-Year: Data available 12/06**

**By 2008: 5%**

### **Performance Overview**

Although data concerning waters safe for swimming in 2005 is not yet available, the most recent data, from 2002 State reports, indicates that the number of lake acres and river miles unsafe for swimming is increasing, rather than decreasing. Lake acres identified as unsafe for swimming increased from about 2.6 million in 2000, to about 3.2 million in 2002. River miles unsafe for swimming increased slightly from 90,000 miles to about 92,000 miles. These increases may be partly attributable to increased beach monitoring and reporting.

### **Performance Highlights**

Results of progress for the end-of-year include:

- In early FY 2005, EPA published regulations establishing the current pathogen criteria for coastal recreational waters, increasing the number of coastal States and Territories, with current criteria from 11 in 2002 to all 35 coastal States and Territories.
- EPA and States committed in 2005 to monitoring and managing 91% of significant public beaches under the BEACH Act. End-of-year data indicates that EPA exceeded its commitment with 96.5% of these beaches being monitored.
- EPA has a long-term goal of increasing the number of days that beaches monitored under the BEACH Act are open for swimming from about 94% in 2002 to 96% in 2008. Data indicates that EPA exceeded the 2005 commitment of maintaining the goal of 96% of days open.
- EPA exceeded the FY 2005 commitment of 36% of permits for combined sewer overflows having schedules in place. End-of-year results under this measure are 44.5% of permits with schedules in place (i.e. 371 permits). EPA expects to meet the 2008 goal of 75% of permits with schedules in place.

- EPA is making limited progress in working with States to encourage the adoption of Voluntary Management Guidelines for on site/decentralized sewage treatment systems, increasing the number of States adopting guidelines from only 2 in 2002 to 6 at the 2005 end-of-year.
- Several program activities being implemented for the Great Lakes, including the BEACH program and the control of combined sewer overflows, have an important impact on swimming waters.
- Progress has been made on the development of a new measure on waterborne disease outbreaks attributable to swimming or other recreational contact. During 2005, ORD and CDC analyzed the historical outbreak data baseline of outbreaks related only to recreational water covered by the CWA.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.

### **Needed Adjustments**

Needed adjustments and key next steps identified by the Subobjective Team include:

- The Office of Water will work with the Office of Research and Development, the Centers for Disease Control, and the Council of State and Territorial Epidemiologists (CSTE) to evaluate options for the development of a public access database on disease outbreaks associated with recreational water exposure.
- In order to stay on track toward meeting the goal of developing schedules for implementation of Long Term Control Plans in combined sewer overflow permits, EPA is increasing the percentage of CSO permits with enforceable mechanisms to implement LTCPs.
- EPA Regions 1 and 9 have both developed Beach Strategies for expanding and improving the implementation of BEACH Act programs within States in the Region. Region 5 and the Great Lakes National Program Office are assisting in the development of a Coastal Human Health Strategy for the Great Lakes.
- EPA will work with other non-coastal States and Tribes to have them adopt current pathogen criteria. There is currently an effort underway to provide guidance and new criteria for pathogen and pathogen indicators is being developed.

## **SUBOBJECTIVE: PROTECT WATER QUALITY ON A WATERSHED BASIS**



**Subobjective: Use both pollution prevention and restoration approaches to increase the number of watersheds where water quality standards are met in at least 80% of the assessed water segments:**

**2002 Baseline: 453 watersheds of the total 2,262 USGS cataloguing unit scale watersheds across the Nation.**

**2005 Commitment: 458 watersheds**

**2005 End-of-Year: 2 (annual), 450 (cumulative)**

**2008 Target: 600**

**Strategic Measure: Restore a percentage of those water bodies identified in 2000 as not attaining standards:**

**2000 Baseline: 21,632 waterbodies**

**2005 Commitment: 715 (3.3%)**

**2005 End-of-Year: 1,955 (9.0%)**

**2012 Target: 25%**

### **Performance Overview**

EPA is evaluating data from States concerning progress toward restoration of impaired waterbodies on a watershed basis. Existing data indicate that goal of 600 watersheds having greater than 80% of assessed waters meeting standards by 2008 is unlikely to be met.

Although improvement of water quality on a watershed scale is proceeding more slowly than expected, restoration of individual impaired waters is on track. Regions and States have significantly exceeded the goal of restoring 2% of the 21,632 waters listed as impaired in 2000 at the end of 2005 with 9% (1,955) waterbodies at the end-of-year. Attainment of the goal of restoring 25% of these waters by 2012 is less certain.

### **Performance Highlights**

Results of progress for the end-of-year include:

- Performance with respect to the water quality standards program is generally on track for success with a total of 44 States and Tribes that have submitted revisions to water quality standards on schedule and EPA has approved State standard submissions on schedule in most cases. EPA met its commitment of developing 8 water quality criteria documents to guide

States and Tribes in adopting revised standards. FY 2005 goals for development and approval of Tribal water quality standards however, resulted in 26 tribes at the end of the year against a 2005 commitment of 32.

- States are on track to develop and begin implementing water quality monitoring strategies consistent with national monitoring guidance. At the end of FY 2005, 51 States had accomplished this work.
- EPA exceeded the FY05 commitment of 36% for combined sewer overflow (CSO) permits with schedules in place to implement Long Term Control Plans. Regions have approved over 4,071 TMDLs, and at the end-of-year, have approved 105% of the TMDLs scheduled to be completed in FY 2005 and well above the FY 2005 commitment of 3,178.
- EPA and States are making good progress in development of water quality trading in the context of TMDLs. EPA had a goal of developing 22 TMDLs that provide for trading in FY 2005, but exceeded this goal with the development of 27 such TMDLs.
- EPA has made a special effort to work with States to identify the highest priority permits from an environmental risk perspective, and to give these permits top priority for action. End-of-year data indicates that in FY 05, 102% of priority permits had been issued, significantly higher than the goal of 95% of priority permits being current.
- Some 46 States have issued Phase II storm water permits for municipalities and for construction, slightly off the pace needed to meet the goal of all 50 states issuing Phase II storm water permits.
- As a result of recent court decisions, States are behind schedule for updating regulations to reflect requirements for Concentrated Animal Feeding Operations (CAFOs) (26 States at the end-of-year while the target was 40) and issuance of general permits (25 States at the end-of-year while the target was 39).

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.

### **Needed Adjustments**

Needed adjustments and key next steps identified by the Subobjective Team include:

- The Office of Science and Technology will convene Region/General Counsel management level review teams to identify bottlenecks in the review and approval of Tribal water quality standards.
- The Deputy Assistant Administrator was briefed on identifying issues and opportunities related to attainment of the goal of restoring 25% of impaired waters by 2012 and for improving progress toward watershed restoration. The briefing included proposals for the further development of Regional “Watershed Game Plans” and the expression of common elements of these Regional strategies at the national level.
- The Office of Water will work with Regional managers to review opportunities for including trading authority in TMDLs and in permits, and will work with each Region focus on this important effort.
- The Office of Water will take several steps to improve management of tribal clean water programs, including:
  - support Regional efforts to approve Tribal water quality standards;
  - issuing comprehensive new guidance for tribal recipients of section 106 grants, including guidance on water quality monitoring, assessment, and reporting; and
  - improve the percentage of priority permits and all permits on Tribal lands that are current.
- The demand for water quality data and information continues to exceed State and Tribal monitoring resources. In particular, competing monitoring priorities make it difficult to routinely monitor waters undergoing restoration activities to document progress. The Office of Water intends to demonstrate how the use of multiple monitoring tools can improve efficiency and can be implemented in State and Tribal programs. Additionally, the Office of Water will work with partners to leverage State and Tribal monitoring data with data collected by volunteers, industry and others to more effectively meet information needs.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.



## **SUBOBJECTIVE: PROTECT COASTAL WATERS**

**Subobjective: Improve national and regional coastal aquatic ecosystem health on the “good/fair/poor” scale of the National Coastal Condition Report. (Rating is a 5-point system in which 1 is poor and 5 is good.)**

**2002 Baseline: “fair/poor” or 2.4**

**2005 Commitment: 2.5**

**2005 End-of-Year: 2.7**

**2008 Target: 2.6**

### **Performance Overview**

The second edition of the National Coastal Condition Report (NCCR II), published in 2005 and describing conditions in 2004 and 2005, includes an overall assessment of coastal water quality conditions. Based on these indicators, the overall health of the Nation’s coastal waters is fair. This is essentially the same as the findings from the first NCCR issued in 2001 (2.3 rather than 2.4 on a five point scale).

From a regional perspective, the condition of the coastal waters in the Southeast, Gulf of Mexico, and Great Lakes has improved since the first NCCR, while the Northeast and West coasts remain the same.

Among the key indicators, coastal habitat condition, sediment quality, and benthic condition ranked the lowest; whereas, individual components of water quality, including dissolved oxygen and dissolved inorganic nitrogen, ranked slightly better.

{Note that the NCCR II used improved methods for assessment. When the original report scores are adjusted to reflect the improved methods, the adjusted national score is 2.0 rather than 2.4. Comparing the original corrected score of 2.0 to the new score of 2.3 shows a slight improvement in conditions. The indicator showing the greatest improvement in corrected scores is water quality (1.5 to 3.2) followed by benthic quality (1.5 to 2.0). Sediment quality and fish tissue score both declined slightly while the coastal habitat index remained essentially the same. }

### **Performance Highlights**

During 2005, the Subobjective Team reported the utilization of an integrated management approach that focused on NEPs, combined focus on major stressors (invasives, vessels, smart growth), and continued to monitor and assess coastal water quality. EPA’s water quality research vessel, BOLD, has expanded EPA capacity to assess coastal water quality. EPA continues to partner with other federal agencies, Ocean Action Plan, Coral Reef Task Force, and the National Dredging Team.

Results of progress for the end-of-year include:

- Exceeded targeted goal at the subobjective level and six of seven Strategic Targets.
- Progress at the end-of-year for 2006 measures is generally on track for most program activity measures including measures relating to:
  - o ballast water;
  - o management of the National Estuary Program estuaries (i.e., return on Federal investment, priority actions initiated and completed, and development of key indicators to track environmental progress);
  - o marine debris monitoring network operations;
  - o development of dredged material management plans for major ports and harbors;
  - o monitoring of ocean disposal site management plans; and
  - o coastal State training and monitoring related to air deposition.
- Reporting by the Corps of Engineers of the beneficial use of dredged material is not yet established.

### **Best Practices**

Key next steps identified by the Subobjective Team include:

- NCCR has a good track record and will be showing trends in the future.
- NEPs are generally strong and effective.
- EPA will work with other water programs, including the storm water program and the wetlands program, to further improve coastal water quality.
- EPA will partner with other Federal agencies to assure the effective implementation of the Ocean Action Plan and support the work of the Coral Reef Task Force and the National Dredging Team.

### **Needed Adjustments**

Some suggestions that the Subobjective Team feels that EPA needs to undertake to improve the effectiveness of the Coastal and Ocean Waters Subobjective:

- Current measures need to be expanded to reflect the PART review process.
- EPA will make a connection with core water programs/watersheds by adding a new coastal watershed program activity measure.

- Headquarters will develop a measuring and reporting system that will more effectively involve the Regions.

### **Strengthening the Link Between Performance and Budget**

- EPA will drop future NEP CCRs due to funding constraints;
- EPA will need to support broader monitoring/data management for a broader scope of new measures;
- EPA needs to continue a strong NEP program by requiring support for Strategic Plan goals/reporting in NEP grants and developing Implementation Review reports to identify issues/actions needed to improve performance; and
- EPA will address support for achieving the goals of the Strategic Plan in contracts/grants on a case-by-base basis.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.



## **SUBOBJECTIVE: PROTECT WETLANDS**

**Subobjective: Working with partners, achieve a net increase of acres of wetlands with additional focus on biological and functional measures.**

**2002 Baseline: annual net loss of an estimated 58,500 acres.**

**2005 Commitment: 100,000**

**2005 End-of-Year: TBD**

**2008 Target: 400,000**

### **Performance Overview**

Although data concerning the goal in the EPA *Strategic Plan* concerning the creation of 100,000 acres of wetlands per year is not available, information describing progress toward broader wetlands goals, identified by the President after the publication of the *Strategic Plan*, is available. Additionally, the President called for creating, improving and protecting a total of three million acres of wetlands over five years. The wetlands data, provided in a report, titled *Preserving America's Wetlands, Implementing the President's Goal* (SEQ., April 2005), indicates that since April 2004, 832,000 acres have been restored, created, protected or improved including:

- 328,000 acres restored or created;
- 154,000 acres improved; and
- 350,000 protected.

### **Performance Highlights**

Results of progress for the end-of-year include:

- At end of year, EPA has exceeded commitments for wetlands related measures including support for Tribal wetland and watershed projects and development of State capacity to measure wetlands conditions.

### **Best Practices**

The following practices have been identified by the Subobjective Team as formidable tools in achieving success:

- As a result of working with the measures, there has been a sharper focus on what is measureable now and what to seek in the longer term, e.g. wetland acres restored now versus wetland function and condition in the future.

- The focus on national wetland acreage provides incentive for accelerated USFWS reports and new a new Army Corps of Engineers database.

### **Needed Program Adjustments**

The Subobjective Team included the following statement of needed actions:

- The wetlands program will continue cooperative efforts with other water programs and with the Army Corps of Engineers to implement wetlands programs on a watershed basis.
- The wetlands program will continue to work to improve data with respect to wetlands gains and losses in function and the ability to reflect wetlands condition.

### **Strengthening the Link Between Performance and Budget**

EPA hopes to pursue authority to award wetland program development grants for implementation of wetland monitoring, upon which funding is critical. Grants currently support state and tribal capacity building, restoration projects and developing monitoring capability. Grant support for program priorities has been reinforced through RFPs for 2006 grants in monitoring, regulation, restoration, standards, mitigation compliance, and partnership

### **Progress with New Outcome Measures in the Future**

Measuring and reporting on wetland function has improved dramatically over the years. A new measure on national wetland condition (functional and biological) is being considered for the 2011 Strategic Plan in which OWOW plans to conduct probabilistic assessments of wetland conditions in 2013 in coordination with WT-4 which tracks states progress towards reporting on changes in wetland condition.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.

## **SUBOBJECTIVE: MEXICO BORDER WATERS**



**Subobjective (Part A): Achieve water quality standards currently being exceeded in shared and transboundary waters where standards currently being exceeded:**

**2002 Baseline: n/a                      2005 Target: n/a      2008 Target: >50%**  
**Measure not operational**

**Subobjective (Part B): Protect the health of people in the Mexico border area by providing adequate water and wastewater sanitation systems funded through the Border Environmental Infrastructure Fund:**

**2002 baseline: 790,000 persons provided access    2005 Commitment: 1.5 million**  
**2004 Report: 1,163,000                                      2005 Report: 1,163,000**

### **Performance Overview**

Progress toward the 2005 goal of protecting the health of 1.5 million people by providing adequate water and wastewater sanitation systems had slowed in 2005 because certification of new projects was halted pending completion and implementation of a project priority system.

### **Performance Highlights**

Results of progress for the end-of-year include:

- EPA worked with other parties to develop a consistent, quality assured data set of 14 key parameters for measurement of water conditions and reached binational agreement on the data set.
- EPA began the process of identifying binational, shared water bodies/segments that are impaired. EPA expects to complete the process of identifying significant, transboundary that are impaired by the end of FY 2005.
- EPA began development of a border-wide water quality report.
- EPA developed and implemented a prioritization process for border water drinking water and wastewater infrastructure projects. As a result of the process, 26 projects have been identified as candidates for FY 2005/2006 border water infrastructure funding. The Prioritization Criteria and Methodology were established to ensure drinking water and wastewater

projects addressing the most severe public health and environmental conditions in the border region received funding first.

### **Needed Adjustments**

Needed adjustments and key next steps identified by the Subobjective Team include:

- Preparations for the second water border infrastructure prioritization are underway. For the FY 2007-2008 prioritization process, the criteria, the methodology and related processes have been modified to enhance the success of the program and to improve the process for the project sponsors.
  
- EPA will transition to a new measure of performance related to water and wastewater services 1) By 2012, provide safe drinking water to 25% of homes in the Mexico Border area that lacked access to safe drinking water in 2003; and 2) By 2012, provide adequate wastewater sanitation to 25% of homes in the Mexico Border area that lacked access to wastewater sanitation in 2003. ( In 2003, the Binational Border 2012 Plan was agreed to by both U.S. and Mexico and therefore can serve as an appropriate baseline.)
  - Increase the pace of environmental protection through increased utilization of existing funds.
  - Border Environmental Infrastructure Fund projects which impact the impairments of significant shared and transboundary surface waters will be shared with our State partners to assist in their own water and wastewater project developments.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.

## **SUBOBJECTIVE: GREAT LAKES**



**Subobjective: Prevent water pollution and improve the overall aquatic ecosystem health of the Great Lakes using the Great Lakes 40-point scale:**

**2002 Baseline: 20 points      2005 Commitment: 21      2008 Target: 22**  
**2005 Mid-Year: 21.9      2005 End-of-Year: 21.9**

### **Performance Overview**

The Great Lakes index has improved in 2005 from the 2002 baseline of 20 to 21.9 out of a possible score of 40, surpassing the 2005 estimate of 21 and approaching the 2008 goal of 22. Indices for coastal wetlands, drinking water, and air toxics deposition are improving. A key concern is the increased level of phosphorus in Lake Erie, believed to be the result of invasive species, and the growth in the size of the dead zone in the Lake.

### **Performance Highlights**

Results of progress for the end-of-year include:

- The “Great Lakes Regional Collaboration of National Significance” (GLRC) was launched toward the end of 2004 after considerable outreach and discussion with Great Lakes governmental partners at the State and local levels, key Great Lakes organizations, and stakeholders. The GLRC is governed by an Executive Committee that is overseeing the effort to develop a strategic plan. The Executive Committee has established eight “Strategy Teams” corresponding to priorities established by the Great Lakes governors and adopted by the Great Lakes mayors. Work of the Strategy Teams and the Executive Committee is currently underway and culminated in “Summit I” in Summer 2005, and “Summit II” in December 2005 at which time the final Strategic Plan was released. EPA and Great Lakes States are ahead of schedule in the monitoring of 100% of Great Lakes Tier I (significant) beaches consistent with the National Beach Guidance. In addition, 100% of all other Great Lakes public Beaches have monitoring and notification programs as of FY 2005 end-of-year.
- Progress in delisting Areas of Concern (AOCs) is slow. Zero AOCs were de-listed by year end, rather than the targeted 3. EPA is, however, on target for the longer-term goal of de-listing 10 AOCs by 2010. The delay is the result of the environmental complexities of problems in the AOCs (contaminated sediments, inadequate wastewater infrastructure). The Great Lakes Legacy Act and the unprecedented cooperation taking place under the Great Lakes Regional Collaboration's AOC/Sediments Strategy Group will substantially support future delisting progress.

- The FY05 end of year data shows a 6% annual rate of decline in the average percentage concentrations of PCBs in whole lake trout and walleye. This is a 1% increase over the 5% annual rate of decline determined at mid-year; however, the mid-year data is inconclusive. The February 2005 review of the Great Lakes Fish Monitoring Program (GLFMP) re-evaluated the program's data quality objective, determining that small annual changes in concentration are not considered statistically significant and that a longer time period (ex. 10 years) was necessary. A second program review is being planned in order to (i) revise the Data Quality Objectives to reflect the current levels of contaminants in fish and allow continuation of the GLFMP's 30+ year trend line and (ii) evaluate the representativeness of the fish data for the whole lake.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.

### **Needed Adjustment**

A key adjustment and next step identified by the Subobjective Team is:

- Beneficial Use Impairments stemming from contaminated sediments have been identified in all 31 AOCs in the United States. Although progress has been made to address this problem, the array of existing programs has not been adequate to get the job done during the 20 years since AOC designation. Both the GAO and the International Joint Commission have been critical of the slow progress in this area. The AOC/Contaminated Sediment Strategy Team as part of the Great Lakes Regional Collaboration is considering a recommendation to fund the Legacy Program at \$150 million over 15 years, as a means to adequately address the problem in a timely manner.



## **SUBOBJECTIVE: CHESAPEAKE BAY**

**Subobjective: Prevent water pollution and protect aquatic systems so that overall aquatic system health of the Chesapeake Bay is improved and acres of submerged aquatic vegetation increase.**

**2002 Baseline: 85,252 acres**

**2005 Commitment: 90,000 acres**

**2005 End-of-Year: 72,935 acres**

**2008 Target: 120,000 acres**

### **Performance Overview**

A key measure of success, which integrates both water quality and essential aquatic habitat, is the restoration of submerged aquatic vegetation (SAV). Beginning in FY05, achievement of SAV targets is measured based on the “single best year” of acreage as observed through the most recent three years of data from the aerial survey. Baywide, the single best year in the 2002-05 period was 89,659 acres in 2002. Based on data from the most recent survey in 2004, however, the baywide SAV acreage had declined to 72,935. This downward trend will need to be reversed in order to meet the 2008 goal.

An additional measure of environmental improvement in the Bay is the reduction in nitrogen, phosphorus, and sediment entering the Bay. Under these measures, reductions in these pollutants are occurring and are offsetting a significant increase due to population growth, but the rate is not sufficient to attain the new Bay water quality standards. Maintaining reduced nitrogen and sediment levels will be a challenge due to expected growth in human and farm animal population in the region.

### **Performance Highlights**

Results of progress for the end-of-year include:

- Increases in the percentage of wastewater treatment flow to the Bay that are treated by Biological Nutrient Removal were on track at the mid-year (i.e. 56% with a 2005 commitment of 60%). However, the percentage of wastewater treatment flow was unable to increase in progress by the end of the year. (56% with a 2005 target of 60%).
- Increases in the miles of streambank and shoreline restored with riparian forest buffers did not meet the 2005 commitment. (3,791 at end of year with a 2005 target of 4,000).

Additional information concerning performance under outcome and program activity measures is provided in the FY 05 End-of-Year slides at the end of this report.

### **Best Practices**

The Program plans to conduct a full re-evaluation in 2007. In the meantime, the Program continues to focus on the acceleration of nutrient-sediment reduction, including the state adoption of enforceable bay-specific water quality standards, the implementation of an innovative new basin-wide NPDES permitting strategy for nitrogen and phosphorus, and development of a strategy to address excess animal manure and poultry litter that was presented to the Chesapeake Executive Council endorsement in the fall.

### **Needed Program Adjustments**

The Subobjective Team assessment included the following statement of needed actions:

“In 2000, the Chesapeake Bay Program partners (including the Administrator of EPA) committed to a goal of restoring Bay water quality by 2010. This idealistic commitment certainly created a sense of urgency within EPA and partner government agencies about (1) establishing new, attainable, water quality criteria and standards; and (2) agreeing to scientifically-supported, protective nutrient-sediment allocations.”

The targets in EPA's 2005 plan for nutrient and sediment reductions are scientifically based and also reflect a multi-state consensus. However, the level of effort and expenditure to meet the allocations is immense (currently estimated at \$28 billion capital cost), far beyond what the Bay Program partners thought would be needed when they made the 2010 commitment.

### **Strengthening the Link Between Performance and Budget**

With respect to strengthening the link between performance under the Subobjective and grants and contracts, the linkage and reporting burden should be commensurate with the size of the investment, e.g. prioritizing larger federal investments as opposed to grants for small amounts. In an effort to better determine the decision process for how activities are funded through contracts and grants, the Chesapeake Bay Program uses a process that involves states and other partners to debate competing areas of activity and environmental results to advise EPA in how the Bay funds should be spent.

### **Progress with New Outcome Measures in the Future**

CBO expects to develop an “integrated assessment” outcome measure that would deliver a top level index of Bay water quality.



## **SUBOBJECTIVE: GULF OF MEXICO**

**Subobjective (Part A): Prevent water pollution and improve the overall aquatic ecosystem health of coastal waters of the Gulf of Mexico by 0.2 on the “good/fair/poor” scale of the National Coastal Condition Report, a 5-point system in which 1 is poor and 5 is good:**

**2002 Baseline: fair/poor or 1.9**

**2005 Target: 2.0**

**2005 End-of-Year: 2.4**

**2008 Target: 2.1**

**Subobjective (Part B): Reduce releases of nutrients throughout the Mississippi River Basin to reduce the size of the hypoxic zone in the Gulf of Mexico:**

**Baseline: 1996-2000 running average size is 14,128 km<sup>2</sup>**

**2005 Target: 14,128 km<sup>2</sup>**

**2005 End-of-Year: 12,700 km<sup>2</sup>**

**2015 Target: less than 5,000 km<sup>2</sup>**

### **Performance Overview**

The second edition of National Coastal Condition Assessment (NCCA II) indicates significant progress in improving conditions in the Gulf of Mexico. The original baseline score for the Gulf, using a range of indicators, was 1.9, or “fair to poor” on the 5 point scale, but the 2004 score rises to 2.4. The indicator showing the greatest improvement in these corrected scores is water quality, increasing from 1 to 3. Benthic conditions score improved from 1 to 2. Scores for sediment quality (3) coastal habitat (1), and fish tissue contamination (3) remain the same.

Data is not now available to determine progress toward the goal of reducing the size of the hypoxic zone in the Gulf of Mexico.

### **Performance Highlights**

Results of progress for the end-of-year include:

- The Gulf of Mexico program exceeded the FY 2005 commitment of 11,000 acres of coastal and marine habitat restored, enhanced, or protected. Total acres achieved are 15,995 toward the 2008 target of 20,000. The substantial progress in this area is largely due to the success of our strategic partnerships with NOAA, The Nature Conservancy, National Fish and

Wildlife Foundation, Corporate Wetlands Restoration Partnership, and Shell Marine Habitat Program.

- The Gulf Program did not meet the target for reducing the rate of shellfish-borne *Vibrio vulnificus* illnesses. The FY 05 end-of-year result remained at the same level as the mid-year of 0.194 per million. Achievements in this goal are attributable to broadened high risk consumer outreach and education efforts throughout strategically targeted consumer groups.
- The Gulf Program established the Lower Mississippi River sub-Basin Committee ahead of the 2006 target date.
- The Gulf of Mexico Program office has not met commitments established for 2005 for the Gulf of Mexico Program and for the Gulf Hypoxia Program.

Additional information concerning performance under outcome measures and program activity measures is provided in the FY 05 End-of-Year slides of this report.

### **Next Steps**

Key next steps identified by the Subobjective Team include:

- The Gulf Program will continue support for the identification and prioritization of the “100 Highest Opportunity Watersheds” in State performance partnership agreements which focus on nutrient reduction beginning in FY 07.
- The Gulf program will participate with the Gulf of Mexico Alliance, a regional partnership among the 5 Gulf States in response to the US Ocean Action Plan.
- The Gulf program will continue collaboration in the Industry Led Solutions voluntary strategy for nonpoint source nutrient management to reduce nutrients in the Gulf.
- The Gulf Program will participate with the Interagency Working Group on Methylmercury in the development of a mercury research strategy for the Gulf of Mexico.

### III) CONCLUSIONS AND RECOMMENDATIONS

Overall conclusions concerning the performance of the National Water Program -- based on consideration of the subobjective-specific assessments as well as other evaluation projects summarized in the Appendix of this Report -- are described below. Recommendations for follow-up actions based on these conclusions are provided where appropriate and supplement the “next step” actions described in the preceding section of the report.

- 1) **Strong End-of-Year Program Performance:** Available data generally show that end-of-year commitments for most measures have been accomplished. In some cases, performance is well ahead of expected commitment. In a few cases, significant shortfalls from expected performance are being addressed.
- 2) **Consistent Regional Performance:** The assessments of performance under each subobjective do not directly address the performance of individual Regions. At the same time, review of program performance data generally does not suggest that any Region has significantly under-performed with respect to FY 05 commitments.
- 3) **Improved Water Program Integration:** A common theme of subobjective assessments of progress is the ongoing effort to increase integration of the implementation of water programs.

For example, national program managers reinforced efforts to complete critical work to improve integration of source water protection and water quality standards that is expected to significantly benefit both programs in the next several years.

In addition, the implementation of the water quality subobjective is now substantially driven at the Regional level by “Watershed Game Plans” developed by each Region. These Watershed Game Plans describe the water quality/watershed outcome goals in the Region, and define how the range of clean water programs (e.g. standards, planning, permits, financing) will be used to accomplish needed improvements in specific waterbodies and watersheds.

- 4) **Expanded Outreach to Other Programs/Agencies:** The implementation of several key subobjectives is benefiting from an expanded effort to coordinate water program implementation with the work of other programs or agencies.

For example, the nonpoint source program at the national level and in several Regions, has expanded cooperation with USDA programs to better focus a range of resources on priority areas. The drinking water program is working with the Centers for Disease Control to improve measurement of waterborne disease outbreaks. EPA is also cooperating with NOAA, the Interstate Shellfish

Sanitation Conference, and the FDA to improve data concerning the location of closed shellfishing areas.

- 5) **Tribal Water Program Implementation:** Tribal program activities measures are included in a number of different subobjectives. For a majority of the measures related to Tribes, data is either lacking or showing less than expected end-of-year performance.
- 6) **Coordination with Compliance and Enforcement:** Although program managers at the national and Regional levels work closely with compliance and enforcement program staff, expanding the coordination of program planning could improve success in accomplishing key water outcome measures.

**Recommendation:** The Office of Water should work with the Office of Enforcement and Compliance Assurance to define more formal program planning and coordination mechanisms, including procedures for sharing of program data and development of common criteria for definition of priority geographic areas.

- 7) **Mercury and Water Issues:** Issues related to mercury in water and fish are important to success under several subobjectives, including fish safe to eat, water quality, coastal water, and the Great Lakes. Progress toward reducing the limits on fish consumption depends to a large extent on reduction of mercury in air emissions. The expected increases in the number of waters listed as impaired because of violation of mercury criteria is an important consideration for setting targets for future waterbody restoration. Mercury is a factor in fish contamination in coastal waters reported in the National Coastal Condition Reports and plays a role in reducing the overall progress toward healthier coastal waters.

**Recommendation:** The Office of Water should review options for the presentation of data concerning mercury that would allow for water quality impacts attributable to mercury to be clearly identified as part of impairments as a whole and for EPA to be able to account for and report water quality impairments and improvements specifically associated with mercury.

- 8) **Reduce Data Lags:** A common problem in the management of programs and the measurement of program toward outcome goals is the length of time between a reporting period and the availability of data from the reporting period. In general, the quicker the turn-around time between the completion of a reporting period and the compilation of data, the more useful the data is. Measures of progress for the national water program have data response times ranging from virtually real time to as long as four years.

**Recommendation:** The existing Office of Water Information Steering Committee should conduct a review of data system response times with the goal of identifying means to reduce response times. Where reduction of response

times requires investments, these investments should be ranked and scored along with other possible information system investments.

- 9) **Water Program Performance Assessment:** The National Water Program is making a significant investment in program planning, including the development of water elements of the Agency *Strategic Plan* and implementation of the *Plan* through annual National program guidance. In addition, the National Water Program is increasing investment in assessment of program performance, including assessment of progress under the *Strategic Plan* as well as under the Program Assessment and Rating Tool (PART) and other efforts (e.g. Permitting for Environmental Results, Drinking Water Key Indicators, Environmental Results Order). {Note that a strong score under the PART process is more likely where a program can show consistent assessment of performance by internal and external parties; see PART questions 2.6 and 4.5.} At the same time, other parties, including the Inspector General and the Government Accountability Office, assess aspects of the water program.

**Recommendation:** The National Water Program should respond to the growing importance of performance assessment (distinct from program planning) by increasing management attention to program performance. The Program should consider a range of options to increase coordination of water program performance activities (ranging from assessments under measures in the *Strategic Plan*, to program specific evaluations, to Regional office reviews). The Program should also work to improve coordination of evaluations of specific water programs by outside parties including the Office of Management and Budget PART process and studies by the EPA Inspector General and the Government Accountability Office. A goal of this effort should be to develop periodic reports to water managers providing an overall assessment of both program performance and needed management actions.