

US EPA ARCHIVE DOCUMENT

FY 2011 National Water Program End of Year Performance by Subobjective

The following chapters provide a summary of the progress made toward accomplishing environmental and program goals for each subobjective described in the *FY 2011 National Water Program Guidance*. Each subobjective chapter includes the following information:

- A brief summary of overall performance in 2011 and the previous four years for measures under each subobjective.
- A description of performance highlights, including what commitments were met and what factors contributed to success.
- A description of management challenges, if appropriate, identifying key factors that led to measures not being met and next steps to improve performance for the future.

Each subobjective section focuses primarily on measures with FY 2011 commitments. Indicator measures are discussed where trends significantly differ from previous year's results. Annual Commitment System (ACS) measure codes (e.g., SP-1) are provided in the text in parentheses.

Key for Reading Performance Measure Charts and Tables

For all charts with national trend results, commitments are reflected by blue trend lines and results by vertical bars. For charts with regional FY 2011 results, a dotted line (in orange) indicates the national FY 2011 commitment for that particular measure. Although regions use the national commitment as a point of reference in setting their annual commitments, regional commitments may vary based on specific conditions within each region. Green bars in both national and regional charts identify commitments met, and red bars identify measures not met. A purple bar indicates that the Agency did not set a commitment for that year.

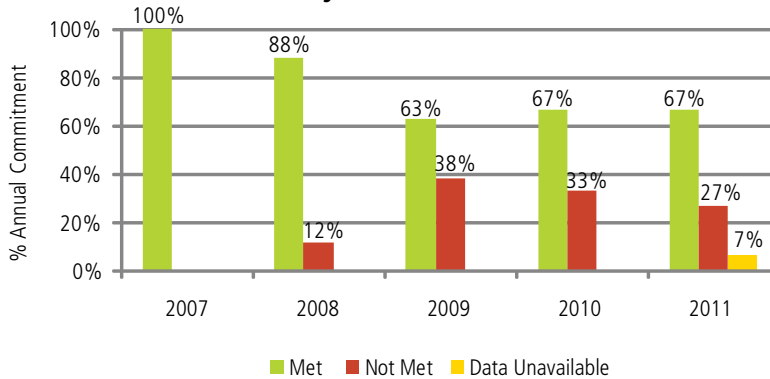
For the measure summary tables in each subobjective chapter, a green "up" arrow means that a measure met its FY 2011 commitment, and a red "down" arrow indicates that the annual commitment was not met. The letter "I" means that the measure is an indicator measure and did not have an annual commitment for FY 2011. Measures without data or not reporting in FY 2011 are indicated by "Data Unavailable." An "LT" symbol notes that the measure has a long-term goal and does not have an annual commitment. A gold star (★) in the past trends column highlights that the measure has met its annual commitment 100% of the time over the past four or five years. And finally, the appendix number represents the page in Appendix D (A-00) on the website where additional details about the measure can be found, and the figure number is the number of the chart in the chapter.



 **Subobjective: Great Lakes**

The Great Lakes National Program Office met 67% (10 of 15) of its performance commitments in 2011 (Figure 48). This is a significant accomplishment, given that the program had a net increase of five performance measures in FY 2011. Ten measures were reported for the first time in FY 2011.

Figure 48: Great Lakes Subobjective Five-Year Trend by Fiscal Year



FY 2011 ACS Code	Abbreviated Measure Description	Commitment Met/Not Met (I = Indicator) (Data Unavailable = No Data/Not Reporting) (LT = Long-Term Target)	Past Trends: # of Years Met	Appendix Page Number (D-0)/ Figure Number
Subobjective 4.3.3 Great Lakes				
4.3.3	Improve health—Great Lakes ecosystem	▼	3/5	D-51/Fig. 40
SP-29	Reduce PCBs in Great Lakes fish	▲	5/5★	D-51
SP-31	Restore Areas of Concern (AOCs)	▲	2/5	D-52/Fig. 51
SP-32	Remediate cubic yards of contaminated sediment	▲	5/5★	D-52/Fig. 49
GL-5	Beneficial Use Impairments (BUIs) restored	▲	0/2	D-53/Fig. 52
GL-6	Number of non-native species newly detected in the Great Lakes ecosystem	▲	1/3	D-53
GL-7	Number of multi-agency rapid response plans established, mock exercises to practice responses carried out under those plans, and/or actual response actions	▲	1/1	D-53
GL-8	Percent of days of the beach season that the Great Lakes beaches monitored by state beach safety programs are open and safe for swimming	▼	1/1	D-53
GL-9	Acres managed for populations of invasive species controlled to a target level	▲	0/1	D-54
GL-10	Percent of populations of native aquatic non-threatened and endangered species self-sustaining in the wild	▼	1/1	D-54
GL-11	Number of acres of wetlands and wetland-associated uplands protected, restored, and enhanced	▲	0/1	D-54

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FY 2011 ACS Code	Abbreviated Measure Description	Commitment Met/Not Met (I = Indicator) (Data Unavailable = No Data/Not Reporting) (LT = Long-Term Target)	Past Trends: # of Years Met	Appendix Page Number (D-0)/ Figure Number
Subobjective 4.3.3 Great Lakes				
GL-12	Number of acres of coastal, upland, and island habitats protected, restored and enhanced	▼	0/1	D-54
GL-13	Number of species delisted due to recovery	▲	1/1	D-54
GL-15	Five-year average annual loadings of soluble reactive phosphorus (metric tons per year) from tributaries draining targeted watersheds	Data Unavailable	0/1	D-54
GL-16	Acres in Great Lakes watershed with USDA conservation practices implemented to reduce erosion, nutrients, and/or pesticide loading	▲	1/1	D-55

As the largest surface freshwater system on the face of the earth, the Great Lakes ecosystem holds the key to the quality of life and economic prosperity for tens of millions of people. U.S. President Barack Obama and EPA Administrator Lisa Jackson, in collaboration with 15 other federal agencies, have made restoring the Great Lakes a national priority. Congress appropriated \$300 million for the Great Lakes Restoration Initiative (GLRI) for FY 2011.

FY 2011 Performance Highlights and Management Challenges

One of the Great Lakes National Program's key Strategic Targets assesses the overall progress that U.S. environmental programs are making in protecting and restoring the chemical, physical, and biological integrity of the Great Lakes ecosystem. This is measured using the Great Lakes Index, a tool for assessing the overall condition of the Great Lakes that is based on a set of selected ecosystem indicators (i.e., coastal wetlands, phosphorus concentrations, Areas of Concern [AOC], sediment contamination, benthic health, fish tissue contamination, beach closures, drinking water quality, and air toxics deposition). Improvements in the Great Lakes Index measures would indicate that fewer toxins are entering the food chain, ecosystems 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 in 2002, the Great Lakes Index declined from a score of 22.7 in 2010 to 21.9 in 2011 (Subobjective 4.3.3). This decrease does not indicate worsening environmental conditions over the long term, but rather an adjustment to one of eight index components—beach closures. A more rigorous reporting standard was used in 2010 (when 62% of Great Lakes beaches were reported as open during more than 95% of the swimming season) than in 2009 (when 82% were reported as open), thus causing the beach closure component of the index to drop. While this gives the appearance that beach conditions—and therefore the general health of the Great Lakes—are deteriorating, approximately the same number of beaches did not meet the 95% threshold in 2010 as in 2009. Prior to 2010, states had reported all unmonitored beaches as open and safe for swimming for 100% of the beach season, thus raising the number of beaches open more than 95% of the swimming season and increasing the percentage. Starting in FY 2012, the beach closure component of the index will only include monitored beaches and will be consistent with the national beach program measure.

The results of analyses reported in FY 2011 indicated that average long-term total PCB concentrations in whole Great Lakes top predator fish at sites on each Great Lake declined more than 44% between 2000 and 2009, meeting the target for declines in concentration trends (37%). EPA base programs and Great Lakes Restoration Initiative (GLRI) projects, including Great Lakes Legacy Act sediment remediation, contribute to continued progress under this long-term measure (SP-29).

Although PCBs were banned in the 1970s, they persist and continue to degrade in the natural environment. Contaminated sediment remediation (under the Great Lakes Legacy Act and Superfund) is removing additional PCBs from the environment.

Based on Lake Michigan data, current concentrations in whole body lake trout are approximately six times the wildlife protection value (0.16 parts per million [ppm]), and the majority of sport fish collected from Lake Michigan fall into the one meal per month consumption advice category (0.21–1.0 ppm) for protection of human health.

A prominent source of pollution in the Great Lakes is contaminated sediments. From 1997 through calendar year 2010, EPA and its partners remediated approximately 8.4 million cubic yards of contaminated sediment from the Great Lakes basin. In calendar year 2010 (for FY 2011 reporting), approximately 1 million cubic yards were remediated through various federal and state authorities, including the Great Lakes Legacy Act (330,000 cubic yards), Superfund Natural Resource Damage Assessment (720,000 cubic yards), and Wisconsin/EPA Toxic Substance Control Act (20,000 cubic yards). This is the sixth consecutive year that the Great Lakes National Program Office met its commitments for this measure (SP-32) (Figure 49). The Great Lakes Program has achieved approximately 82% of its 2015 goal of removing 10.2 million cubic yards of contaminated sediment. The volume of sediments remediated to date represents about 18% of the estimated universe of contaminated sediments in the Great Lakes basin (Figure 50).

Figure 49: Remediate Contaminated Sediment in the Great Lakes Trend by Fiscal Year (SP-32)

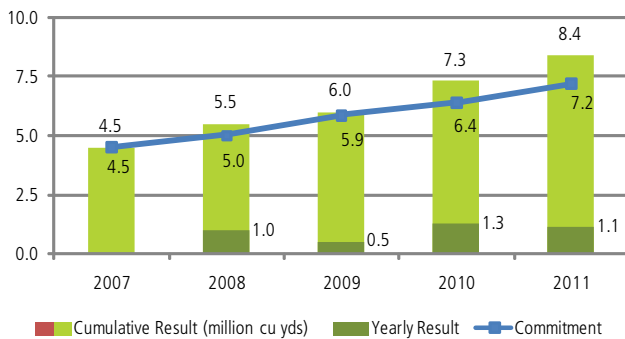
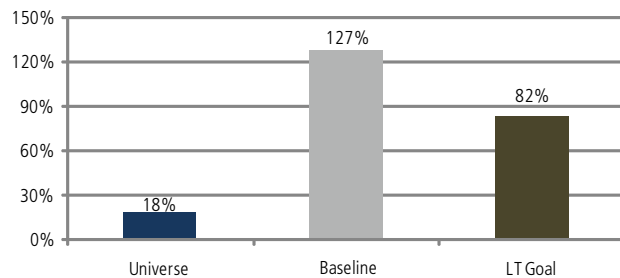


Figure 50: Percent Toward Universe, Baseline, and Long-Term Goal (SP-32)



A key indicator for the Great Lakes National Program Office is to implement all management actions necessary for delisting AOCs within the Great Lakes basin. A delisting indicates that the AOC meets the public’s vision for that area and that it is no longer among the most polluted areas in the Great Lakes. EPA and its partners met their commitment by implementing all management actions for a cumulative total of two AOCs through 2011 (SP-31) (Figure 51). In FY 2011, the state of Pennsylvania concluded that all required management actions necessary for delisting had been completed at the Presque Isle Bay AOC. The state will now conduct analyses and monitoring to provide the data necessary to remove the remaining Beneficial Use Impairment (BUI) and delist the AOC according to the procedures in the Great Lakes Water Quality Agreement. The Agency expects the BUI will be removed and the AOC will be delisted in calendar year 2012.

For the first time in three years, the Great Lakes Program met its commitment to reduce the number of BUIs at Great Lakes AOCs (Figure 52). Under the GLRI, EPA collaborated extensively with state and federal partners to conduct projects supporting the removal of 26 impairments. Examples of impairments removed include: restrictions on drinking water at Rochester Embayment AOC and Detroit River AOC; beach closings at Kalamazoo River AOC, Lower Menominee AOC, Waukegan Harbor AOC, and the Manistique River AOC; and restrictions on dredging at St. Clair River AOC, Muskegon Lake AOC, and White Lake AOC.

Figure 51: Management Actions Implemented

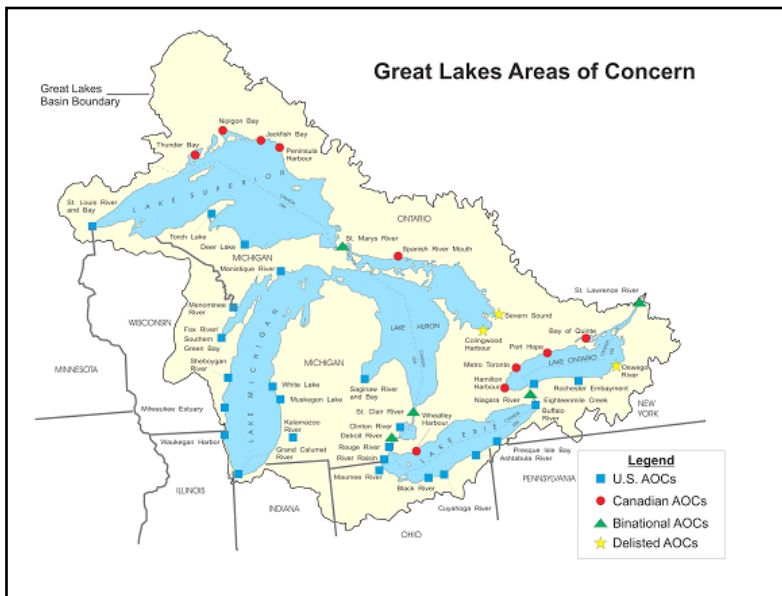
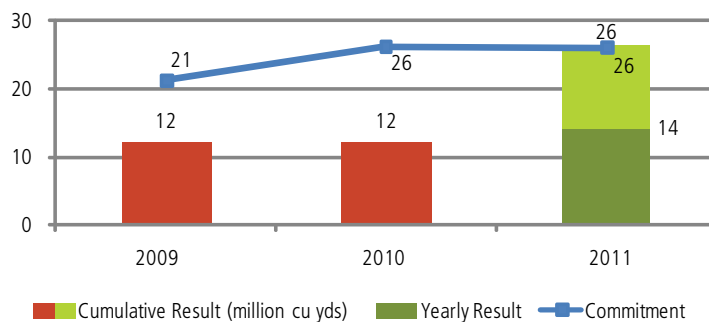


Figure 52: Number of Beneficial Use Impairments Removed Within AOCs Trend by Fiscal Year (GL-5)



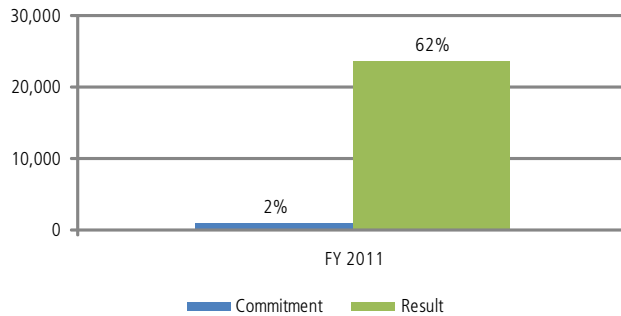
The Great Lakes National Program Office reported on 10 new measures in FY 2011. These measures were developed as part of the GLRI and are included in the Initiative’s Action Plan (see http://greatlakesrestoration.us/pdfs/glri_actionplan.pdf). The results from several of these measures are highlighted below.

One of the key goals of the Action Plan is to reduce the number of invasive species entering the Great Lakes Basin. Although 10 new species were detected between 2000 and 2009, only one new species has been detected since then (GL-6). The program also measures the number of acres managed for populations of invasive species that are controlled to a specific target level. More than 13,000 acres were managed in FY 2011, which is significantly above the annual commitment of 1,500 acres (GL-9). The unprecedented level of funding for invasive species work capitalized on a backlog of projects and appears to have achieved economies of scale due to significantly larger projects. Approximately 4,800 acres of this effort are the result of projects to protect, restore, and enhance coastal habitat and are also included in the results for that measure (GL-12).

EPA collaborated with and funded a number of other federal agencies¹⁶ to protect, restore, and enhance over 9,600 acres of wetlands and wetland-associated uplands across the Great Lakes Basin (GL-11). This was well above the FY 2011 commitment of 7,500 acres. Some of the most significant completions in support of removing BUIs were done through the Michigan Department of Natural Resources at River Raisin in Monroe, Michigan. Also contributing to this result were projects involving 20 tribes that received funding from the Bureau of Indian Affairs for restoring wild rice and other cultural wetland resources across the basin. In addition, the Great Lakes Program and its partners protected, restored, and enhanced more than 12,100 acres of coastal, upland, and island habitats in FY 2011. These results fell short of the Agency's commitment of 20,000 acres (GL-12). Funding and permitting process delays have slowed project implementation. These project areas are expected to be protected, restored, or enhanced in 2012 following completion of the permitting process.

In FY 2011, more than 267,000 acres in the Great Lakes watershed were put into U.S. Department of Agriculture (USDA) conservation practices to reduce erosion, nutrients, and/or pesticide loadings under Farm Bill programs. This represents a 62% increase over the baseline of 165,000 acres (based on FY 2008 data) (Figure 53). The significant increase in FY 2011 is a combined result of greater funding (base USDA programs and GLRI) and increased participation in Natural Resource Conservation Service programs. The acres tracked in this measure are not cumulative, but rather are for new conservation practices implemented in a given fiscal year. The percent increase will vary considerably from year to year due to funding, the conservation universe, and the difficulty of conservation practices.

Figure 53: Percent Acres with USDA Conservation Practices Implemented in Great Lakes Watershed (GL-16)



¹⁶ Bureau of Indian Affairs, U.S. Fish and Wildlife Service, National Park Service, Forest Service, National Oceanic and Atmospheric Agency, and the U.S. Army Corp of Engineers.