

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.

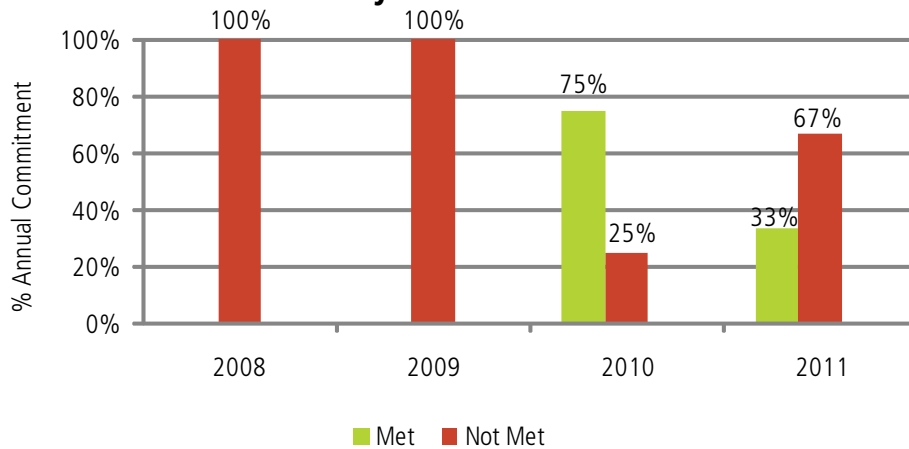
For the measure summary tables in each subobjective chapter, a green "up" arrow means that a measure met its FY 2011 commitment, and a red "down" arrow indicates that the annual commitment was not met. The letter "I" means that the measure is an indicator measure and did not have an annual commitment 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: South Florida**

The South Florida Program and its partners had mixed results in FY 2011 by meeting one of the two water quality commitments and failing to meet the goal of 10 parts per billion (ppb) total phosphorus throughout the Everglades Protection Areas (Figure 65). The failure of one of the water quality measures for the Florida Keys National Marine Sanctuary to (FKNMS) achieve its commitment by a very small margin may be attributable to natural variability within the ecosystem. The phosphorus target for the Everglades is a long-term goal that will only be achieved with time and a significant investment of resources. Substantial progress was made in FY 2011 on identifying the water quality projects that will ultimately achieve the phosphorus criterion in the Everglades marsh.

Figure 65: South Florida Subobjective Four-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 4.3.7 South Florida				
SP-45	Achieve no net loss in South Florida stony coral	I		D-66
SP-46	Maintain health of South Florida sea grass	I		D-66
SP-47a	Maintain South Florida coastal water quality—chlorophyll a	▲	1/1	D-67
SP-47b	Maintain South Florida coastal water quality—nitrogen/phosphorus	▼	0/1	D-67
SP-48	Improve Everglades water quality	▼	0/4	D-68

FY 2011 Performance Highlights and Management Challenges

The South Florida ecosystem encompasses three national parks, more than 10 national wildlife refuges, a national preserve, and a national marine sanctuary. It is home to two Native American Nations, and it supports the largest wilderness area east of the Mississippi River, the only living coral barrier reef adjacent to the United States, and the largest commercial and sport fisheries in Florida. Rapid population growth, however, is threatening the health of this vital ecosystem. South Florida is home to about 8 million people, greater than the population of 39 individual states.

EPA and its federal, state, regional, and local partners were unable to achieve a no net loss in stony coral cover (mean percent stony coral cover) in the FKNMS and in the coastal waters of Dade, Broward, and Palm Beach Counties in 2011 (SP-45). The significant decline in stony corals in FY 2011 is a result of the record-breaking winter of 2010, which depressed water temperatures in nearshore environments below the lethal temperature for corals and associated reef fauna.

The overall health and functionality of the sea grass beds in the FKNMS stayed within the baseline established in 2005 (SP-46). Health and functionality of the seagrass beds are determined by their composition and abundance, productivity, and nutrient availability. None of the indicators for these elements was significantly different from the baseline, but the trend shows a decline, suggesting that the goal may not be met within the next few years.

EPA and its partners measure water quality of the nearshore and coastal waters of the FKNMS in two different ways; one indicator measures the levels of chlorophyll a (CHLA) and light clarity, and the other indicator tracks the amount of dissolved inorganic nitrogen (DIN) and total phosphorus (TP) levels at monitoring stations throughout the sanctuary (SP-47). Seventy-five percent (170 of 227) of monitoring stations saw CHLA concentrations maintained at healthy levels (less than or equal to 0.35 µg/l-1). Light clarity (KD) levels remained effectively unchanged from last year, with 176 of 206 stations exhibiting KD at appropriate levels (less than or equal to 0.20 m⁻¹), for a result of 85.4%. Both measures met their FY 2011 commitment of 75%.

In FY 2011, 843 of 1,000 stations (or 84.3%) exhibited DIN levels at less than or equal to 0.75 µM, which meets the annual commitment. Total phosphorus numbers, however, did not achieve the measure commitment of 75%, with 738 of 1,003 stations meeting the target, for a result of 73.6%. Nonetheless, the FY 2011 results indicate a gradual improvement in water quality over the previous four-year (2007–2010) average of 63% of stations meeting total phosphorus levels at or less than 0.25 µM.

For the fourth consecutive year, the Agency did not see an improvement in water quality of the Everglades ecosystem as measured by TP. EPA and its partners failed to meet the TP criterion of 10 ppb throughout the Everglades Protection Area. Source controls and stormwater treatment areas (STAs) or wetlands are not adequate for treating all water to the discharge limits. Inflow phosphorus concentrations to the Everglades continue to exceed the 10 ppb criterion, despite significant progress.

In FY 2011, EPA and its South Florida partners saw a 23.8% increase since 2009 of sewage treatment facilities and onsite sewage treatment and disposal systems receiving advanced wastewater treatment or best available technology, as recorded by equivalent dwelling units (EDUs). The goal for the Florida Keys is to improve sewage treatment (advanced wastewater treatment) by 2% (1,500 EDUs) annually.

In the past 10 years, the city of Key West has moved to advance wastewater treatment and eliminate its outfall. In addition, EPA designated all state waters of the Florida Keys a no-discharge zone to eliminate sewage discharge from vessels. Moreover, septic tank/cesspit issues are being eliminated (approaching 50% complete), as homeowners and businesses are being required to connect the advanced wastewater treatment systems as they come online. EPA and its partners have been able to make aggressive moves such as these based on the strong science from an effective monitoring program and a series of special studies.