

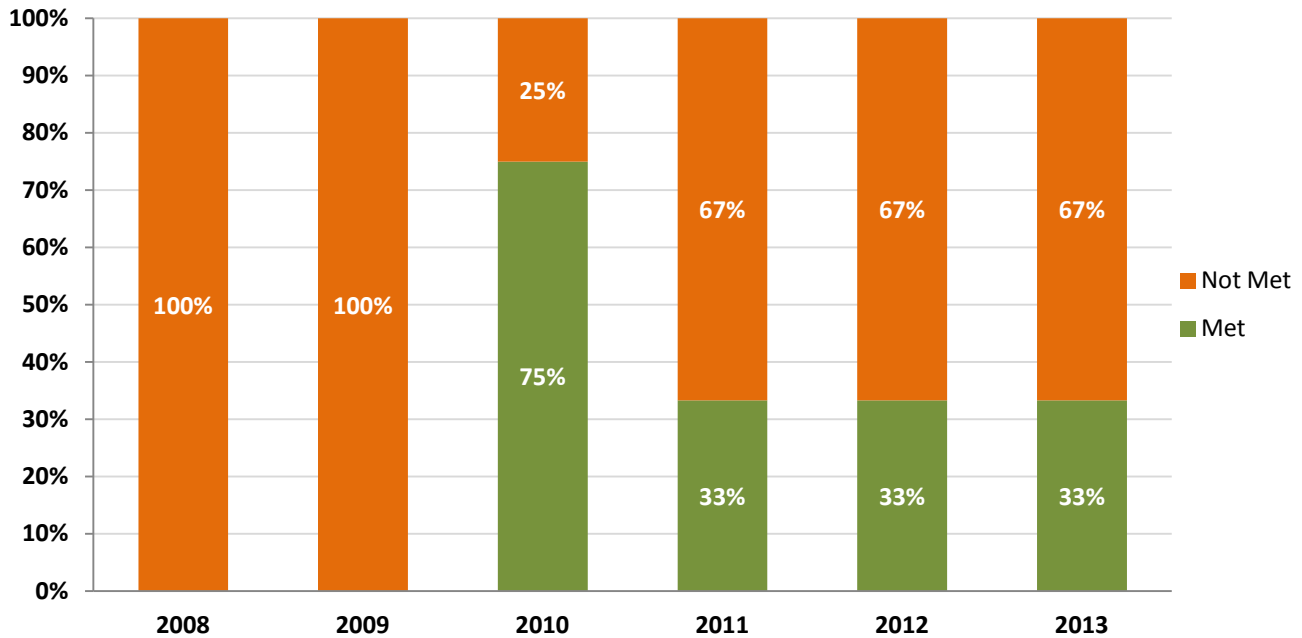
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Subobjective: South Florida

EPA failed to meet two of its three commitments under the South Florida subobjective in FY 2013 (Figure 84).

Figure 84: South Florida Subobjective Six-Year Trend



FY 2013 ACS Code	Abbreviated Measure Description	Results and Commitment Status							Appendix Page Number (D-0)/ Figure Number
		2007	2008	2009	2010	2011	2012	2013	
Subobjective 2.2.11 Restore and Protect the South Florida Ecosystem									
SFL-SP45	Achieve no net loss in South Florida stony coral		Loss	Loss	No Net Loss	Loss	No Net Loss	No Net Loss	D-55
SFL-SP46	Maintain health of South Florida sea grass		Not maintain	Not maintain	Maintain	Maintain	Not Maintain	Maintain	D-55
SFL-SP47a	Percent South Florida monitoring stations maintain coastal water quality for chlorophyll a & light clarity					75%; 85.4%	70.9%; 72.5%	84.5%; 80.4%	D-56/Fig. 85
SFL-SP47b	Percent South Florida monitoring stations maintain coastal water quality for nitrogen and phosphorous					84.3%; 73.6%	81%; 89.5%	60%; 82.3%	D-56/Fig. 86
SFL-SP48	Maintain Everglades water quality measured by total phosphorus		Not Maintain	Not Maintain	Not Maintain	Not Maintain	Not Maintain	Not Maintain	D-57
SFL-1	Increase percent sewage treatment systems receiving advanced wastewater treatment in Florida					23.8%; 42,000	13.1%; 47,505	5%; 52,209	D-57

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FY 2013 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 able to achieve an increase in FY 2013 in stony coral cover (**6.86%**) in the Florida Keys National Marine Sanctuary (FKNMS) and in the coastal waters of Dade, Broward, and Palm Beach Counties, Florida (SP-45). The Coral Reef Evaluation and Monitoring Program (CREMP), of the Florida Keys National Marine Sanctuary Water Quality Protection Program (FKNMS WQPP), completed its 17th year of annual monitoring surveys in the Florida Keys and documented a slight increase in stony coral cover from 6.63% in 2011 to 6.86% in 2012 - marking the 2nd consecutive year of increase since the unprecedented cold snap of 2010. Small increases in hard coral cover in 2011 and 2012 demonstrate that, less major disturbance events, the reef tract does show the potential to recover.²⁸

The overall health and functionality of the sea grass beds in the FKNMS were **maintained** above the baseline established in 2005 (SP-46). In FY 2013, the Species Composition Index (SCI) was 0.48 and the Elemental Indicator (EI) was 9.0 — equal or higher than the established 2005 baseline of 0.48 and 8.3, respectively. Larger values of the SCI indicate higher dominance of the slowest growing plant while larger values of the EI indicate nutrient-limited conditions, both indices indicating better water quality.

EPA and its partners measure water quality of the near shore 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). **Eighty-five percent (142 of 168)** of monitoring stations saw CHLA concentrations maintained at healthy levels (less than or equal to 0.35 ug-l). Light clarity (KD) levels were above FY 2012 levels, with **135 of 168** stations exhibiting KD levels appropriate (less than or equal to 0.20 m-1) for a result of **80.4%**.

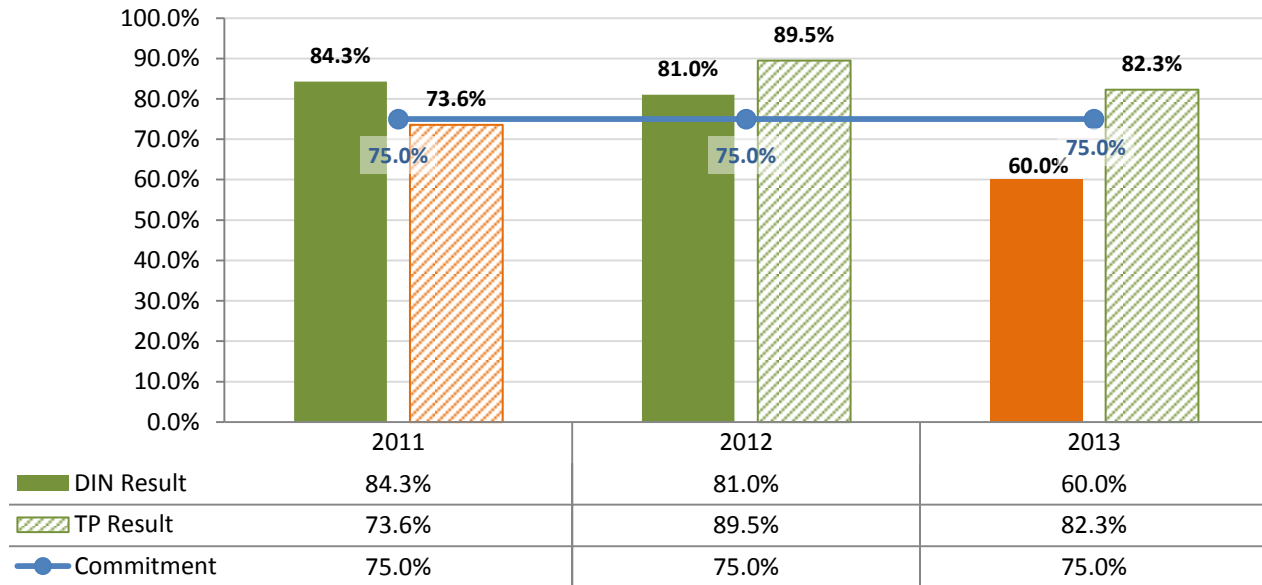
²⁸ This is the second time in three years that coral coverage has increased. Coral coverage increased from 6.5% in FY 2009 to 7.3% in FY 2010. Stony coral coverage significantly decreased from 7.3 % in FY 2010 to 5.9% in FY 2011 due to an unprecedented cold snap in the Florida Keys. Monitoring indicated a slight increase in stony coral cover from 6.63% in FY2012 to 6.86% in FY2013.

Figure 85: Florida Keys National Marine Sanctuary CHLA and Light Clarity (KD) Levels by Fiscal Year (SFL-SP47a)



In FY 2013, 268 of 447 stations exhibited dissolved inorganic nitrogen levels (DIN) levels less than or equal to 0.75 μM , for a **60%** result that is below the annual commitment of 75%. Total phosphorus (TP) numbers achieved the measure commitment of 75%, with 368 of 447 stations meeting the target, for a result of **82.3%**. (Figure 86). Since 1995 elevated DIN numbers have been found closer to shore suggesting human impact. The elevated FY 2013 DIN number may suggest increasing polluted runoff entering the waterways or may be a bias in the dataset introduced by the reduction of monitoring stations in the western FKMNS (less human impact) and an increase in nearshore shores (heavily human impacted sites.)

Figure 86: Florida Keys National Marine Sanctuary Dissolved Inorganic Nitrogen (DIN) and Total Phosphorus (TP) Levels by Fiscal Year (SFL-SP47b)



For the sixth consecutive year, EPA and its partners failed to meet the water quality goal for the Everglades ecosystem, as measured by the annual TP concentration of 10 parts per billion (ppb). Inflow phosphorus concentrations to the Everglades continue to exceed the 10 ppb criterion, in spite of significant progress over the past six years. A major factor in the failure to meet the water quality goal is that point source controls and the storage treatment wetlands areas are not adequate for treating all water to the discharge limits. In 2013, the TP marsh data maintained the baseline as all areas were lower than the 2005 baseline. All discharges from stormwater treatment areas (STA) were maintained except for one. Therefore, overall the baseline was not maintained. The performance measure was not met since the impacted areas of the Everglades marsh did not meet the criterion.

In FY 2013, EPA and its South Florida partners saw a **5%** increase over the past year in sewage treatment facilities and onsite sewage treatment and disposal systems receiving advanced wastewater treatment (AWT) or best available technology (BAT), as recorded by equivalent dwelling units (EDUs). The increase in EDUs by 5.1 % (or 5,810) significantly exceeded the 2% (or 1,500) increase in EDUs annually called for by the EPA strategic target, as well as the overall goal to provide AWT or BAT sewage treatment throughout the Florida Keys by December 31, 2015.

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 (68.6% complete) as homeowners and businesses connect to advanced wastewater treatment systems as they come online. EPA and its partners have been able to make such aggressive moves based on the strong science from an effective monitoring program and a series of special studies.