

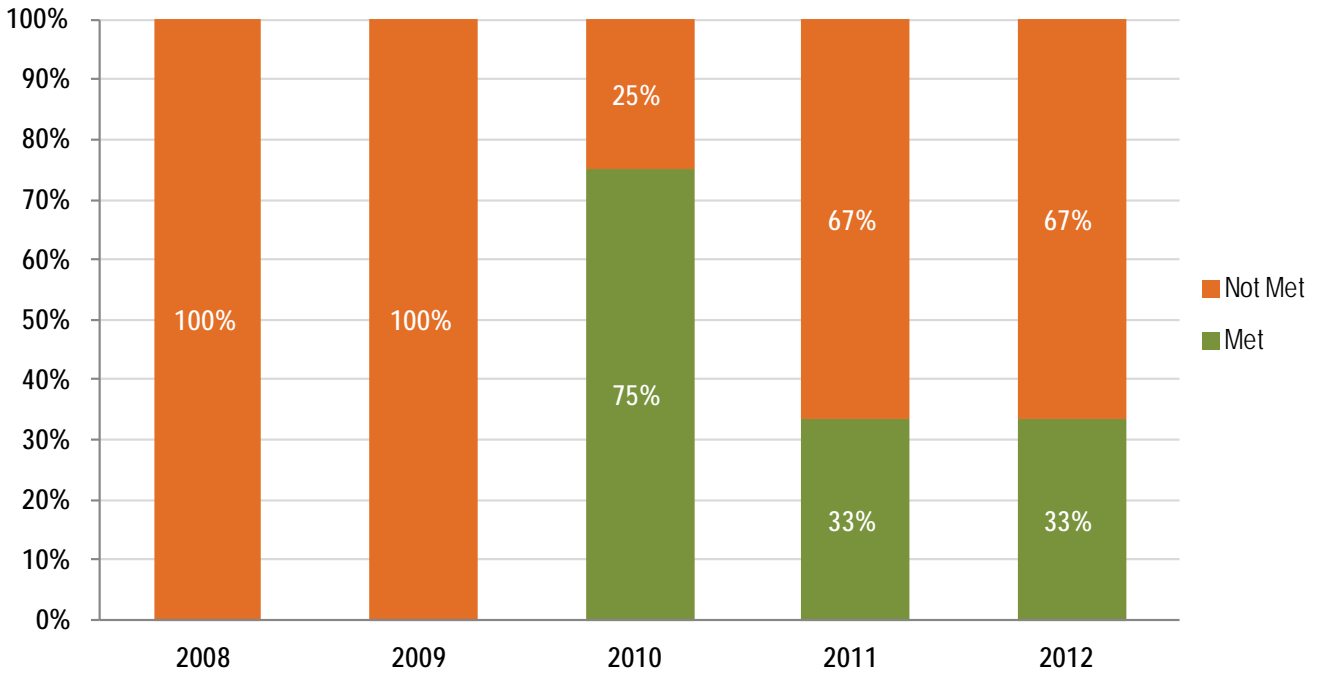
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Subobjective: South Florida

The South Florida Program and its partners had mixed results in FY 2012, failing to meet two of three of their commitments (Figure 84).

Figure 84: South Florida Subobjective Five-Year Trend



FY 2012 ACS Code	Abbreviated Measure Description	Results and Commitment Status						Page Number (D-0)/ Figure Number
		2007	2008	2009	2010	2011	2012	
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	D-65
SFL-SP46	Maintain health of South Florida sea grass							D-65
SFL-SP47a	Percent South Florida monitoring stations maintain coastal water quality for chlorophyll a & light clarity					85%	70.9%; 72.5%	D-66/Fig.85
SFL-SP47b	Percent South Florida monitoring stations maintain coastal water quality for nitrogen and phosphorous					74%	81%; 89.5%	D-66/Fig.86
SFL-SP48	Maintain Everglades water quality measured by total phosphorus							D-67
SFL-1	Increase percent sewage treatment systems receiving advanced wastewater treatment in Florida					24%	13.1%	D-67

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FY 2012 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.

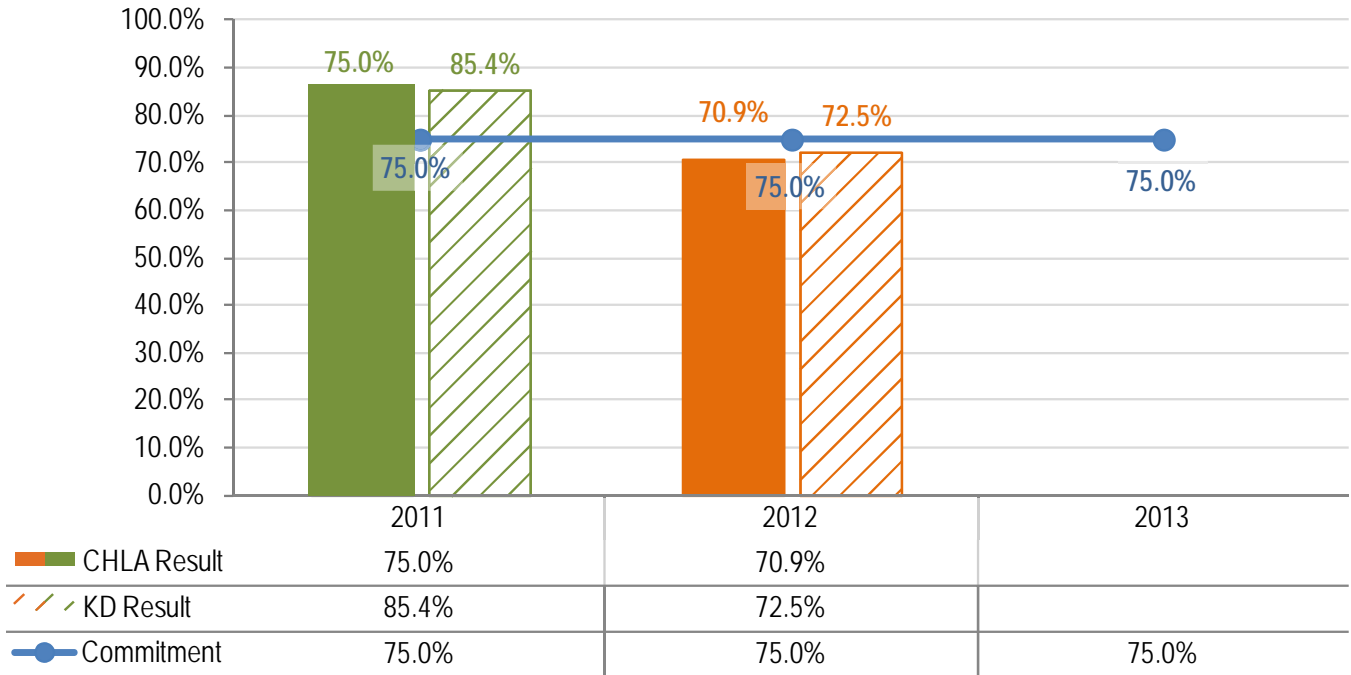
EPA and its federal, state, regional, and local partners were able to achieve an increase from 5.9% in FY 2011 to 6.6% in FY 2012 in stony coral cover (mean percent stony coral cover) in the Florida Keys National Marine Sanctuary (FKNMS) and in the coastal waters of Dade, Broward, and Palm Beach Counties, Florida (SP-45). Note, however, that the results for this measure have been fairly inconsistent over the past three years.²⁹ While it is plausible that some coral recovery is occurring, it is too early to say that cover is increasing with any statistical confidence.

For the first time, the overall health and functionality of the sea grass beds in the FKNMS fell below the baseline established in 2005 (SP-46). In FY 2012, the Species Composition Index (SCI) was 0.28 and the Elemental Indicator (EI) was 5.5—significantly lower than the 2005 baseline of 0.48 and 8.3, respectively. The explanation is that less light is reaching the sea grasses and that water quality has been degraded.

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). Seventy-one percent (162 of 227) of monitoring stations saw CHLA concentrations maintained at healthy levels (less than or equal to 0.35 ug/l-1). Light clarity (KD) levels fell below FY 2011 levels, with 150 of 207 stations exhibiting KD levels appropriate (less than or equal to 0.20 m-1) for a result of 72.5%. This is the first time both indicators failed to meet their targets since reporting began in 2006 (Figure 85). Although the reason behind the decline in performance is unknown at this time, the South Florida Water Quality Protection Program will continue future monitoring to discern if this is a one-time event or the start of an emerging trend.

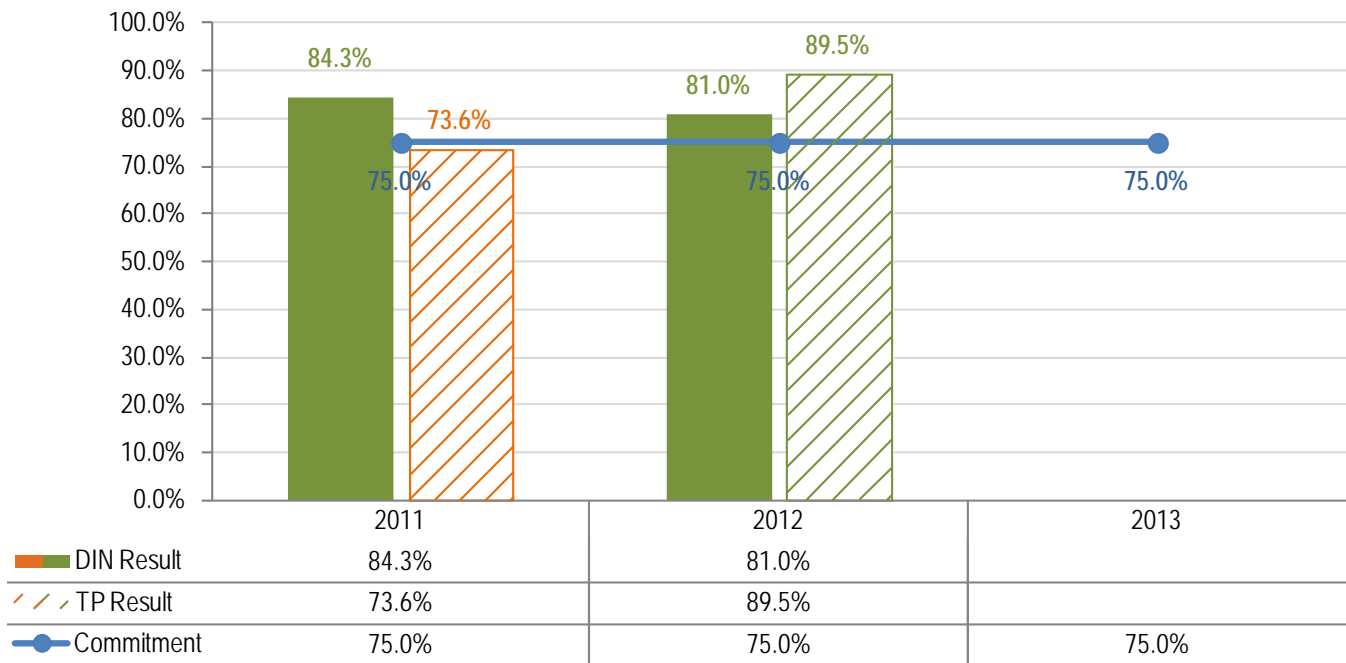
²⁹ This is the second time in three years that coral coverage has increased. Coral coverage increased from 6.5% in FY 2009 to 7.3% in FY 2010. Stony coral coverage significantly decreased from 7.3 % in FY 2010 to 5.9% in FY 2011 due to an unprecedented cold snap in the Florida Keys.

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



In FY 2012, 810 of 1,000 stations exhibited DIN levels less than or equal to 0.75 μM , for an 81% result that meets the annual commitment. TP numbers also achieved the measure commitment of 75%, with 896 of 1,001 stations meeting the target, for a result of 89.5% (Figure 86). Note that the FY 2012 results indicate a gradual improvement in water quality over the previous five-year (2007–2012) average of 77% of stations meeting TP levels of .25 μM or less. While yearly excursions from meeting water quality targets are expected, the trend in the long-term monitoring program is toward documentable total nitrogen and TP water quality improvement. From the data, the trend coincides with implementation of improved wastewater management, but further investigation is required.

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



For the fifth 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 five 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 recognition of this, in September 2012, Florida issued a revised NPDES permit and Consent Order for the storage treatment areas. The permit includes a new protective water-quality-based discharge limit for phosphorus and requires additional phosphorus control measures that are projected to cost about \$900 million.

In FY 2012, EPA and its South Florida partners saw a 13.1% 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 13.1% (or 5,505) 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 (63.5% 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.