

Bay Post

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Tampa Bay Seagrasses Continue to Surpass Recovery Goal

Seagrasses in Tampa Bay increased by more than 1,360 acres, or nearly 3.3%, since 2014, adding to the record-breaking gains reported two years ago, according to survey results released today.

Overall, seagrasses cover 41,655 acres of bay bottom, a number that continues to surpass the 38,000-acre goal set by the Tampa Bay Estuary Program (TBEP), and sets a new record for the highest amount of seagrass documented since 1950.

However, scientists caution, the aerial surveys that form the basis of the seagrass estimates were conducted during the winter of 2015-2016 - before the torrential rains of last summer caused emergency sewer discharges into portions of the bay. Sewer overflows associated with heavy rainfall also occurred throughout the bay in summer 2015.

Seagrass gains were documented in every bay segment but Middle Tampa Bay, which lost 42 acres from 2014 to early 2016. Middle Tampa Bay refers to waters south of the Gandy Bridge, including Hillsborough's South Shore to the Manatee County border, and coastal St. Petersburg to Coquina Key.

Tampa Bay Segments	2014	2016	Change in Acreage 2014 to 2016	% Change
Boca Ciega Bay	8,880.43	9,070.29	190	2.1%
Hillsborough Bay	1,973.41	2,007.18	34	1.7%
Lower Tampa Bay	7,637.67	7,796.92	159	2.1%
Manatee River	656.31	723.35	67	10.2%
Middle Tampa Bay	9,694.21	9,652.45	-42	-0.4%
Old Tampa Bay	10,272.53	11,146.64	874	8.5%
Terra Ceia Bay	1,180.31	1,258.33	78	6.6%
Tampa Bay Total:	40,294.87	41,655.16	1,360.29	3.4%

The largest gain, 874 acres, was documented in Old Tampa Bay, where historically seagrass recovery and water quality have trailed other bay areas. Old Tampa Bay encompasses the waters from the Gandy Bridge north to Oldsmar and east to Tampa.

Boca Ciega Bay ranked second in acreage gains, with 190 new acres observed.

Hillsborough Bay gained 34 additional acres of seagrass. Hillsborough Bay is traditionally the most heavily impacted part of the bay, encompassing downtown Tampa, the iconic Bayshore Boulevard, and a busy industrial port.

"Overall this is good news," said Holly Greening, director of the Tampa Bay Estuary Program. "We will need to carefully watch trends in future years to make sure we maintain progress in bay recovery."

Seagrasses are important because they are natural "fish factories" that need clean water to flourish. They support a variety of juvenile fish, shrimp, crabs, marine worms and other bay creatures, and remove and store carbon that contributes to greenhouses gases.

The seagrass surveys are coordinated by scientists with the Southwest Florida Water Management District (SWFWMD). Aerial photos are taken every two years in winter, when bay waters are clearest. The digital imagery is plotted, analyzed and ground-truthed to verify accuracy. SWFWMD has used this comprehensive process to track trends in seagrass extent in Florida estuaries since 1988.

The seagrass assessment is bolstered by results from monthly water quality sampling. All major bay segments met water quality targets in 2016, although the area north of the Gandy Bridge, known as Old Tampa Bay, continues to struggle with high levels of algae that lowered its overall ranking.

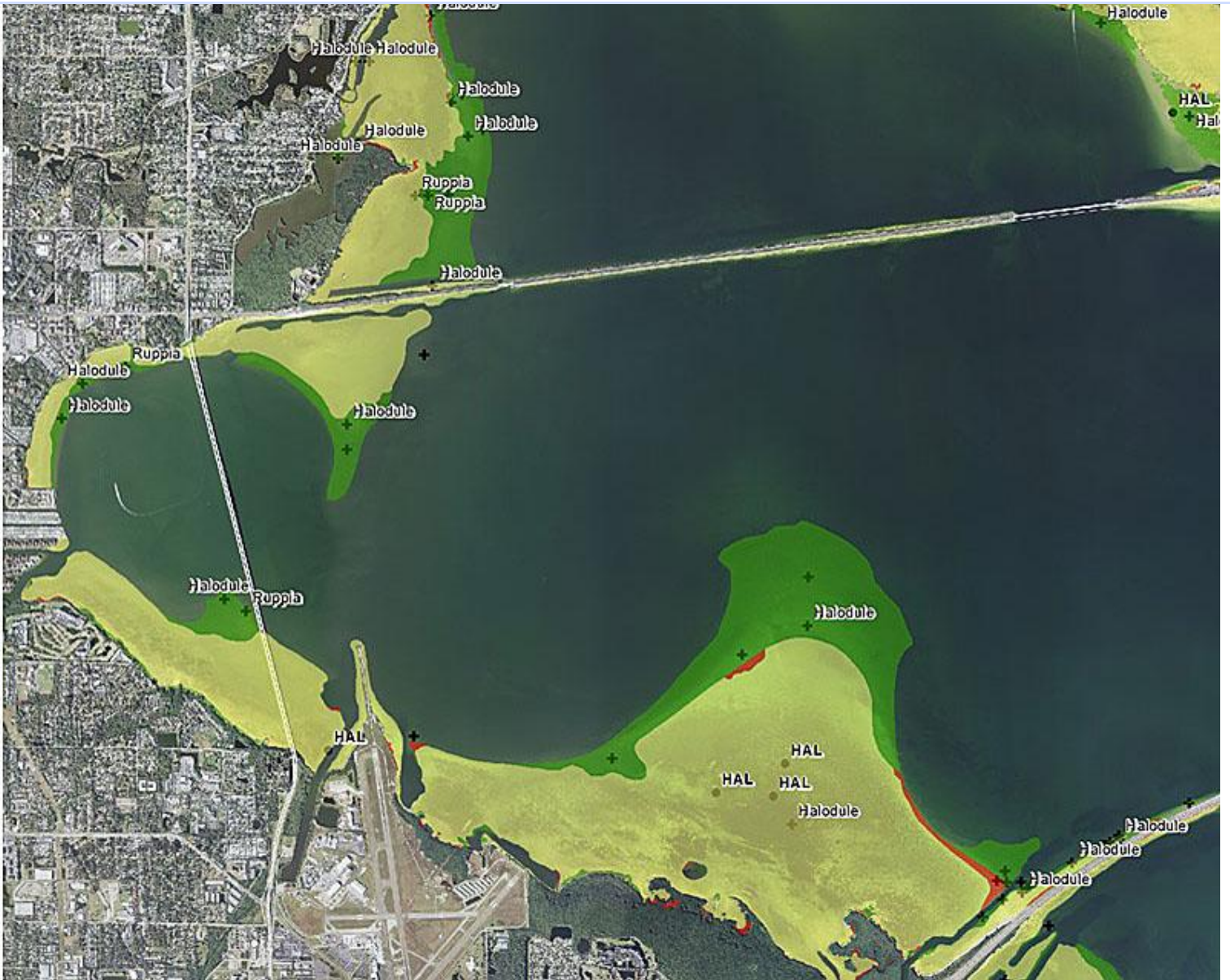
Water quality testing is conducted monthly by the Environment Protection Commission of Hillsborough County (EPC) at 45 fixed sampling stations in the four major bay segments - Hillsborough Bay, Old Tampa Bay, Middle Tampa Bay and Lower Tampa Bay. The sampling measures both the amount of chlorophyll (abundance of algae) in the water, and the amount of visible sunlight penetrating the water column.

TBEP annually produces a "report card" comparing the water sampling with established targets for each bay segment. "Green" means a bay segment is meeting all water quality targets averaged over a 12-month period, while "red" means it is not. "Yellow" indicates that an area failed to meet either chlorophyll or water clarity targets in a given year.

The water quality sampling may not detect short-term or locally specific water quality impacts.

The combination of water quality and seagrass information gives bay managers a valuable set of tools to assess the bay's overall health, tracking long-term progress in restoring the bay and serving as an early-warning system for potential problems. For example, the nuisance algae *Pyrodinium bahamense* was again documented in Old Tampa Bay during summer 2016, contributing to persistent water quality issues there.

Widespread flooding and emergency discharges of treated and untreated wastewater also occurred during August and September 2016 - but did not affect overall water quality results for Middle Tampa Bay, where most of the discharges occurred. Scientists suggest that the sheer volume of rainfall may have helped dilute or flush nutrient pollution from the bay.



Through analysis and interpretation of aerial images, scientists can see whether seagrasses have expanded over time, and where. They can also track how distribution of various types of seagrass. This image shows expansion of shoal grass (*Halodule wrightii*) in Feather Sound. SOURCE: SWFWMD



Seagrasses are underwater "fish factories" that support fish, manatees, shrimp, crabs, birds and other bay inhabitants. They also remove and store carbon that contributes to greenhouses gases.

Photo by Jimmy White

Year	Old Tampa Bay	Hillsborough Bay	Middle Tampa Bay	Lower Tampa Bay
1975	Red	Red	Red	Green
1976	Red	Red	Red	Yellow
1977	Red	Red	Red	Red
1978	Red	Red	Red	Yellow
1979	Red	Red	Red	Red
1980	Red	Red	Red	Red
1981	Red	Red	Red	Red
1982	Red	Red	Red	Red
1983	Red	Yellow	Red	Red
1984	Red	Green	Red	Yellow
1985	Red	Red	Red	Yellow
1986	Red	Yellow	Red	Green
1987	Red	Yellow	Red	Green
1988	Yellow	Green	Yellow	Green
1989	Red	Yellow	Red	Yellow
1990	Red	Green	Red	Yellow
1991	Green	Yellow	Yellow	Yellow
1992	Yellow	Green	Yellow	Yellow
1993	Yellow	Green	Yellow	Yellow
1994	Yellow	Yellow	Red	Red
1995	Red	Yellow	Red	Yellow
1996	Yellow	Green	Yellow	Green
1997	Yellow	Green	Red	Yellow
1998	Red	Red	Red	Red
1999	Yellow	Green	Yellow	Yellow
2000	Green	Green	Yellow	Yellow
2001	Yellow	Green	Yellow	Yellow
2002	Yellow	Green	Green	Green
2003	Red	Yellow	Green	Yellow
2004	Red	Green	Green	Yellow
2005	Green	Green	Yellow	Yellow
2006	Green	Green	Green	Green
2007	Green	Green	Green	Green
2008	Yellow	Green	Green	Yellow
2009	Yellow	Yellow	Green	Green
2010	Green	Green	Green	Green
2011	Red	Green	Yellow	Green
2012	Green	Green	Green	Green
2013	Green	Green	Green	Green
2014	Green	Green	Green	Green
2015	Yellow	Green	Yellow	Green
2016	Yellow	Green	Green	Green

TBEP "report card" shows water quality and clarity over time.