

## Little Sarasota Bay Condition Report for 2010

**CAUTION**



2 out of 3 indicators were rated as PASS.

[Learn more about how this report is created](#)

### Summary:

The overall health of Little Sarasota Bay has decreased due to a high level of chlorophyll a. The other two water quality indicators (nitrogen and phosphorus) were rated as pass. Additionally, the mean acreage of seagrass has continued to increase.

**Water quality:** Only two water quality indicators (nitrogen and phosphorus) were rated as pass (below the threshold) and remained in excellent condition. Nitrogen levels have remained constant and below the threshold (600.0 ug/l) and near the 520.0 ug/l target level. Phosphorus levels have decreased with the mean below the target level (180.0 ug/l). Chlorophyll a levels have greatly increased since 2009 and are now scored as alert because levels exceed the threshold of 110.4 ug/l.

**Biotic Indicator:** The biotic indicator, seagrass, is in good condition with a continued increase in acreage since 1988. In 2010, the total acreage of seagrass increased 49% to 1,000 acres.

### Water Chemistry Ratings

Total nitrogen, total phosphorus, and chlorophyll a levels are monitored carefully by water resource managers and used by regulatory authorities to determine whether a bay meets the water quality standards mandated by the Clean Water Act. The trend graphs for these indicators are shown below, along with their target and threshold values. A target value is a desirable goal to be attained, while a threshold is an undesirable level which is to be avoided. [Learn More about these ratings and how they are calculated »](#)

## Little Sarasota Bay



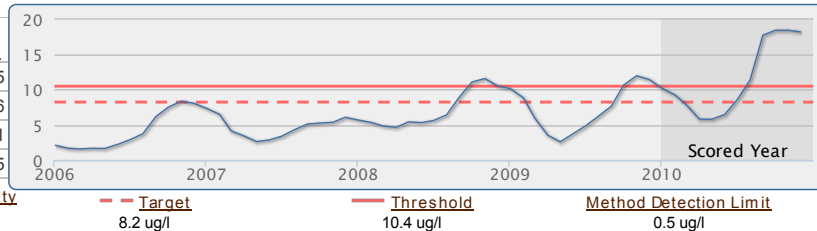
### Chlorophyll a

Score: Caution

#### Five Year Trend Graph

Units: ug/l	Year 2010	Historical period of record
High	42.8	43.5
Mean	11.3	7.6
Low	0.6	0.1
Samples	384	4,375

Data Sources: [Sarasota County](#)



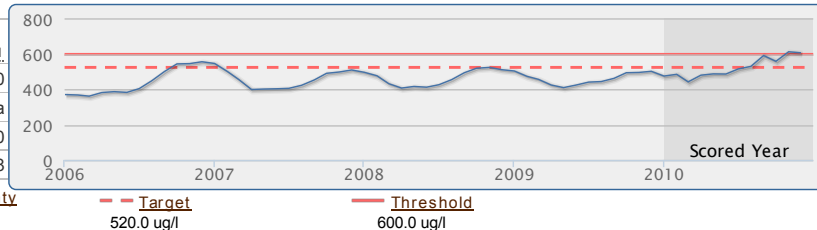
### Nitrogen, Total

Score: Excellent

#### Five Year Trend Graph

Units: ug/l	Year 2010	Historical period of record
High	900.0	1,175.0
Mean	515.6	n/a
Low	215.0	55.0
Samples	72	918

Data Sources: [Sarasota County](#)



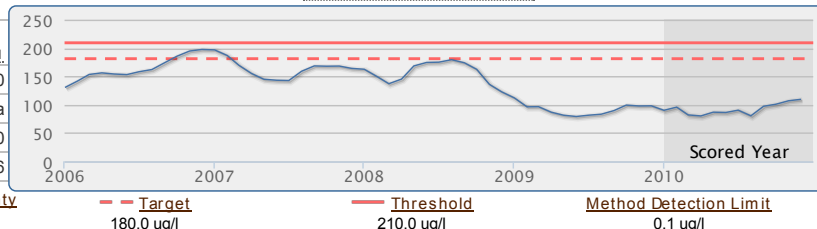
### Phosphorus, Total

Score: Excellent

#### Five Year Trend Graph

Units: ug/l	Year 2010	Historical period of record
High	250.0	510.0
Mean	83.4	n/a
Low	50.0	50.0
Samples	376	4,366

Data Sources: [Sarasota County](#)



## Other Measures of Bay Health

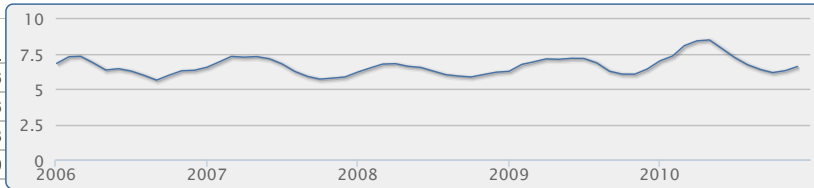
In addition to nutrient levels and chlorophyll concentration, dissolved oxygen levels, and water clarity are also objective indicators of bay health. These have complex interactive cycles which are affected by rainfall, temperature, and tidal action, as well as other factors. High nutrient levels (nitrogen and phosphorus) can stimulate excessive growth of marine algae (indicated by chlorophyll a level), resulting in reduced water clarity (and increased light attenuation) and depleted oxygen levels. Both plants and animals in a bay need oxygen to survive, and the seagrasses which provide food and cover for bay creatures need light for photosynthesis.

### Dissolved Oxygen

Five Year Trend Graph

Units: mg/l	Year 2010	Historical period of record
High	9.8	11.6
Mean	7.2	6.6
Low	4.9	2.8
Samples	72	1,149

Data Sources: [Sarasota County](#)



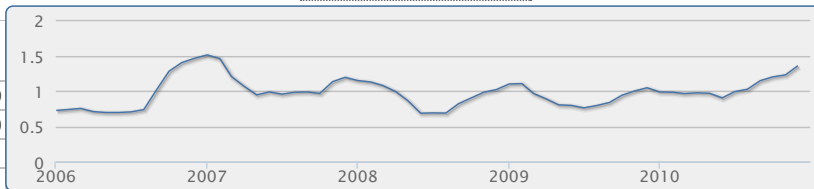
Method Detection Limit  
0.2 mg/l

### Light Attenuation

Five Year Trend Graph

Units: K(1/m)	Year 2010	Historical period of record
High	2.0	2.9
Mean	1.1	1.0
Low	0.3	0.1
Samples	72	921

Data Sources: [Sarasota County](#)



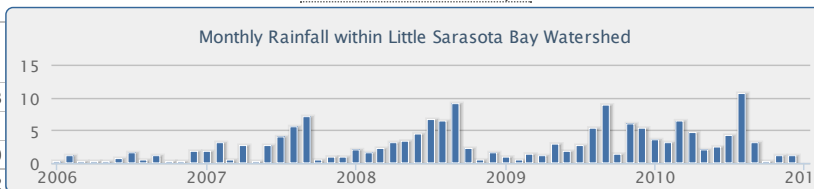
Method Detection Limit  
0.1 K(1/m)

### Rainfall

Five Year Trend Graph

Units: inches	Year 2010	Historical period of record
High	43.6	43.8
Mean		28.1
Low		1.0
Samples	365	3,142

Data Sources: [Sarasota County](#)

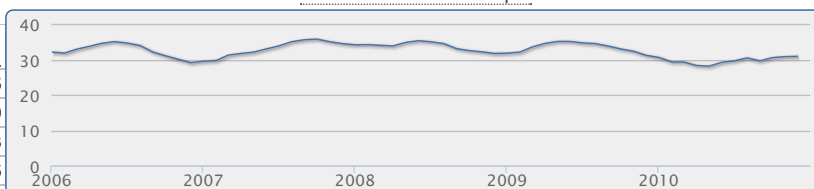


### Salinity

Five Year Trend Graph

Units: PSS	Year 2010	Historical period of record
High	34.9	39.5
Mean	30.0	30.9
Low	23.6	7.3
Samples	72	1,125

Data Sources: [Sarasota County](#)



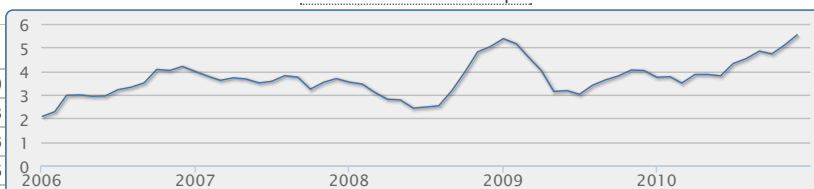
Method Detection Limit  
0.1 PSS

### Turbidity

Five Year Trend Graph

Units: NTU	Year 2010	Historical period of record
High	11.0	15.0
Mean	4.4	3.8
Low	1.0	0.6
Samples	384	4,375

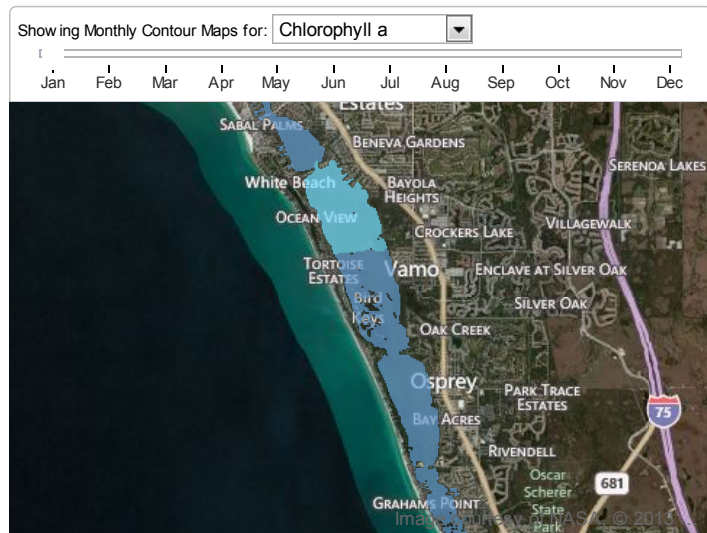
Data Sources: [Sarasota County](#)



Method Detection Limit  
0.2 NTU

## Bay Contour Maps

Contour mapping is one of the best ways to visualize spatial differences in coastal water quality. The interactive map shown below presents monthly data for one selected water quality indicator atop an aerial view of the bay. Choose a different water quality parameter from the list at the top to change the map. [Learn More about Water Quality Contour Mapping »](#)

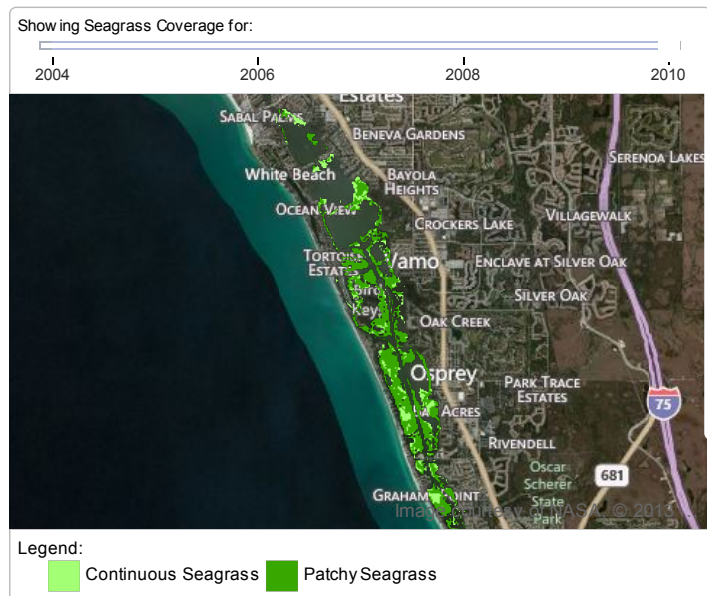


Visit the [Water Quality Contour Mapping Tool](#) to view and compare monthly water quality contour maps for ten different water quality indicators. In addition, you can generate your own custom maps.

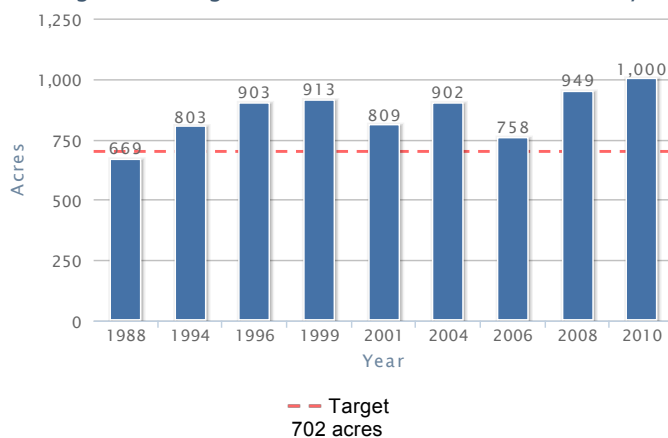


## Seagrasses

Among the most important habitats in Florida's estuarine environments, seagrass beds are indispensable for the role they play in cycling nutrients, supplying food for wildlife, stabilizing sediments, and providing habitat for juvenile and adult finfish and shellfish. Use the interactive map below to observe the size, density and location of seagrass beds from year to year. The graph shows how the total amount of seagrass in the bay has changed over time. [Learn More about Seagrasses »](#)



### Seagrass Acreage Variation within Little Sarasota Bay



## Land Use / Land Cover

Little Sarasota Bay is located within the Little Sarasota Bay Watershed. [View details about the Little Sarasota Bay Watershed »](#)

Land use within a bay's watershed has a major effect on its water quality. In general, less development means better water quality. Land Cover/Land Use classifications categorize land in terms of its observed physical surface characteristics (upland or wetland, e.g.), and also reflect the types of activity that are taking place on it (agriculture, urban/built-up, utilities, etc.). Florida uses as its standard a set of statewide classifications which were developed by the Florida Department of Transportation. [Learn More about Land Use and Land Cover »](#)

