

Clower Creek Condition Report for 2013

CAUTION



3 out of 4 indicators were rated as PASS.

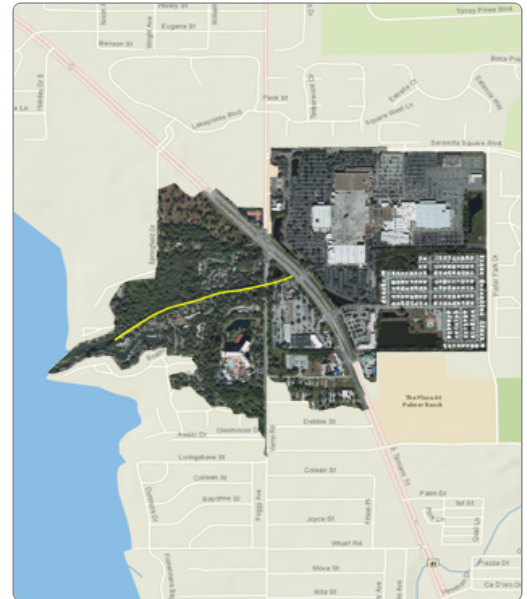
All four indicators must pass for the creek to be rated as PASS.

Size: 284 acres

Location: Central Sarasota County

Discharges into: Little Sarasota Bay

The surface water system in the Clower Creek Basin has undergone major alterations over the past 100 years. Historical survey does not identify Clower Creek by name, but aerial photographs and survey from the mid-1900s confirm the presence of agriculture and the extent of the creek, which meandered northeast through the entire basin and terminated at a wetland near the east basin boundary. The entirety of Clower Creek is predominantly marine. Development in the basin was well under way by the 1970s. The basin is about 85% developed, with over 40% commercial development. Stormwater from these commercial areas flows through a network of pipes and ditches to Clower Creek. *For basin details see: [Little Sarasota Bay Water Quality Management Plan \(2012\)](#)*



Water Chemistry Ratings - Freshwater Portion of the Creek

Total nitrogen, total phosphorus, chlorophyll *a*, and dissolved oxygen levels are monitored carefully by water resource managers and used by regulatory authorities to determine whether a creek meets the water quality standards mandated by the Clean Water Act. Shown below are water quality data for each freshwater stream segment. Florida law defines a threshold for the maximum allowable concentration of nitrogen, phosphorus, and chlorophyll *a*, and the minimum required concentration of dissolved oxygen in these streams.

Water quality data are not available for the freshwater portion of this creek.

Water Chemistry Ratings - Tidal Portion of the Creek

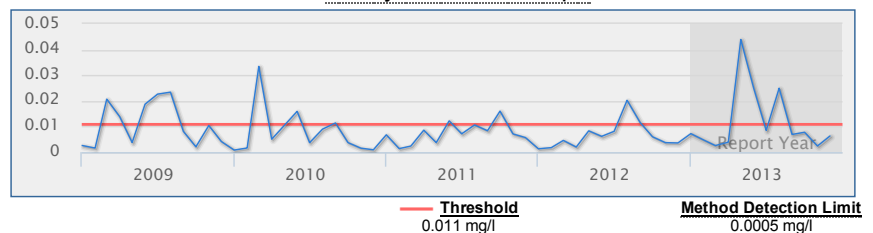
As is the case for predominantly freshwater streams, total nitrogen, total phosphorus, and chlorophyll *a* levels are monitored carefully by water resource managers and used by regulatory authorities to determine whether a tidally-influenced stream meets the water quality standards mandated by the Clean Water Act. Shown below are water quality data for each saltwater water body within this basin. Florida law defines a threshold for the maximum allowable concentration of chlorophyll *a* and the minimum required concentration of dissolved oxygen in these streams. No thresholds have been established for the allowable concentration of nitrogen or phosphorus; trend information is provided for these nutrients, to determine whether a statistically significant trend exists and if so, whether levels are rising (bad) or falling (good).

Chlorophyll *a*

Score: Pass

Units: mg/l	Year 2013	Historical period of record
High	0.0	0.2
Mean	0.0052	n/a
Low	0.0011	0.0001
No. of Samples	41	234

Five-year Trend Graph



Nitrogen, Total

Score: **Pass**

Units: mg/l	Year 2013	Historical period of record
High	2.7	14.1
Mean	1.2748	n/a
Low	0.589	0.363
No. of Samples	21	244

Five-year Trend Graph



Phosphorus, Total

Score: **Pass**

Units: mg/l	Year 2013	Historical period of record
High	1.7	3.1
Mean	0.3045	n/a
Low	0.115	0.07
No. of Samples	21	252

Five-year Trend Graph



Method Detection Limit
0.0001 mg/l

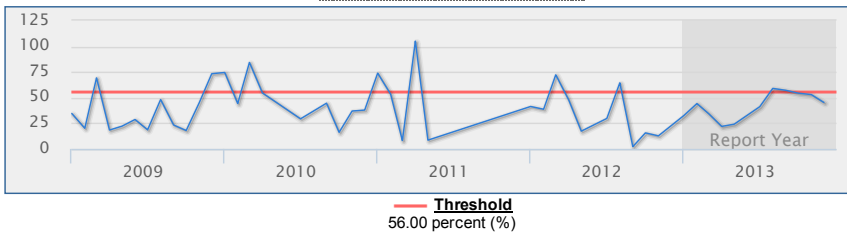
Dissolved Oxygen Saturation

Note: Low DO saturation also may be naturally influenced by inflows from nearby wetlands or groundwater sources

Score: **Caution**

Units: percent (%)	Year 2013	Historical period of record
High	94.0	147.7
Mean	40.15	n/a
Low	7.80	2.20
No. of Samples	28	335

Five-year Trend Graph



Impervious Features

Rain that falls on land that is in a natural state is absorbed and filtered by soils and vegetation as it makes its way into underground aquifers. However, in developed areas, "impervious surfaces" impede this process and contribute to polluted urban runoff entering surface waters. These surfaces include human infrastructure like roads, sidewalks, driveways and parking lots that are covered by impenetrable materials such as asphalt, concrete, brick and stone, as well as buildings and other permanent structures. Soils that have been disturbed and compacted by urban development are often impervious as well.



52% of the land area within the **Clower Creek Basin** is covered by impervious surfaces.

Land Use / Land Cover

Land use within a creek'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 (e.g. upland or wetland), 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.

2011 Land Use / Land Cover within Clower Creek Basin

