Catfish Creek Condition Report for 2012

PASS

Chl-a N P DO

4 out of 4 indicators were rated as PASS.

Size: 3,984 acres
Location: North and central Sarasota County
Discharges into: Little Sarasota Bay

The surface water system in the Catfish Creek Basin has undergone significant alteration over the past century. Historical survey does not identify Catfish Creek by name, but aerial photographs and survey from the mid-1900s clearly show the meandering creek extending inland for over a half mile, narrowing, continuing inland for another mile, and ending at a large wetland. The basin was still relatively undeveloped by the 1970s, but Catfish Creek had been excavated in the developed areas and through the basin, connecting pockets of wetlands to drain low-lying areas. The basin is now highly developed, draining from north to south through a ditch trenched through what is now Palmer Ranch, a master-planned community of residential and commercial development. *For basin details see:* ***Little Sarasota Bay Water Quality Management Plan (2012)***

Water Chemistry Ratings - Freshwater Portion of the Creek

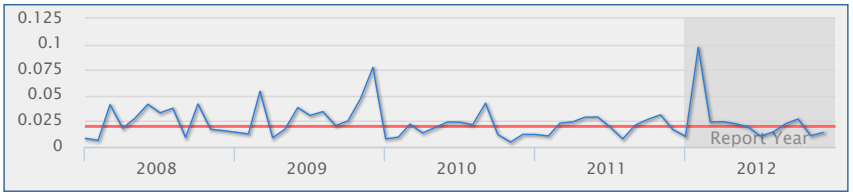
Total nitrogen, total phosphorus, chlorophyll *a*, and dissolved oxygen levels are monitored carefully by water resource managers and used by regulatory authorities to determine whether a creek meets the water quality standards mandated by the Clean Water Act. Shown below are water quality data for each 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.

Chlorophyll a

Score: Pass

Units: mg/l	Year 2012	Historical period of record
High	0.0968	0.0968
Mean	0.0197	n/a
Low	0.0102	0.0009
No. of Samples	12	92

Five-year Trend Graph



Threshold 0.02 mg/l

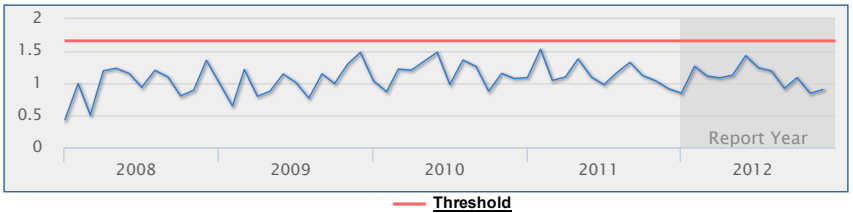
Method Detection Limit 0.0005 mg/l

Nitrogen, Total

Score: Pass

Units: mg/l	Year 2012	Historical period of record
High	1.428	1.906
Mean	1.0718	n/a
Low	0.843	0.431
No. of Samples	12	92

Five-year Trend Graph



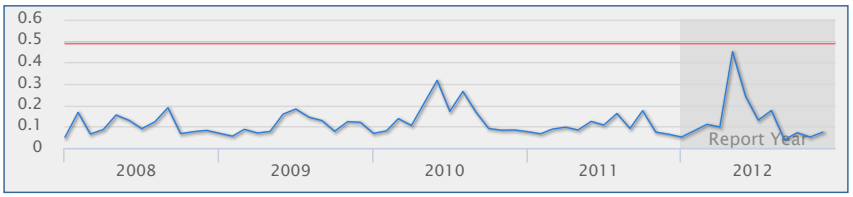
Threshold 1.65 mg/l

Phosphorus, Total

Score: Pass

Units: mg/l	Year 2012	Historical period of record
High	0.45	0.63
Mean	0.1935	n/a
Low	0.11	0.036
No. of Samples	5	57

Five-year Trend Graph



Threshold
0.49 mg/l

Method Detection Limit
0.0001 mg/l

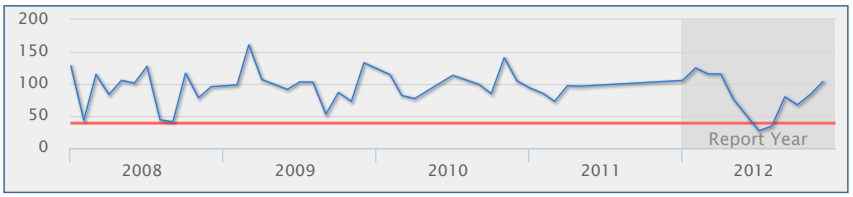
Dissolved Oxygen Saturation

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

Score: Pass

Units: percent (%)	Year 2012	Historical period of record
High	124.70	172.70
Mean	76.97	n/a
Low	26.80	26.80
No. of Samples	11	90

Five-year Trend Graph



Threshold
38.00 percent (%)

Water Chemistry Ratings - Tidal Portion of the Creek

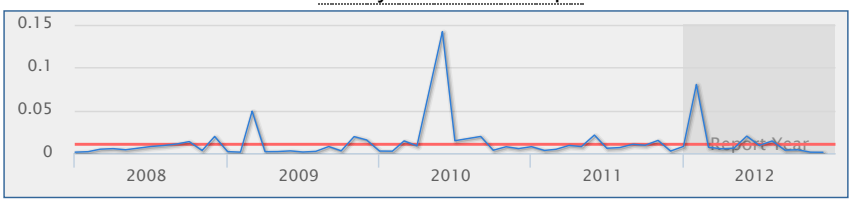
As is the case for predominantly freshwater streams, total nitrogen, total phosphorus, and chlorophyll *a* levels are monitored carefully by water resource managers and used by regulatory authorities to determine whether a tidally-influenced stream meets the water quality standards mandated by the Clean 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 2012	Historical period of record
High	0.1	0.1
Mean	0.0062	n/a
Low	0.0009	0.0001
No. of Samples	12	103

Five-year Trend Graph



Threshold
0.011 mg/l

Method Detection Limit
0.0005 mg/l

Nitrogen, Total

Score: Pass

Units: mg/l	Year 2012	Historical period of record
High	1.4	5.1
Mean	1.0514	n/a
Low	0.845	0.131
No. of Samples	12	135

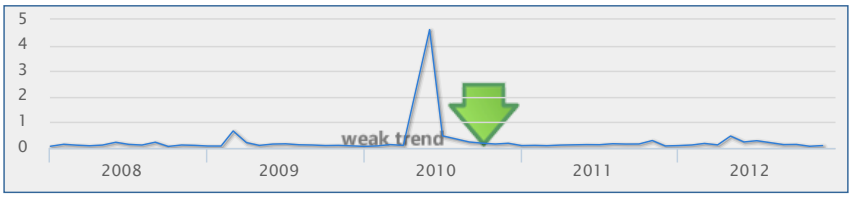
Five-year Trend Graph

Phosphorus, Total

Score: Pass

Units: mg/l	Year 2012	Historical period of record
High	0.5	4.6
Mean	0.1854	n/a
Low	0.114	0.055
No. of Samples	9	116

Five-year Trend Graph



Method Detection Limit
0.0001 mg/l

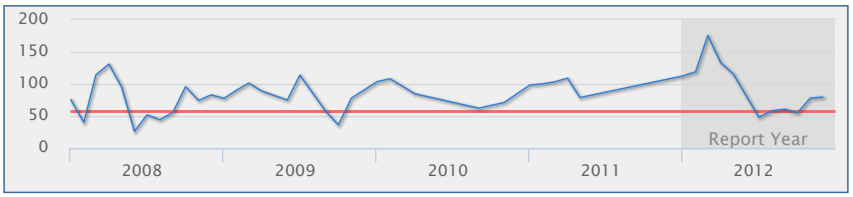
Dissolved Oxygen Saturation

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

Score: Pass

Units: percent (%)	Year 2012	Historical period of record
High	175.3	920.0
Mean	86.5	n/a
Low	47.90	0.00
No. of Samples	11	219

Five-year Trend Graph



Threshold
56.00 percent (%)

Impervious Features

Rain that falls on land that is in a natural state is absorbed and filtered by soils and vegetation as it makes it 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.

24% of the land area within the **Catfish 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 Catfish Creek Basin