

# Phillippi Creek Condition Report for 2013



4 out of 4 indicators were rated as PASS.

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

Size: 35,771 acres

Location: North Sarasota County, south Manatee County

Discharges into: Sarasota Bay

Phillippi Creek Basin consists primarily of residential properties west of Interstate 75, with commercial properties situated along the major arterial transportation routes. The area east of Interstate 75 is primarily rural with scattered low density residential area. Much of the area east of Interstate 75 is in agriculture use. Phillippi Creek drains from the north and northeast to south and southwest. The major conveyance system in the watershed consists of approximately 47 miles of open channels, most of which have been dredged in the past. The soils in the Phillippi Creek Watershed are primarily Myakka with the upland soils containing poorly to very poorly drained sands and the stream-side soils consisting of sands that are better drained. For basin details see: Phillippi Creek Flood Study Update (2001)

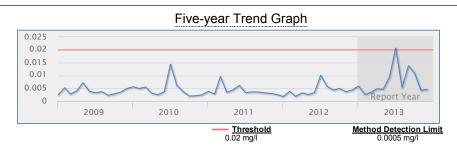


# Water Chemistry Ratings - Freshwater Portion of the Creek

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 <u>maximum allowable</u> concentration of nitrogen, phosphorus, and chlorophyll *a*, and the <u>minimum required</u> concentration of dissolved oxygen in these streams.

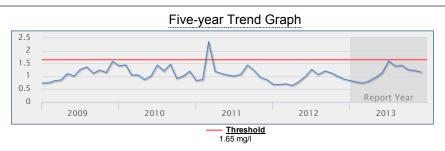
#### Chlorophyll a

Score: Pass			
Units: mg/l	Year 2013	Historical period of record	
High	0.039	0.115	
Mean	0.0063	n/a	
Low	0.0006	0.00	
No. of Samples	59	1,052	



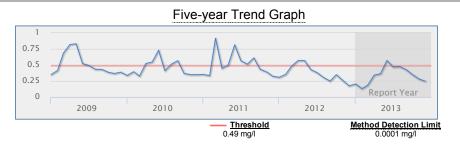
#### Nitrogen, Total

Score: Pass				
Units: mg/l	Year 2013	Historical period of record		
High	2.63	19.23		
Mean	1.1093	n/a		
Low	0.622	0.144		
No. of Samples	39	1,500		



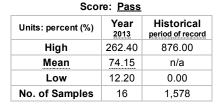
# Phosphorus, Total

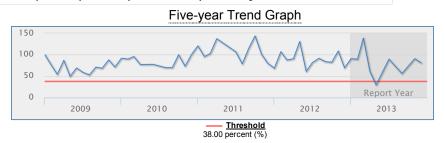
#### Score: Pass Historical Year Units: mg/l 2013 period of record 0.936 High 7.36 Mean 0.317 n/a 0.082 0.047 Low No. of Samples 39 1,484



# **Dissolved Oxygen Saturation**

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



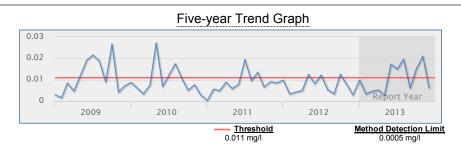


# Water Chemistry Ratings - Tidal Portion of the Creek

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 <u>maximum allowable</u> concentration of chlorophyll a and the <u>minimum required</u> 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).

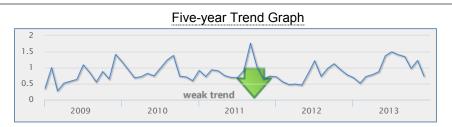
#### Chlorophyll a

Score: Pass			
Units: mg/l	Year 2013	Historical period of record	
High	0.1	0.1	
Mean	0.0084	n/a	
Low	0.0013	0.0003	
No. of Samples	48	173	



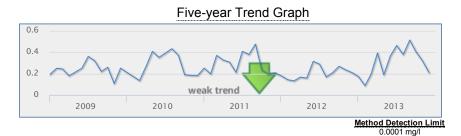
#### Nitrogen, Total

Score: Pass			
Units: mg/l	Year 2013	Historical period of record	
High	1.7	8.9	
Mean	0.9958	n/a	
Low	0.366	0.129	
No. of Samples	27	211	



# Phosphorus, Total

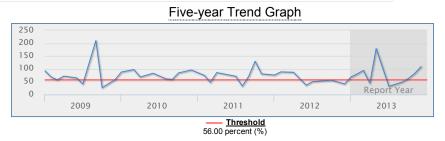
Score: <u>Pass</u>			
Units: mg/l	Year 2013	Historical period of record	
High	0.8	2.2	
Mean	0.3404	n/a	
Low	0.172	0.09	
No. of Samples	25	217	



#### **Dissolved Oxygen Saturation**

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

Score: Pass Year Historical Units: percent (%) 2013 period of record High 179.0 530.0 67.24 Mean n/a 8.70 8.70 Low No. of Samples 24 218



# **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.



20% of the land area within the Phillippi 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 Phillippi Creek Basin

