Forked Creek Condition Report for 2018

CAUTION

Chl-a N P DO

3 out of 4 indicators were rated as **PASS**.

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

Size: 5,863 acres
Location: South Sarasota County
Discharges into: Lemon Bay

Historically, the Forked Creek Basin consisted of a series of contiguous wetlands and mesic hammocks that extended from the creek's headwaters to its outfall. The entirety of Forked Creek is predominantly marine. There are three branches within this basin: the eastern, main branch which extends from State Road 776 north and east to the headwaters; the central branch which extends from the main confluence at SR776 north into the Dale Lakes area; and the western branch which extends north of Overbrook Road to Manasota Beach Road. The eastern branch traverses mainly undeveloped range land and sparsely populated land, while the central branch traverses through two urban subdivisions and one sparsely populated section. The flow characteristics of the creek have been greatly diminished because of the invasion of a variety of exotics, debris and storm-damaged trees. Sarasota County has designated the Forked Creek basin as a regional stormwater facility requiring

Forked Creek



immediate attention. *For basin details see:* ***Forked Creek Drainage Improvements, Preliminary Report Phase I (2000)***

Water Chemistry Ratings | Freshwater Portion of the Creek

Creek Conditions Ratings are based on comparing nitrogen, phosphorus, chlorophyll and dissolved oxygen to water quality guidelines or regulations. Florida law defines a maximum allowable concentration of nitrogen, phosphorus, and chlorophyll *a*, and a minimum allowable 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

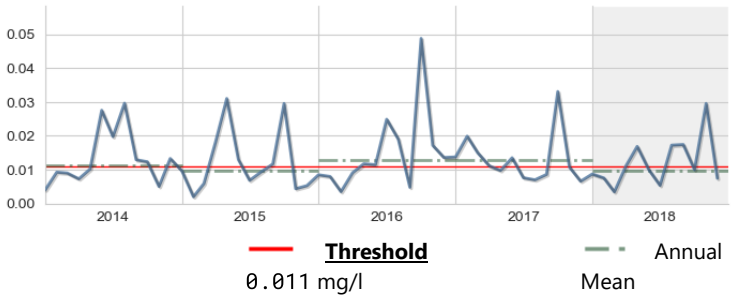
Creek Conditions Ratings are based on comparing nitrogen, phosphorus, chlorophyll and dissolved oxygen to water quality guidelines or regulations. Florida law defines a maximum allowable concentration of chlorophyll *a* and a minimum allowable concentration of dissolved oxygen in these streams. Florida has no regulatory thresholds for nitrogen or phosphorus in tidal creeks so trends are used to rate the creeks.

Chl-a Chlorophyll a

Score: Pass

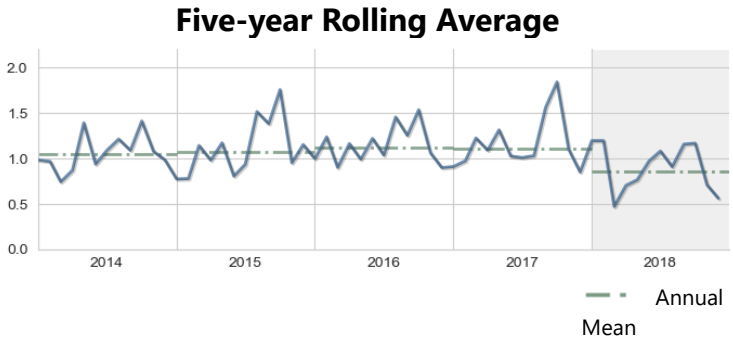
Units: mg/l	Year 2018	Historical period of record
High	0.0	0.2
Mean	0.0096	0.0143
Low	0.0004	0.0003
No. of Samples	35	1,133

Five-year Rolling Average



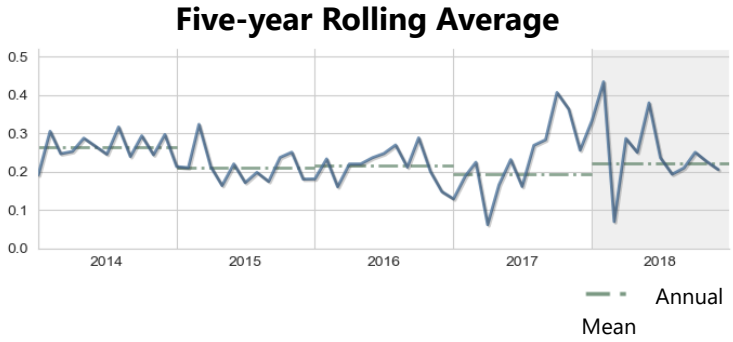
Nitrogen, Total

Units: mg/l	Year 2018	Historical period of record
High	1.4	4.3
Mean	0.8567	1.0622
Low	0.084	0.00
No. of Samples	23	674



Phosphorus, Total

Units: mg/l	Year 2018	Historical period of record
High	0.4	3.8
Mean	0.2214	0.2946
Low	0.004	0.004
No. of Samples	27	1,216



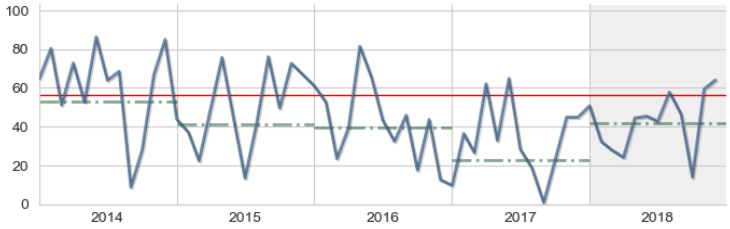
Dissolved Oxygen Saturation

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

Score: Caution

Units: percent (%)	Year 2018	Historical period of record
High	96.6	169.7
Mean	41.64	64.38
Low	9.80	0.70
No. of Samples	23	971

Five-year Rolling Average



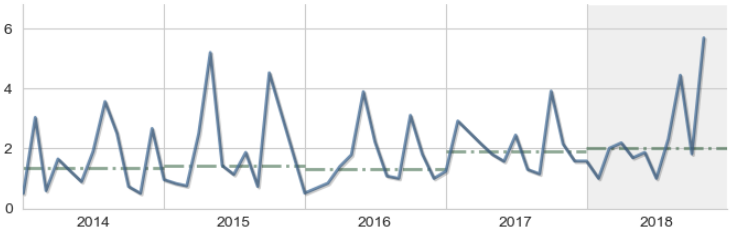
Threshold
56.00 percent (%)

Annual Mean

BOD, Biochemical oxygen demand

Units: mg/l	Year 2018	Historical period of record
High	5.7	16.7
Mean	2.03	2.28
Low	1.00	0.50
No. of Samples	11	452

Five-year Rolling Average

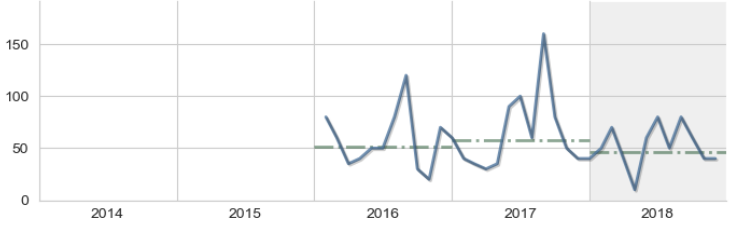


Annual Mean

Color

Units: PCU	Year 2018	Historical period of record
High	80.0	250.0
Mean	46.54	41.48
Low	10.00	10.00
No. of Samples	12	208

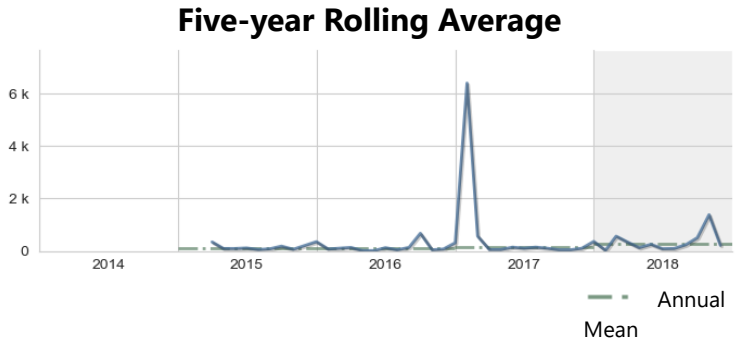
Five-year Rolling Average



Annual Mean

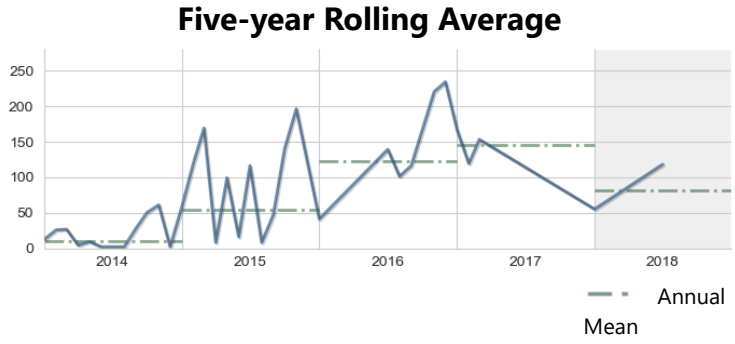
Enterococcus Group Bacteria

Units: cfu/100ml	Year 2018	Historical period of record
High	17,300.0	17,300.0
Mean	255.64	140.15
Low	20.00	10.00
No. of Samples	16	56



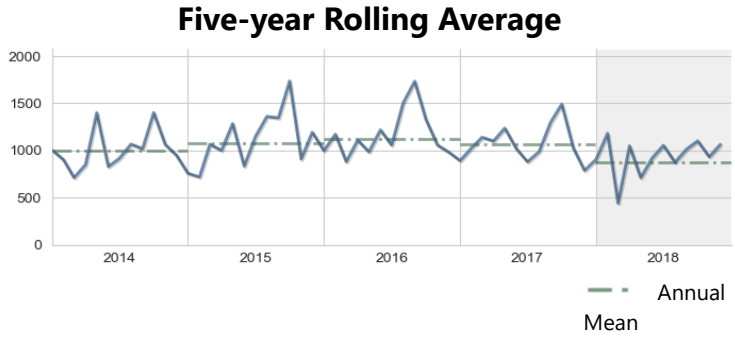
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2018	Historical period of record
High	118.0	587.0
Mean	80.56	22.74
Low	55.00	0.00
No. of Samples	2	579



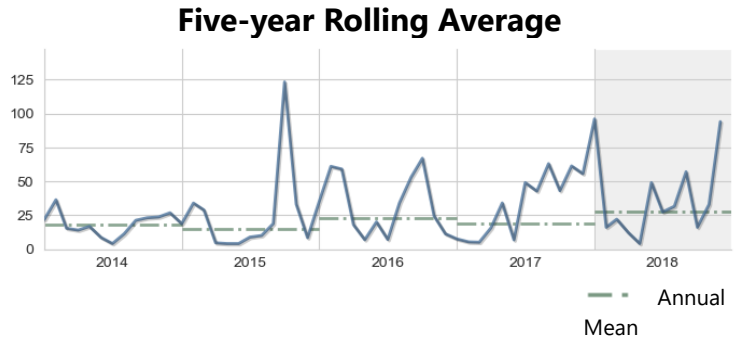
Nitrogen, Kjeldahl

Units: ug/l	Year 2018	Historical period of record
High	1,590.0	4,340.0
Mean	866.92	1066.54
Low	80.00	50.00
No. of Samples	27	1,281



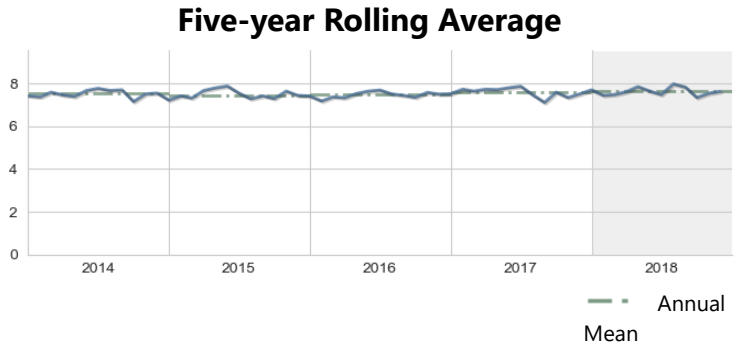
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2018	Historical period of record
High	140.0	882.0
Mean	27.41	15.96
Low	4.00	0.00
No. of Samples	22	980



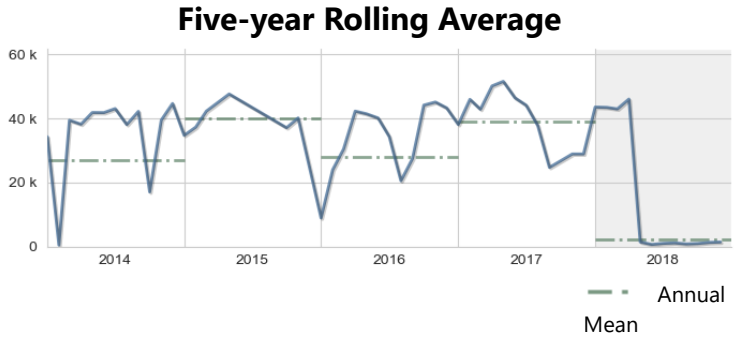
pH

Units: None	Year 2018	Historical period of record
High	8.3	9.3
Mean	7.61	7.75
Low	7.28	4.90
No. of Samples	38	1,873



Specific conductance

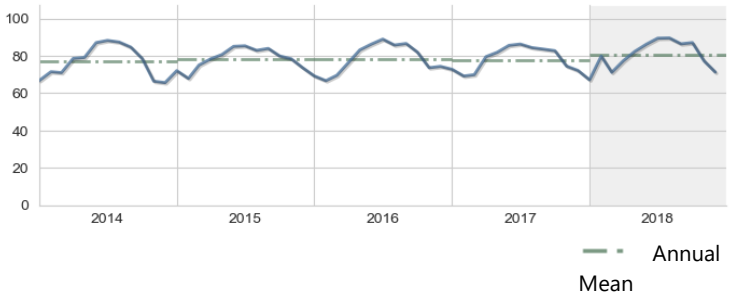
Units: umho	Year 2018	Historical period of record
High	45,942.2	55,192.0
Mean	2125.11	17951.43
Low	9.58	0.941
No. of Samples	20	788



Temperature, water

Units: deg F	Year 2018	Historical period of record
High	90.6	93.9
Mean	80.61	76.26
Low	67.154	50.00
No. of Samples	26	1,502

Five-year Rolling Average

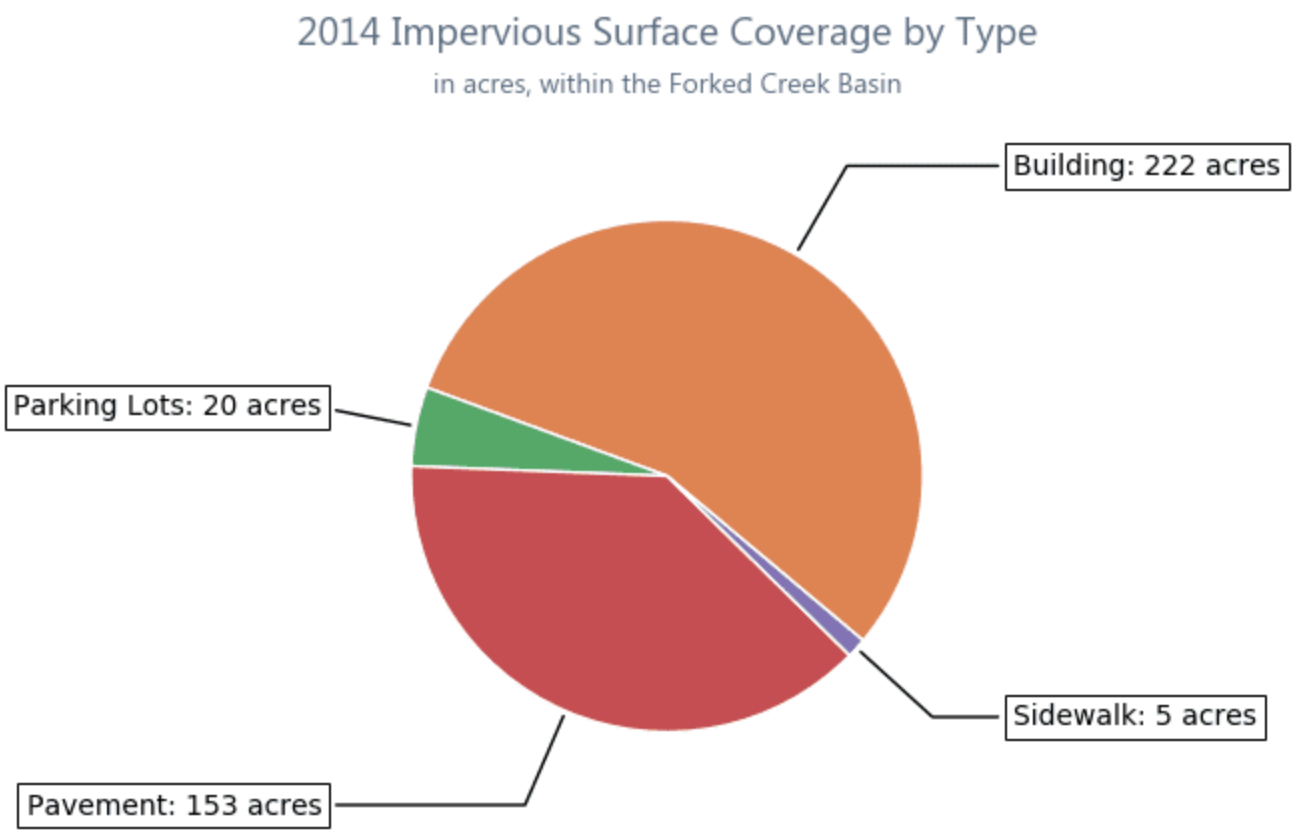


Impervious Features

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.



7% of the land area within the **Forked 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.

Acreage and Percentage within each Land Use / Land Cover Category for Forked Creek Basin

Land Use Classification	1990	1995	1999	2005	2011	2014	2017	Trend
Urban & Built-up	1,394 **23.8%**	1,570 **26.8%**	1,888 **32.2%**	1,859 **31.7%**	2,154 **36.7%**	2,154 **36.7%**	2,393 **40.8%**	
Agriculture	1,055 **18%**	1,081 **18.4%**	1,064 **18.2%**	988 **16.8%**	619 **10.6%**	619 **10.6%**	533 **9.1%**	
Rangeland	232 **4%**	688 **11.7%**	395 **6.7%**	552 **9.4%**	726 **12.4%**	726 **12.4%**	587 **10%**	
Upland Forests	2,059 **35.1%**	1,322 **22.5%**	1,313 **22.4%**	1,187 **20.3%**	1,031 **17.6%**	1,031 **17.6%**	982 **16.7%**	
Water	139 **2.4%**	390 **6.7%**	237 **4%**	229 **3.9%**	276 **4.7%**	276 **4.7%**	318 **5.4%**	
Wetlands	905 **15.4%**	743 **12.7%**	904 **15.4%**	944 **16.1%**	948 **16.2%**	948 **16.2%**	943 **16.1%**	
Barren Land	1 **0%**	0 **0%**	0 **0%**	0 **0%**	0 **0%**	0 **0%**	0 **0%**	
Transportation and Utilities	78 **1.3%**	68 **1.2%**	61 **1%**	103 **1.8%**	107 **1.8%**	107 **1.8%**	108 **1.8%**	

2017 Land Use / Land Cover for Forked Creek Basin

as a percentage of land area for this basin

