

Phillippi Creek Condition Report for 2017

!

CAUTION

Chl-a

N

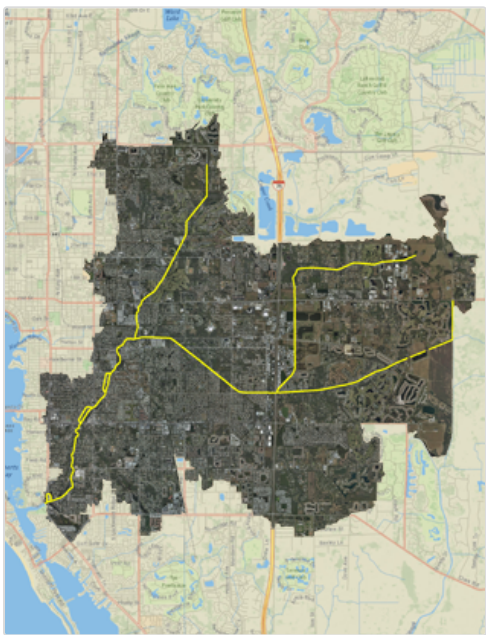
P

DO

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

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

Phillippi Creek



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

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.

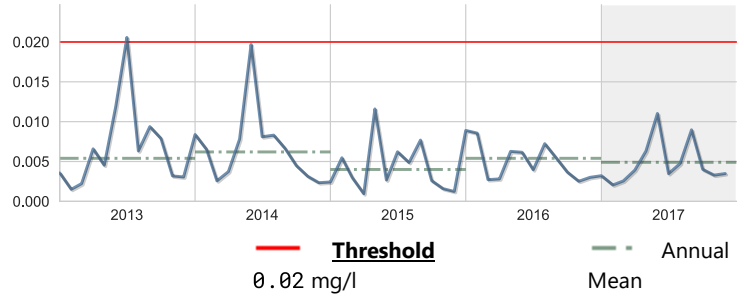


Chlorophyll a

Score: Pass

Units: mg/l	Year 2017	Historical period of record
High	0.252	0.332
Mean	0.0049	0.0041
Low	0.0003	0.00
No. of Samples	226	2,553

Five-year Rolling Average

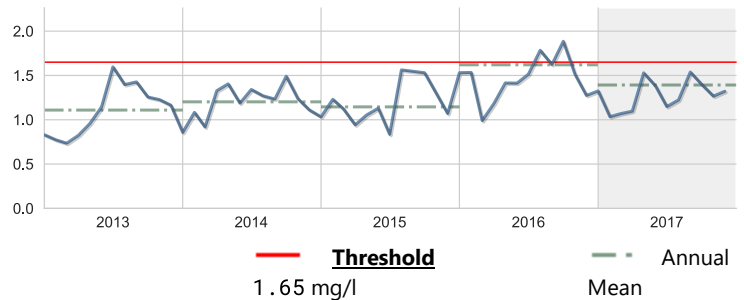


Nitrogen, Total

Score: Pass

Units: mg/l	Year 2017	Historical period of record
High	13.668	19.23
Mean	1.3921	1.2578
Low	0.59	0.144
No. of Samples	162	1,982

Five-year Rolling Average



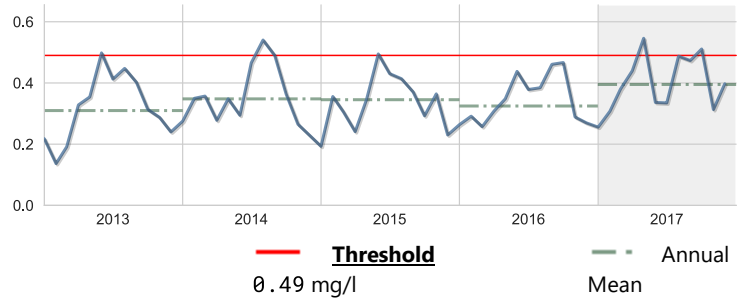


Phosphorus, Total

Score: Pass

Units: mg/l	Year 2017	Historical period of record
High	2.01	7.36
Mean	0.3951	0.4087
Low	0.047	0.034
No. of Samples	214	2,935

Five-year Rolling Average



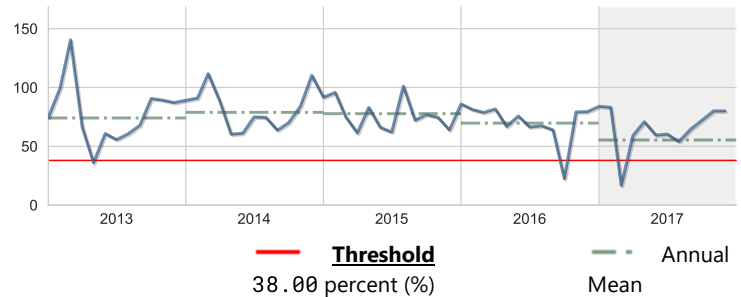
Dissolved Oxygen Saturation

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

Score: Pass

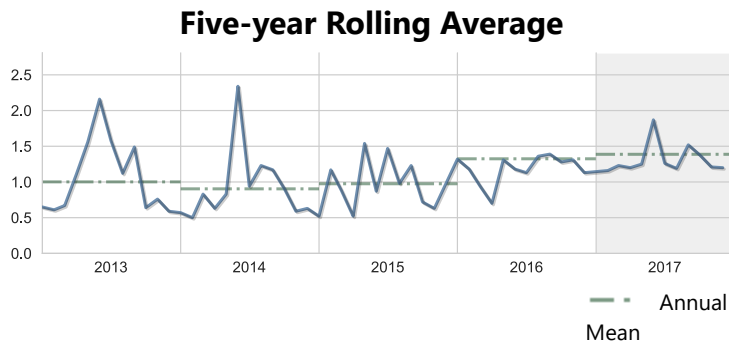
Units: percent (%)	Year 2017	Historical period of record
High	165.00	262.40
Mean	55.32	69.45
Low	0.10	0.00
No. of Samples	174	3,715

Five-year Rolling Average



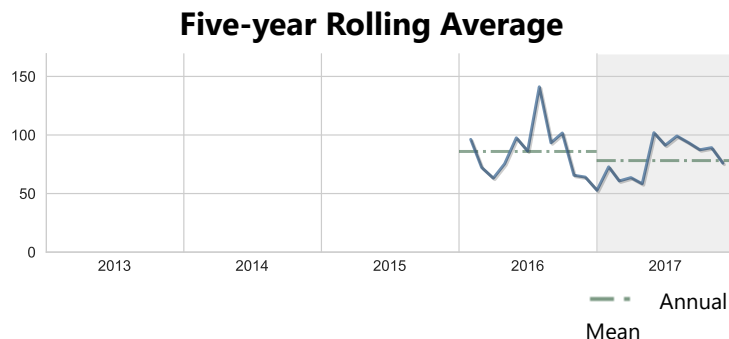
BOD, Biochemical oxygen demand

Units: mg/l	Year 2017	Historical period of record
High	9.01	21.30
Mean	1.39	1.24
Low	1.00	0.071
No. of Samples	195	2,218



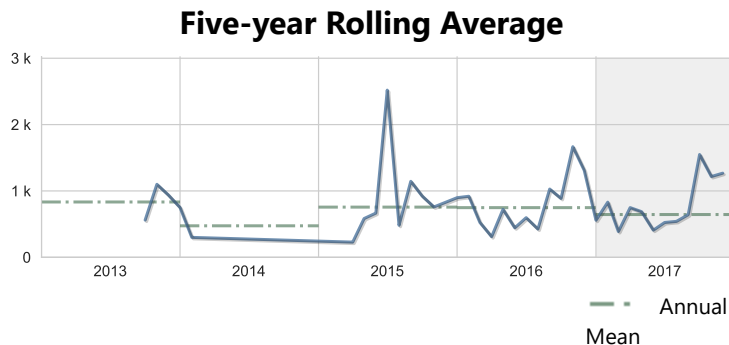
Color

Units: PCU	Year 2017	Historical period of record
High	300.00	400.00
Mean	78.14	69.36
Low	20.00	0.00
No. of Samples	216	1,437



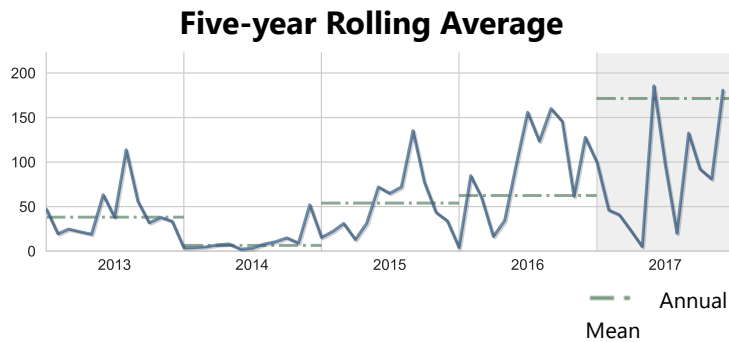
Escherichia coli

Units: cfu/100ml	Year 2017	Historical period of record
High	24196.00	24196.00
Mean	644.26	682.63
Low	10.00	10.00
No. of Samples	202	567



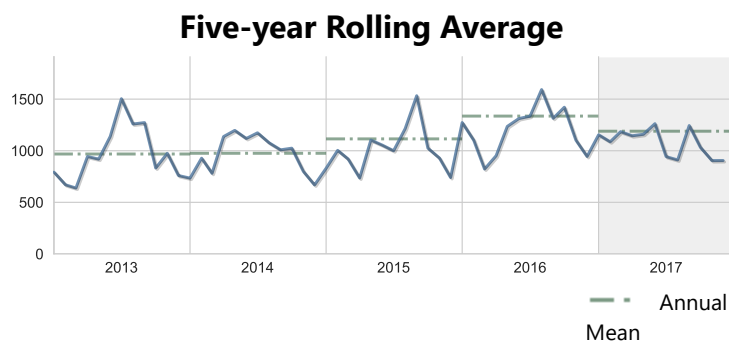
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2017	Historical period of record
High	15800.00	16800.00
Mean	171.41	25.5
Low	5.00	0.00
No. of Samples	91	3,045



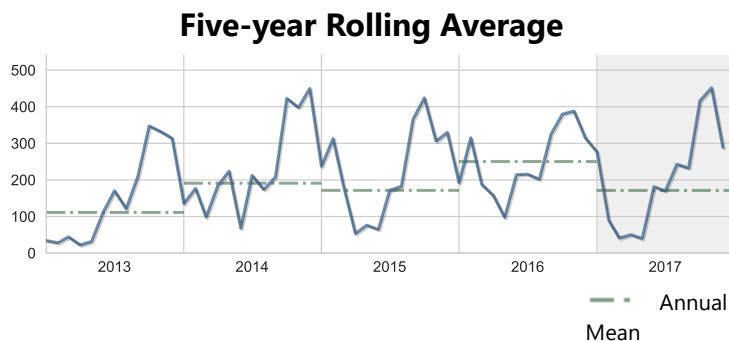
Nitrogen, Kjeldahl

Units: ug/l	Year 2017	Historical period of record
High	20600.00	20600.00
Mean	1189.26	953.47
Low	482.00	2.00
No. of Samples	221	3,299



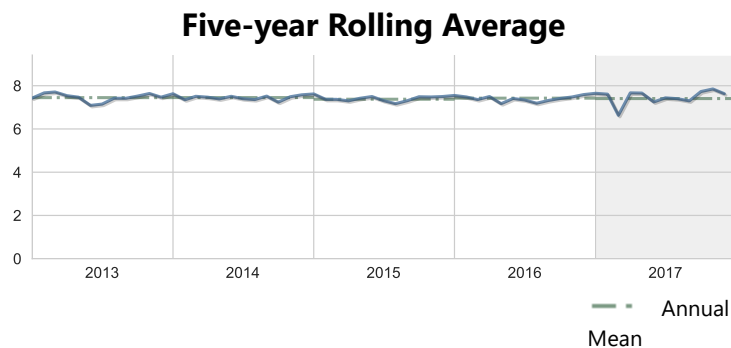
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2017	Historical period of record
High	1210.00	7556.00
Mean	171.29	166.65
Low	10.00	0.00
No. of Samples	160	2,813



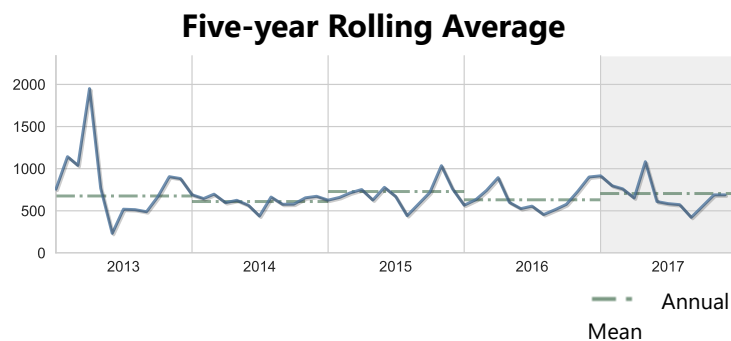
pH

Units: None	Year 2017	Historical period of record
High	10.70	12.00
Mean	7.41	7.43
Low	1.40	1.40
No. of Samples	398	4,350



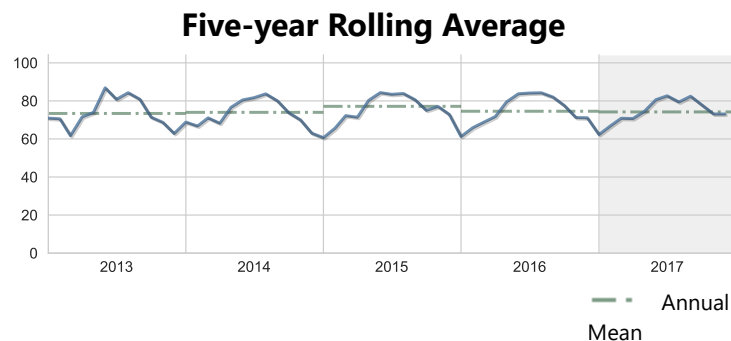
Specific conductance

Units: umho	Year 2017	Historical period of record
High	25780.40	51500.00
Mean	705.08	598.61
Low	5.30	0.369
No. of Samples	187	4,490



Temperature, water

Units: deg F	Year 2017	Historical period of record
High	89.96	139.46
Mean	74.2	72.92
Low	57.20	46.40
No. of Samples	182	3,257



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.

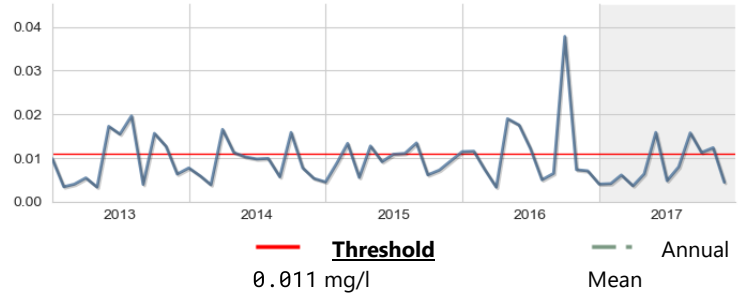


Chlorophyll a

Score: Pass

Units: mg/l	Year 2017	Historical period of record
High	0.0	0.1
Mean	0.0074	0.0079
Low	0.0036	0.0003
No. of Samples	13	383

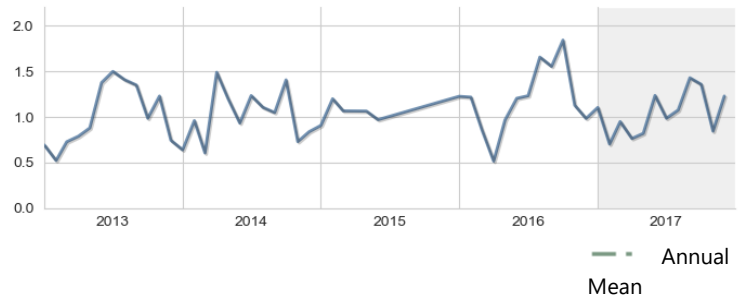
Five-year Rolling Average



Nitrogen, Total

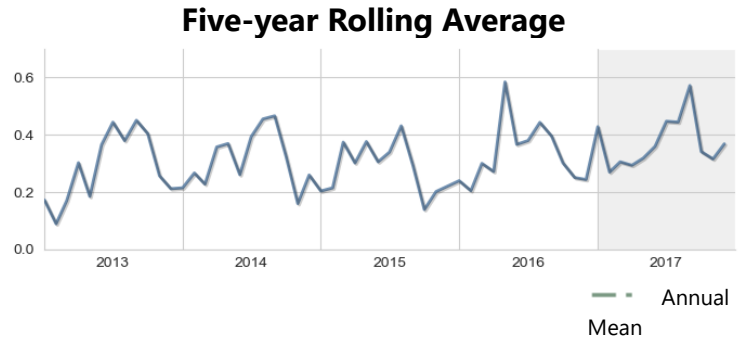
Units: mg/l	Year 2017	Historical period of record
High	1.4	8.9
Mean	1.0774	1.0243
Low	0.699	0.131
No. of Samples	10	256

Five-year Rolling Average



Phosphorus, Total

Units: mg/l	Year 2017	Historical period of record
High	0.6	2.2
Mean	0.3629	0.3008
Low	0.269	0.084
No. of Samples	13	428

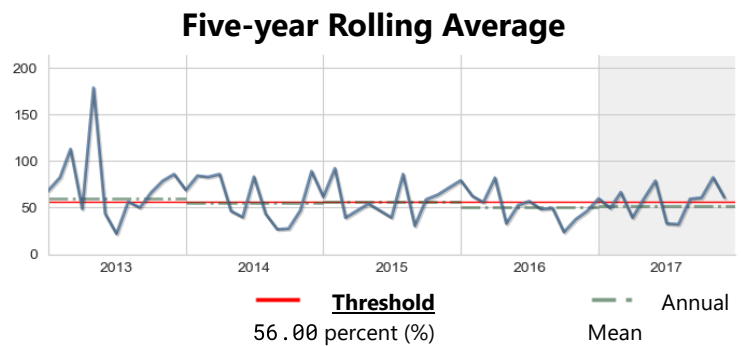


Dissolved Oxygen Saturation

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

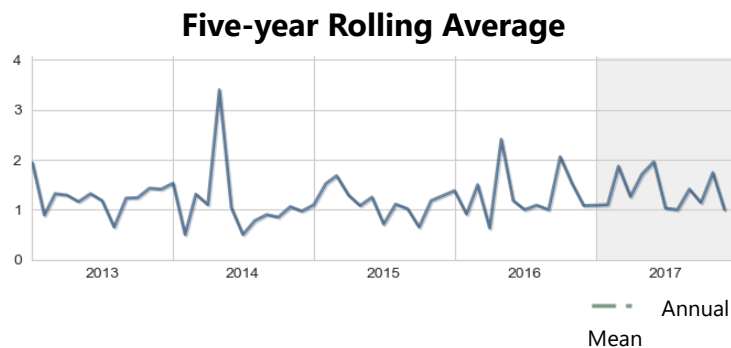
Score: Caution

Units: percent (%)	Year 2017	Historical period of record
High	79.0	210.0
Mean	50.58	62.47
Low	32.10	8.6027
No. of Samples	8	476



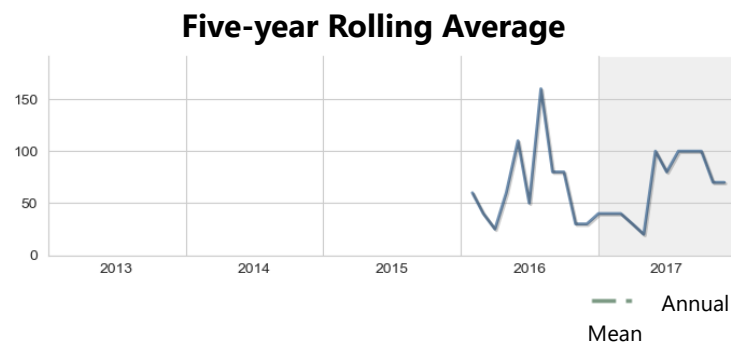
BOD, Biochemical oxygen demand

Units: mg/l	Year 2017	Historical period of record
High	2.0	7.5
Mean	1.38	1.39
Low	1.00	0.50
No. of Samples	12	334



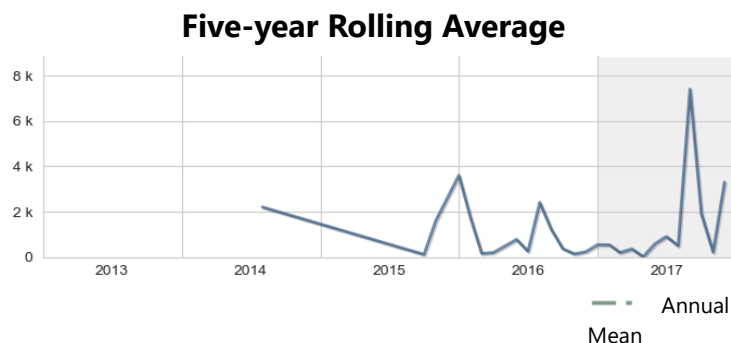
Color

Units: PCU	Year 2017	Historical period of record
High	100.0	280.0
Mean	60.66	53.16
Low	20.00	15.00
No. of Samples	13	142



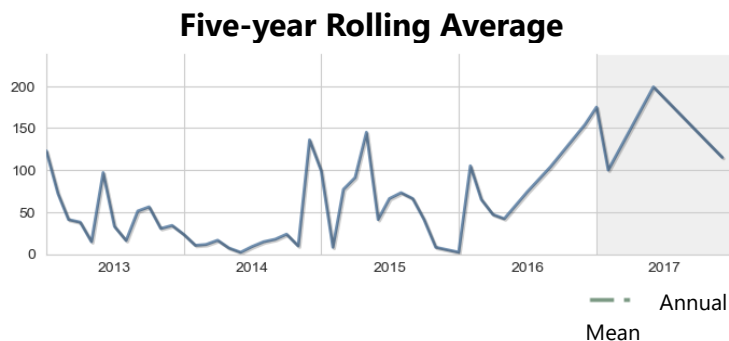
Enterococcus Group Bacteria

Units: cfu/100ml	Year 2017	Historical period of record
High	7,400.0	7,400.0
Mean	528.45	591.24
Low	10.00	10.00
No. of Samples	12	27



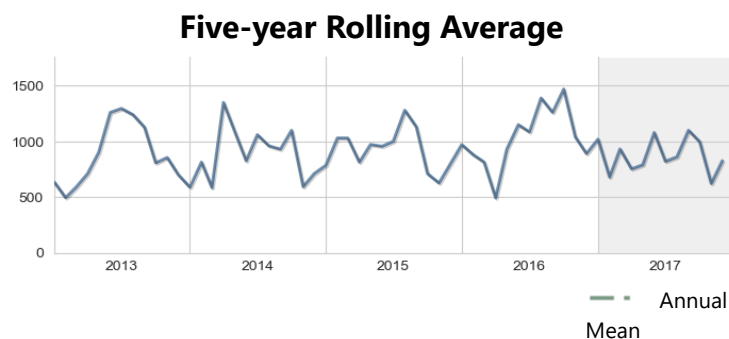
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2017	Historical period of record
High	199.0	945.0
Mean	151.46	27.88
Low	100.00	0.00
No. of Samples	5	464



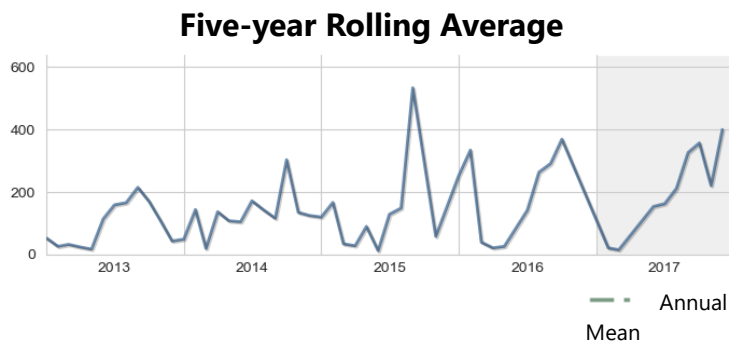
Nitrogen, Kjeldahl

Units: ug/l	Year 2017	Historical period of record
High	1,100.0	3,092.0
Mean	875.54	814.98
Low	621.00	70.00
No. of Samples	13	473



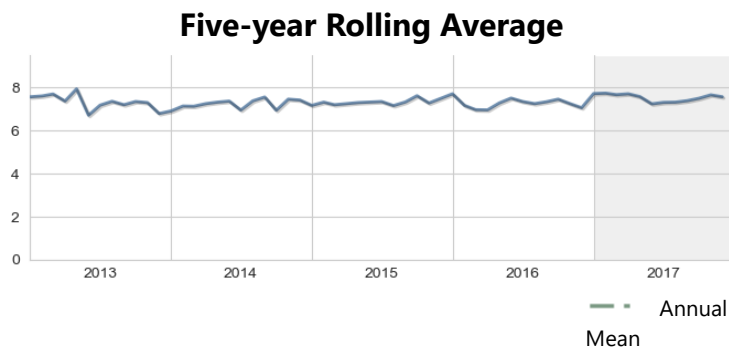
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2017	Historical period of record
High	400.0	1,140.0
Mean	136.8	77.68
Low	14.00	0.00
No. of Samples	10	418



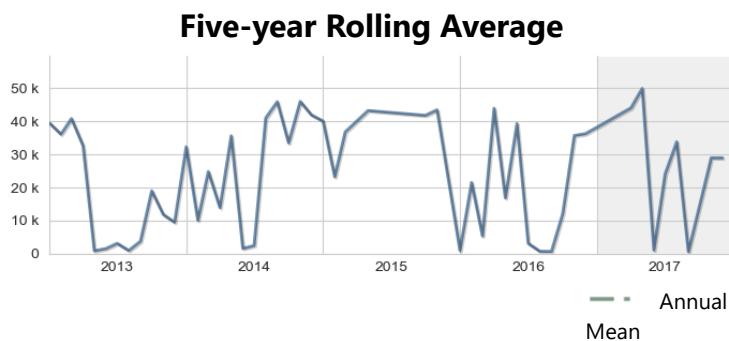
pH

Units: None	Year 2017	Historical period of record
High	7.8	8.5
Mean	7.5	7.66
Low	7.10	5.58
No. of Samples	21	2,015



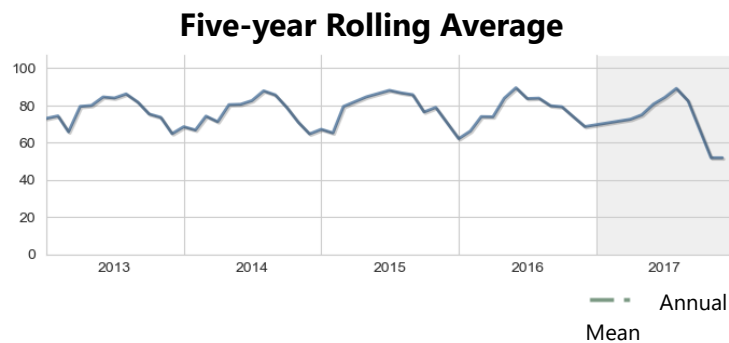
Specific conductance

Units: umho	Year 2017	Historical period of record
High	49,866.7	55,333.0
Mean	12857.09	19432.32
Low	501.10	8.083
No. of Samples	8	2,061



Temperature, water

Units: deg F	Year 2017	Historical period of record
High	89.1	91.4
Mean	72.04	75.4
Low	51.80	49.10
No. of Samples	8	1,932



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.

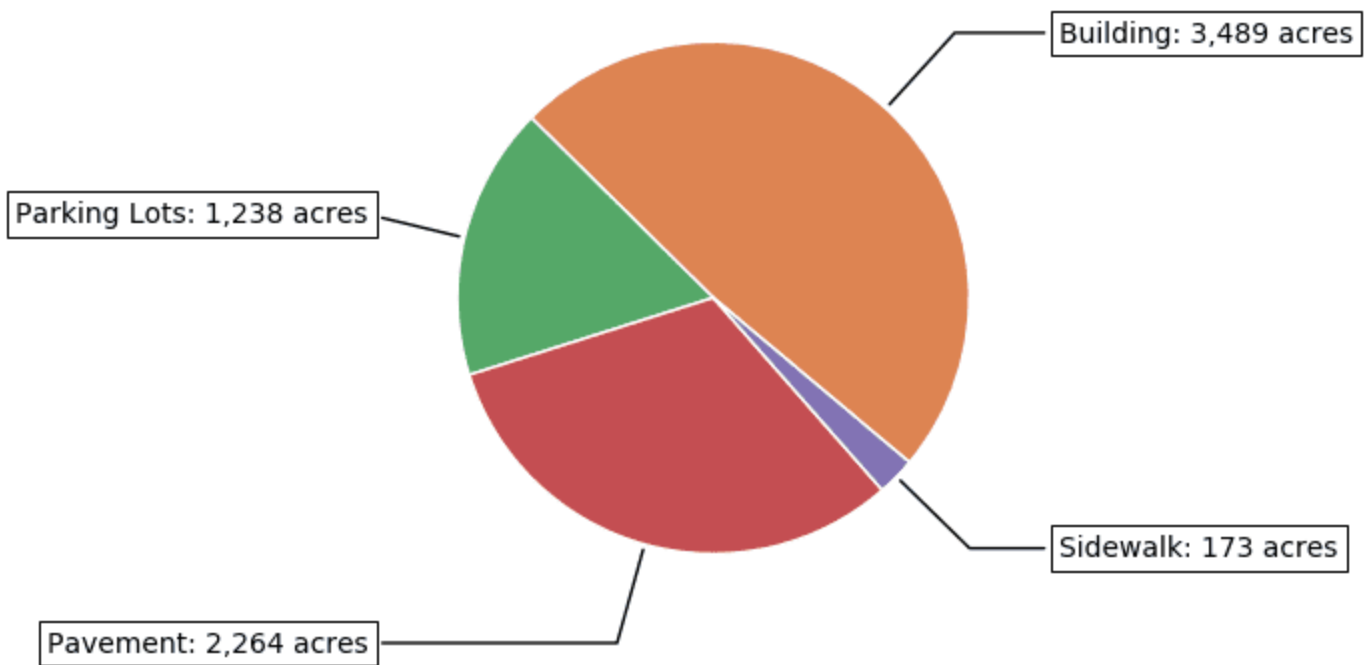


20% of the land area within the **Phillippi Creek Basin** is covered by impervious

surfaces

2014 Impervious Surface Coverage by Type

in acres, within the Phillippi Creek Basin











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 Phillippi Creek Basin

2017 Creek Conditions Report for Phillippi Creek

Land Use Classification	1990	1995	1999	2005	2011	2014	2017	Trend
Urban & Built-up	20,773 58.1%	22,109 61.8%	23,051 64.4%	25,700 71.8%	26,066 72.9%	25,768 72%	26,460 74%	
Agriculture	6,398 17.9%	6,018 16.8%	4,657 13%	2,498 7%	2,216 6.2%	2,309 6.5%	1,822 5.1%	
Rangeland	523 1.5%	308 0.9%	262 0.7%	142 0.4%	147 0.4%	330 0.9%	129 0.4%	
Upland Forests	3,372 9.4%	2,619 7.3%	2,363 6.6%	1,905 5.3%	1,724 4.8%	1,771 5%	1,618 4.5%	
Water	1,171 3.3%	1,367 3.8%	1,606 4.5%	1,858 5.2%	2,027 5.7%	1,883 5.3%	1,997 5.6%	
Wetlands	2,273 6.4%	1,762 4.9%	1,735 4.8%	1,715 4.8%	1,727 4.8%	1,860 5.2%	1,819 5.1%	
Barren Land	19 0.1%	106 0.3%	634 1.8%	9 0%	99 0.3%	95 0.3%	100 0.3%	
Transportation and Utilities	1,244 3.5%	1,481 4.1%	1,464 4.1%	1,943 5.4%	1,767 4.9%	1,755 4.9%	1,826 5.1%	

2017 Land Use / Land Cover for Phillippi Creek Basin

