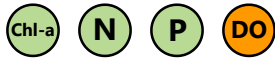


Phillippi Creek Condition Report for 2016

!

CAUTION



3 out of 4
indicators
were rated as
PASS.

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

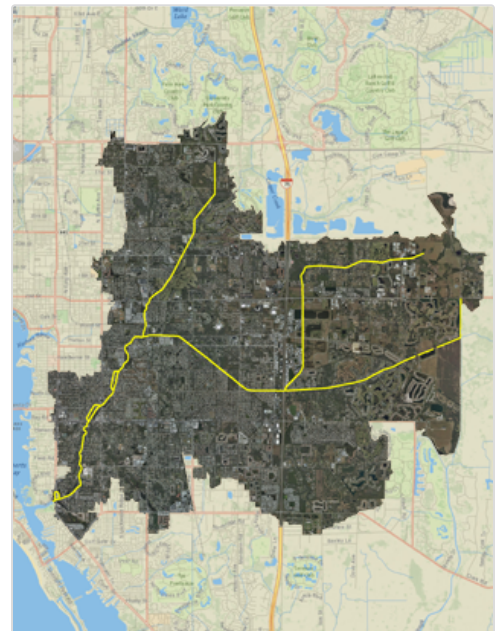
Size: 35,771 acres

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)***

Phillippi Creek



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.

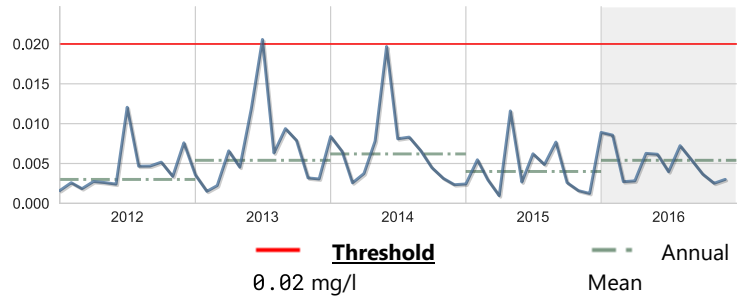


Chlorophyll a

Score: Pass

Units: mg/l	Year 2016	Historical period of record
High	0.332	0.332
Mean	0.0054	0.0041
Low	0.0003	0.00
No. of Samples	320	2,327

Five-year Rolling Average

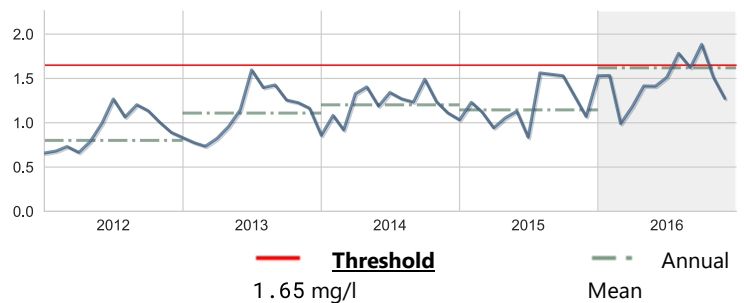


Nitrogen, Total

Score: Pass

Units: mg/l	Year 2016	Historical period of record
High	19.212	19.23
Mean	1.6201	1.2465
Low	0.657	0.144
No. of Samples	232	1,820

Five-year Rolling Average



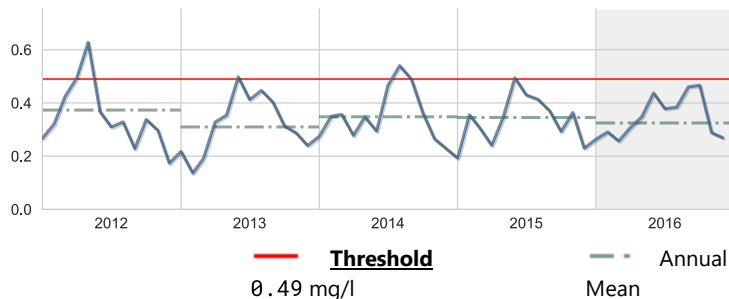


Phosphorus, Total

Score: Pass

Units: mg/l	Year 2016	Historical period of record
High	1.30	7.36
Mean	0.3247	0.4097
Low	0.072	0.034
No. of Samples	286	2,721

Five-year Rolling Average



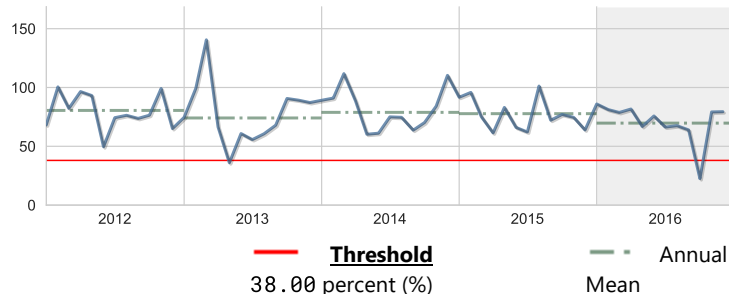
Dissolved Oxygen Saturation

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

Score: Pass

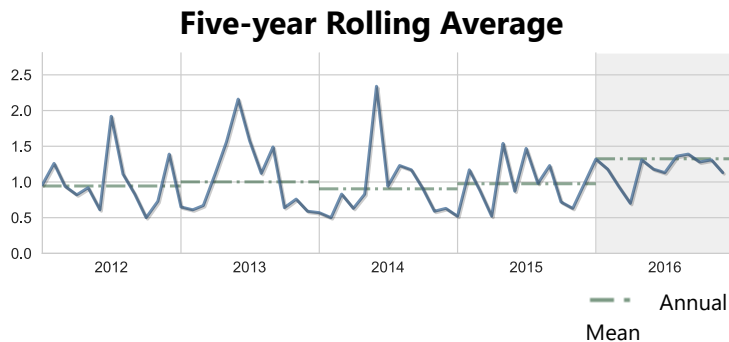
Units: percent (%)	Year 2016	Historical period of record
High	157.90	262.40
Mean	69.71	70.23
Low	0.60	0.00
No. of Samples	295	3,541

Five-year Rolling Average



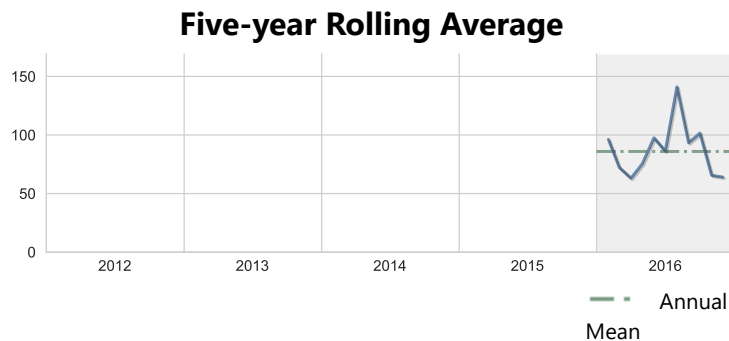
BOD, Biochemical oxygen demand

Units: mg/l	Year 2016	Historical period of record
High	7.04	21.30
Mean	1.32	1.22
Low	0.50	0.071
No. of Samples	274	2,023



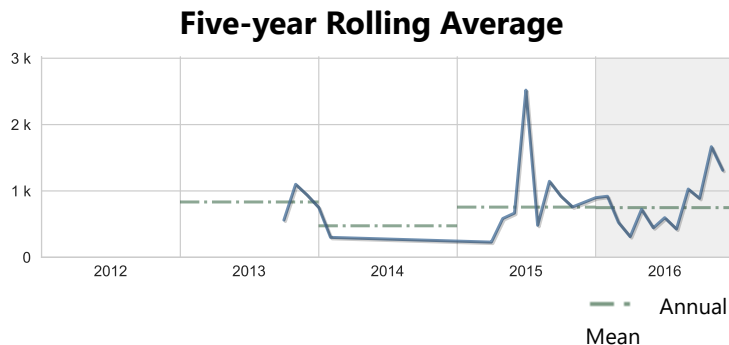
Color

Units: PCU	Year 2016	Historical period of record
High	400.00	400.00
Mean	85.94	67.91
Low	40.00	0.00
No. of Samples	231	1,221



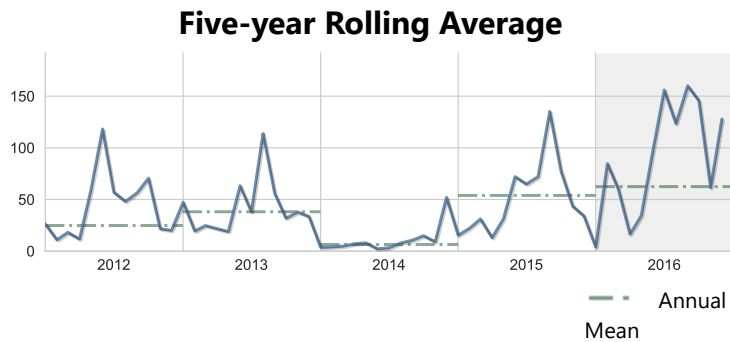
Escherichia coli

Units: cfu/100ml	Year 2016	Historical period of record
High	24196.00	24196.00
Mean	748.17	704.85
Low	10.00	10.00
No. of Samples	262	365



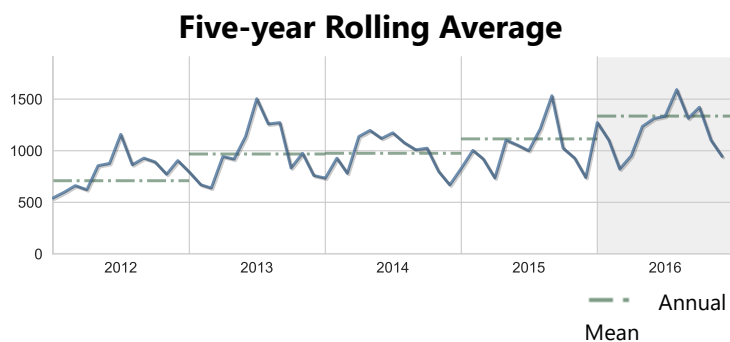
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2016	Historical period of record
High	16800.00	16800.00
Mean	62.44	24.04
Low	0.027	0.00
No. of Samples	177	2,954



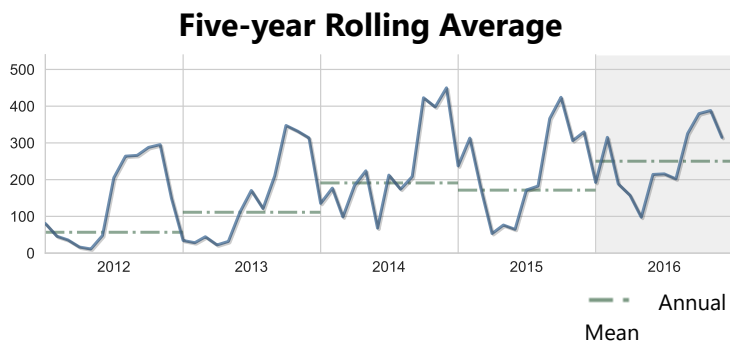
Nitrogen, Kjeldahl

Units: ug/l	Year 2016	Historical period of record
High	18900.00	18900.00
Mean	1335.74	938.46
Low	458.00	2.00
No. of Samples	293	3,078



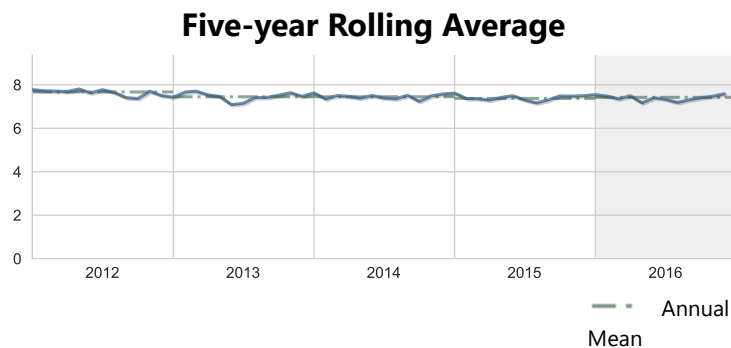
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2016	Historical period of record
High	2530.00	7556.00
Mean	250.2	166.37
Low	4.00	0.00
No. of Samples	254	2,653



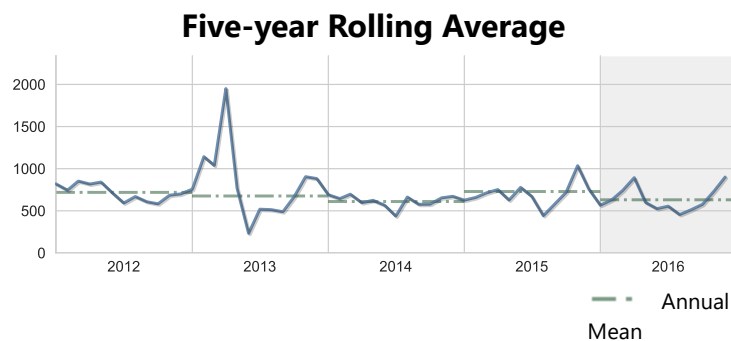
pH

Units: None	Year 2016	Historical period of record
High	9.73	12.00
Mean	7.42	7.43
Low	6.20	3.90
No. of Samples	562	3,952



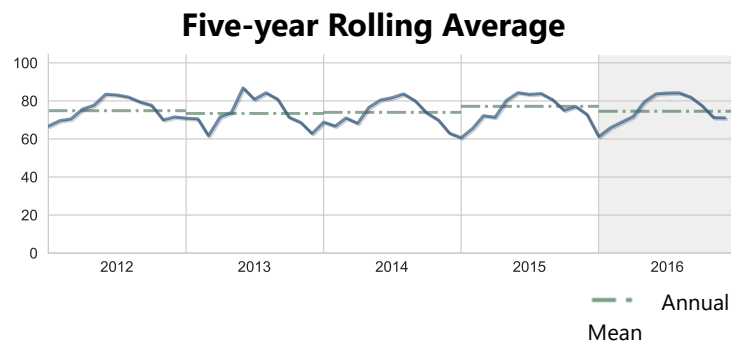
Specific conductance

Units: umho	Year 2016	Historical period of record
High	36192.00	51500.00
Mean	630.73	594.36
Low	209.00	0.369
No. of Samples	302	4,303



Temperature, water

Units: deg F	Year 2016	Historical period of record
High	96.098	139.46
Mean	74.56	72.84
Low	56.156	46.40
No. of Samples	267	3,075



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.

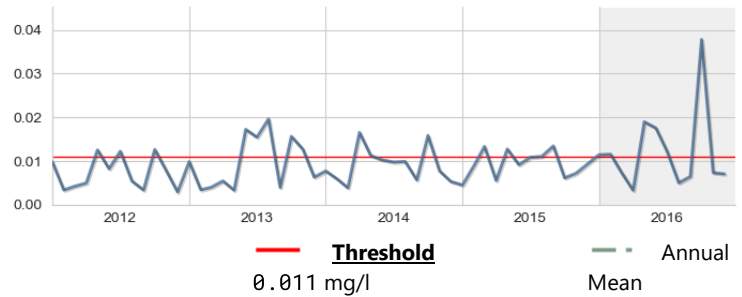


Chlorophyll a

Score: Pass

Units: mg/l	Year 2016	Historical period of record
High	0.0	0.1
Mean	0.0105	0.0079
Low	0.0032	0.0003
No. of Samples	19	370

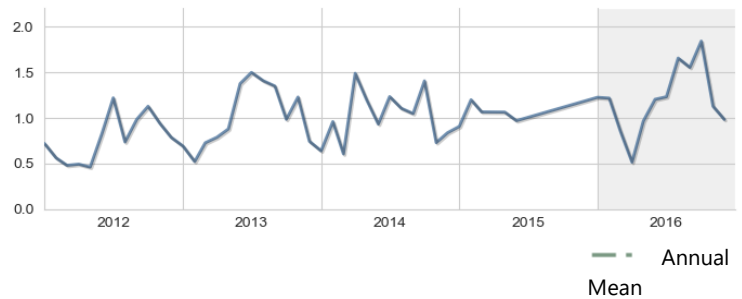
Five-year Rolling Average



Nitrogen, Total

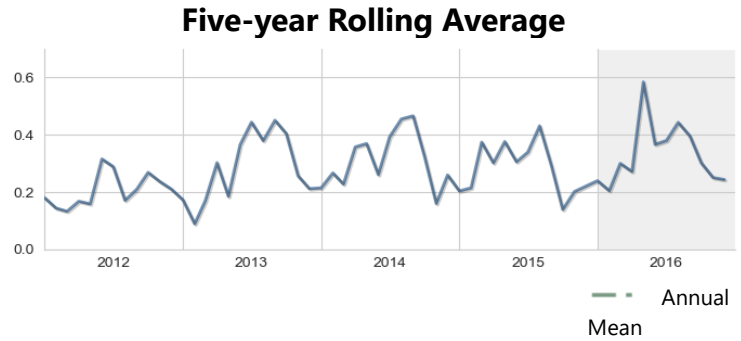
Units: mg/l	Year 2016	Historical period of record
High	1.8	8.9
Mean	1.1035	1.0222
Low	0.512	0.131
No. of Samples	11	246

Five-year Rolling Average



Phosphorus, Total

Units: mg/l	Year 2016	Historical period of record
High	0.6	2.2
Mean	0.3261	0.2991
Low	0.204	0.084
No. of Samples	16	415

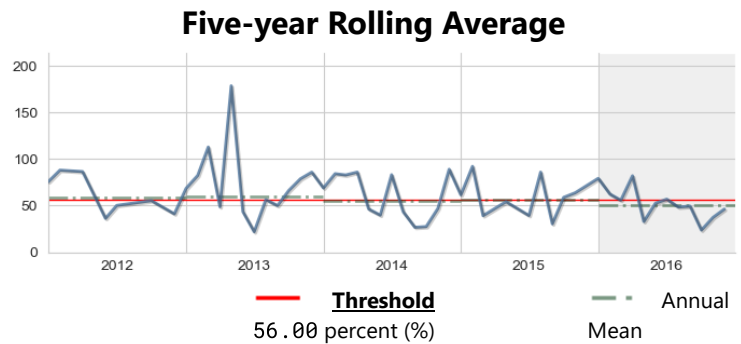


Dissolved Oxygen Saturation

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

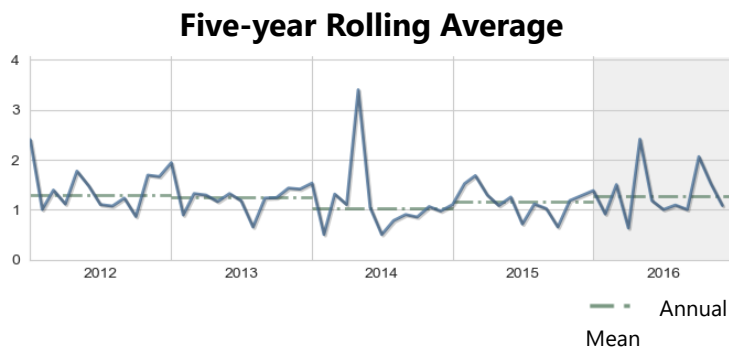
Score: Caution

Units: percent (%)	Year 2016	Historical period of record
High	81.4	210.0
Mean	54.9	62.7
Low	21.70	8.6027
No. of Samples	20	468



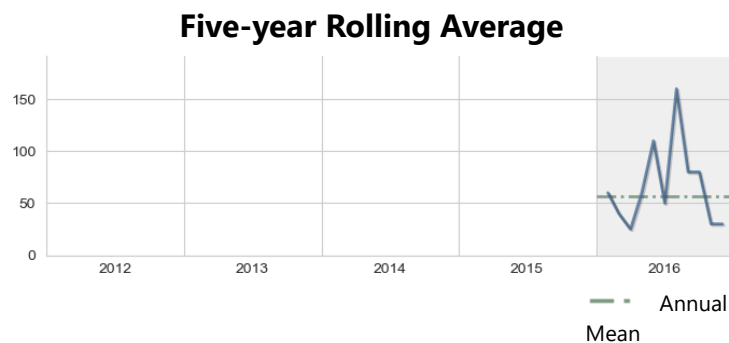
BOD, Biochemical oxygen demand

Units: mg/l	Year 2016	Historical period of record
High	2.4	7.5
Mean	1.26	1.39
Low	0.632	0.50
No. of Samples	14	322



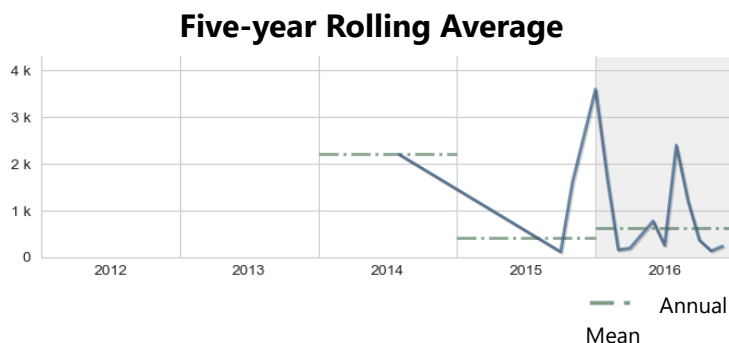
Color

Units: PCU	Year 2016	Historical period of record
High	160.0	280.0
Mean	56.37	52.45
Low	25.00	15.00
No. of Samples	11	129



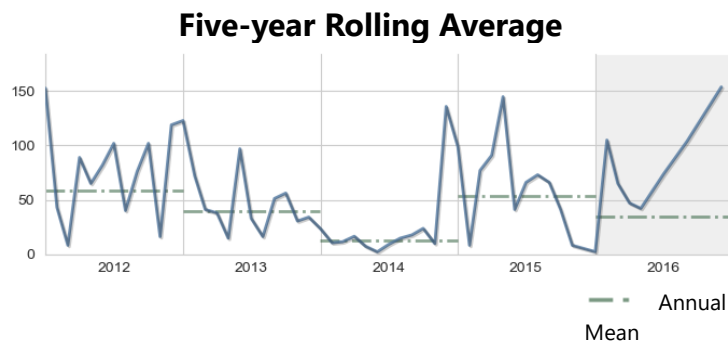
Enterococcus Group Bacteria

Units: cfu/100ml	Year 2016	Historical period of record
High	3,600.0	3,600.0
Mean	627.78	646.81
Low	130.00	110.00
No. of Samples	12	15



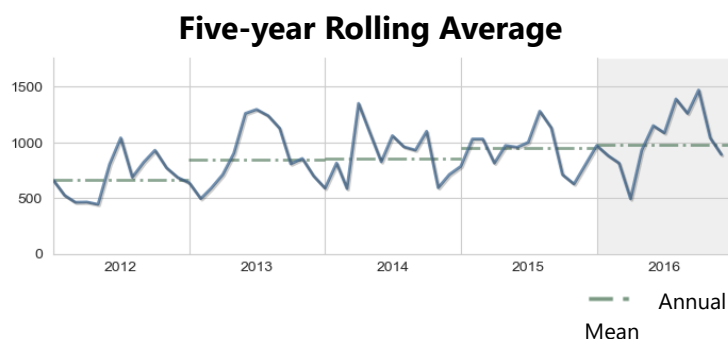
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2016	Historical period of record
High	154.0	945.0
Mean	34.63	27.37
Low	0.067	0.00
No. of Samples	9	459



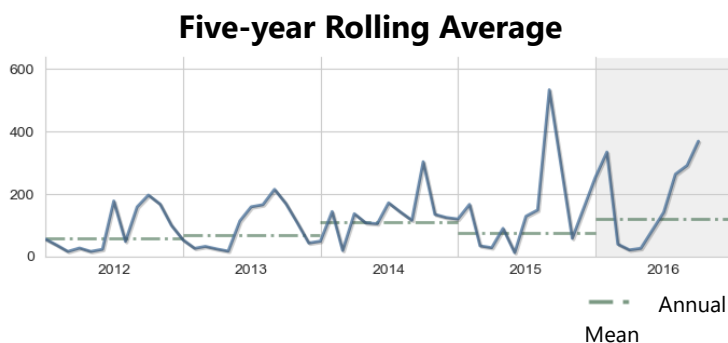
Nitrogen, Kjeldahl

Units: ug/l	Year 2016	Historical period of record
High	1,470.0	3,092.0
Mean	982.53	813.33
Low	492.00	70.00
No. of Samples	16	460



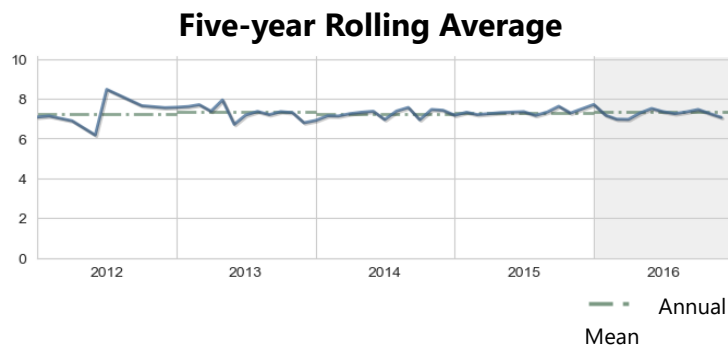
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2016	Historical period of record
High	369.0	1,140.0
Mean	119.79	76.61
Low	20.00	0.00
No. of Samples	12	408



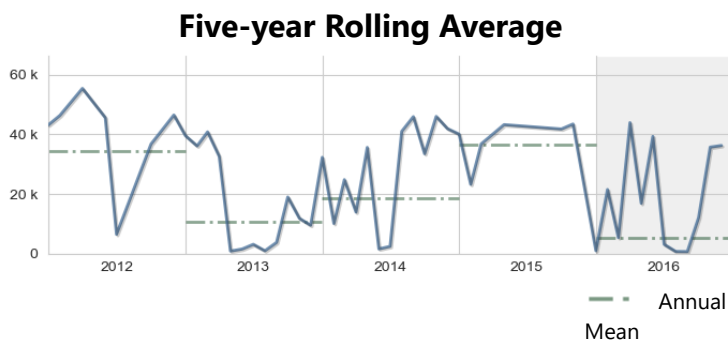
pH

Units: None	Year 2016	Historical period of record
High	7.8	8.5
Mean	7.32	7.66
Low	6.30	5.58
No. of Samples	31	1,994



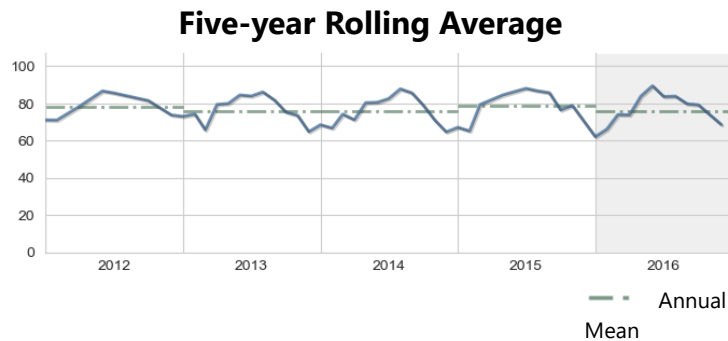
Specific conductance

Units: umho	Year 2016	Historical period of record
High	43,867.0	55,333.0
Mean	5280.11	19463.62
Low	501.00	8.083
No. of Samples	18	2,053



Temperature, water

Units: deg F	Year 2016	Historical period of record
High	89.4	91.4
Mean	75.88	75.41
Low	62.06	49.10
No. of Samples	16	1,924



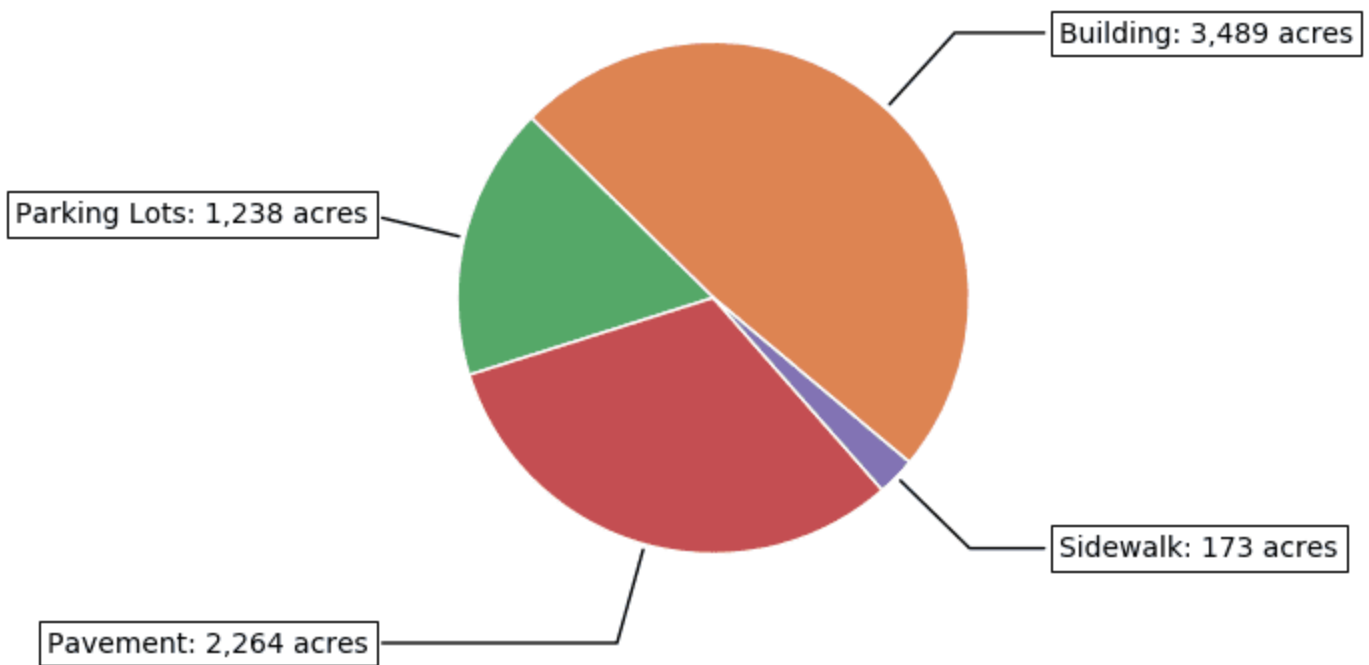
Impervious Features

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

2016 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

