

## Phillippi Creek Condition Report for 2015



### CAUTION



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

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

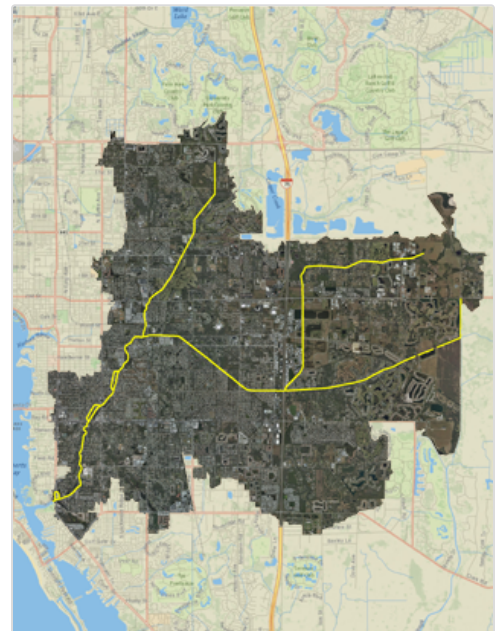
**Size:** 35,771 acres

**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.

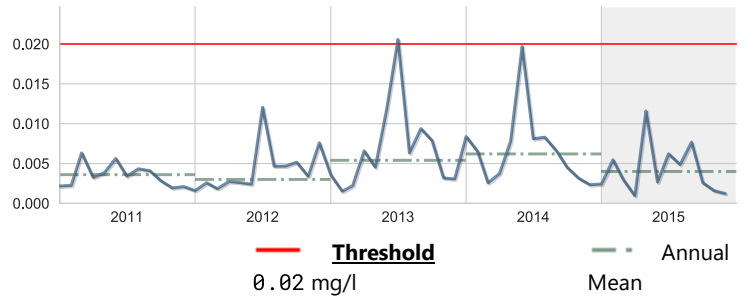


## Chlorophyll a

Score: Pass

Units: mg/l	Year 2015	Historical period of record
<b>High</b>	0.11	0.115
<b>Mean</b>	0.004	0.0039
<b>Low</b>	0.0003	0.00
<b>No. of Samples</b>	184	2,007

### Five-year Rolling Average

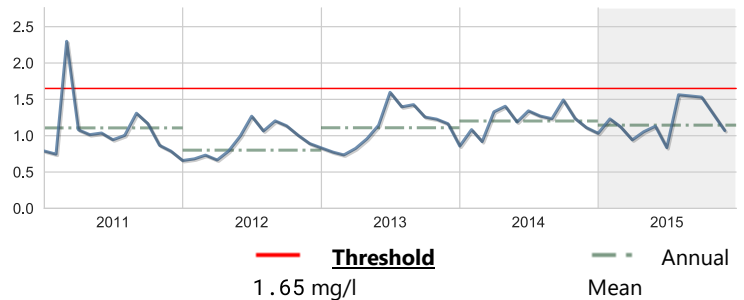


## Nitrogen, Total

Score: Pass

Units: mg/l	Year 2015	Historical period of record
<b>High</b>	1.97	19.23
<b>Mean</b>	1.1453	1.1996
<b>Low</b>	0.754	0.144
<b>No. of Samples</b>	30	1,588

### Five-year Rolling Average



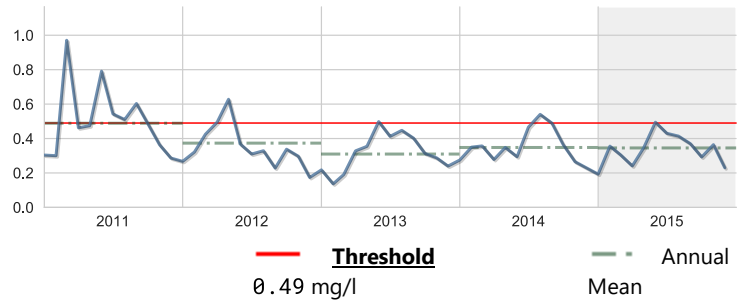


## Phosphorus, Total

Score: Pass

Units: mg/l	Year 2015	Historical period of record
<b>High</b>	1.81	7.36
<b>Mean</b>	0.3453	0.4211
<b>Low</b>	0.098	0.034
<b>No. of Samples</b>	172	2,435

### Five-year Rolling Average



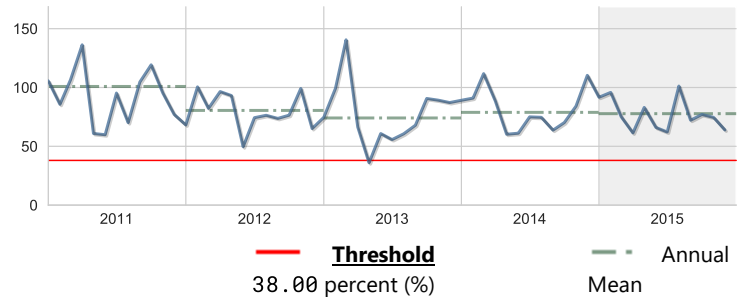
## Dissolved Oxygen Saturation

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

Score: Pass

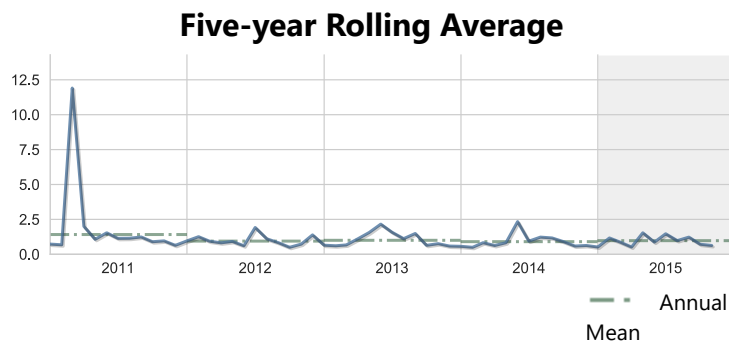
Units: percent (%)	Year 2015	Historical period of record
<b>High</b>	151.00	262.40
<b>Mean</b>	77.74	70.28
<b>Low</b>	21.5977	0.00
<b>No. of Samples</b>	288	3,246

### Five-year Rolling Average



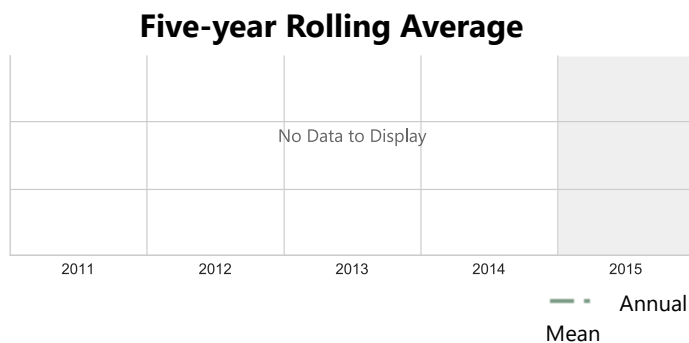
## BOD, Biochemical oxygen demand

Units: mg/l	Year 2015	Historical period of record
<b>High</b>	17.70	21.30
<b>Mean</b>	0.97	1.21
<b>Low</b>	0.50	0.071
<b>No. of Samples</b>	160	1,749



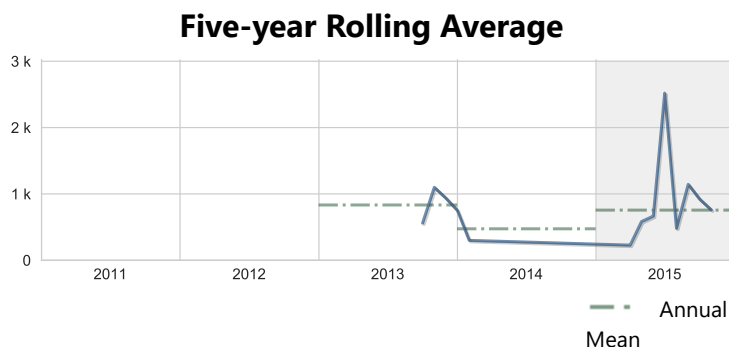
## Color

Units: PCU	Year 2015	Historical period of record
<b>High</b>		350.00
<b>Mean</b>		64.28
<b>Low</b>		0.00
<b>No. of Samples</b>	0	990



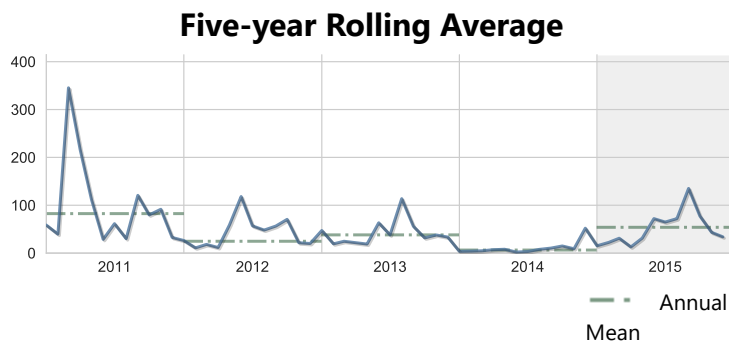
## Escherichia coli

Units: cfu/100ml	Year 2015	Historical period of record
<b>High</b>	24196.00	24196.00
<b>Mean</b>	756.05	605.62
<b>Low</b>	63.00	26.00
<b>No. of Samples</b>	79	103



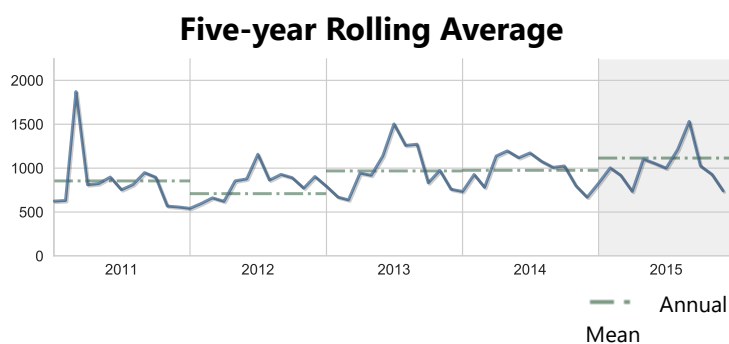
## Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2015	Historical period of record
<b>High</b>	13900.00	13900.00
<b>Mean</b>	53.92	22.62
<b>Low</b>	7.00	0.00
<b>No. of Samples</b>	172	2,777



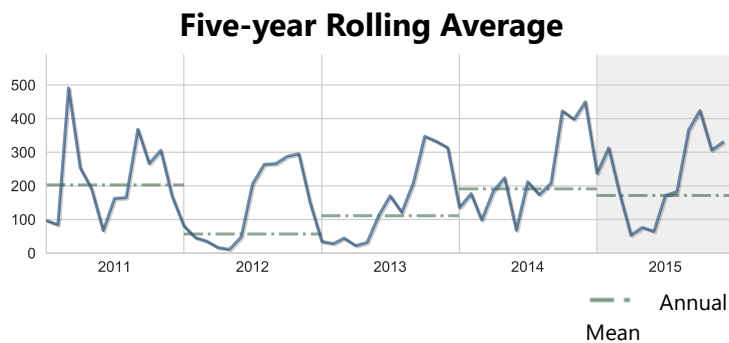
## Nitrogen, Kjeldahl

Units: ug/l	Year 2015	Historical period of record
<b>High</b>	15700.00	17560.00
<b>Mean</b>	1114.84	904.25
<b>Low</b>	617.00	2.00
<b>No. of Samples</b>	172	2,785



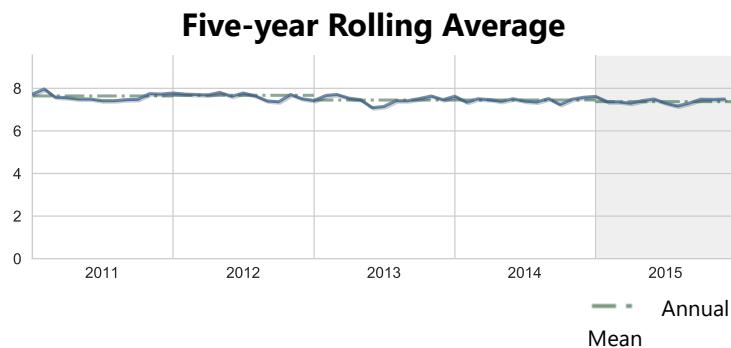
## Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2015	Historical period of record
<b>High</b>	1630.00	7556.00
<b>Mean</b>	171.45	159.3
<b>Low</b>	4.00	0.00
<b>No. of Samples</b>	159	2,399



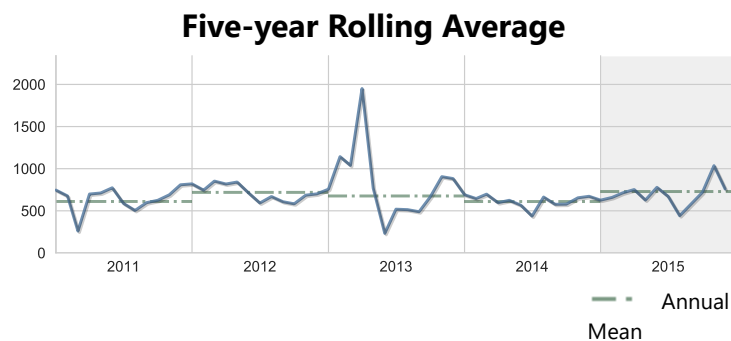
## pH

Units: None	Year 2015	Historical period of record
<b>High</b>	9.28	12.00
<b>Mean</b>	7.38	7.43
<b>Low</b>	6.56	3.90
<b>No. of Samples</b>	242	3,390



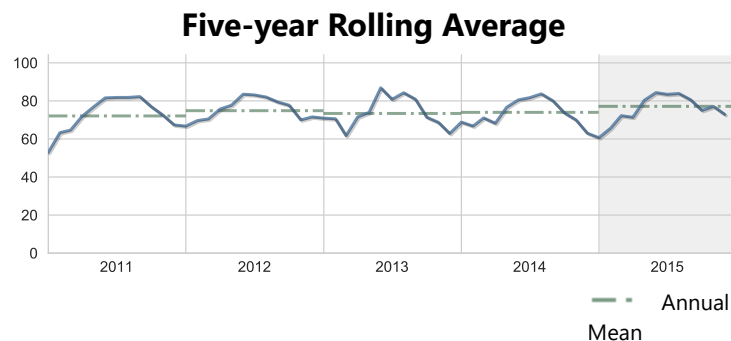
## Specific conductance

Units: umho	Year 2015	Historical period of record
<b>High</b>	24484.00	51500.00
<b>Mean</b>	728.83	591.71
<b>Low</b>	325.00	0.369
<b>No. of Samples</b>	138	4,001



## Temperature, water

Units: deg F	Year 2015	Historical period of record
<b>High</b>	92.354	139.46
<b>Mean</b>	77.14	72.68
<b>Low</b>	57.182	46.40
<b>No. of Samples</b>	180	2,808



## 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.

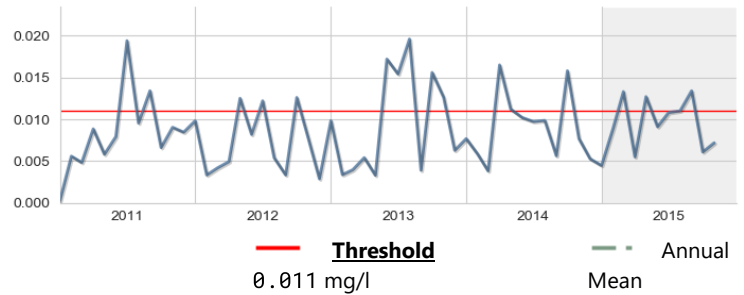


### Chlorophyll a

Score: Pass

Units: mg/l	Year 2015	Historical period of record
<b>High</b>	0.0	0.1
<b>Mean</b>	0.009	0.0078
<b>Low</b>	0.0045	0.0003
<b>No. of Samples</b>	25	351

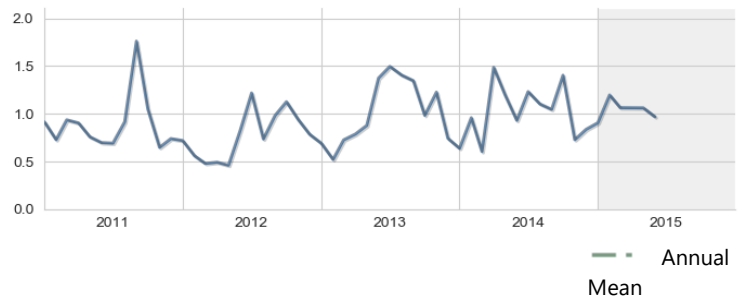
#### Five-year Rolling Average



### Nitrogen, Total

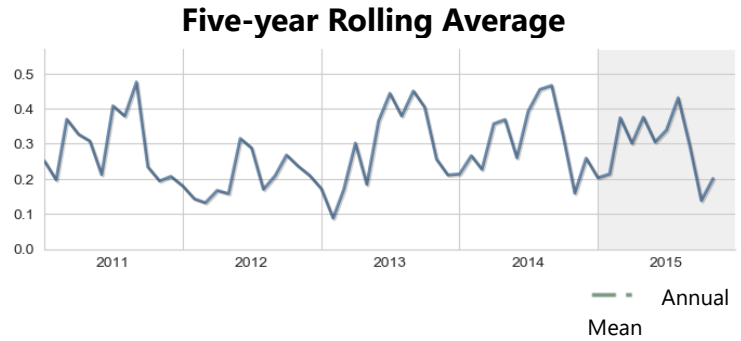
Units: mg/l	Year 2015	Historical period of record
<b>High</b>	1.2	8.9
<b>Mean</b>	1.0335	1.0185
<b>Low</b>	0.904	0.131
<b>No. of Samples</b>	5	235

#### Five-year Rolling Average



## Phosphorus, Total

Units: mg/l	Year 2015	Historical period of record
<b>High</b>	0.4	2.2
<b>Mean</b>	0.2876	0.298
<b>Low</b>	0.138	0.084
<b>No. of Samples</b>	25	399

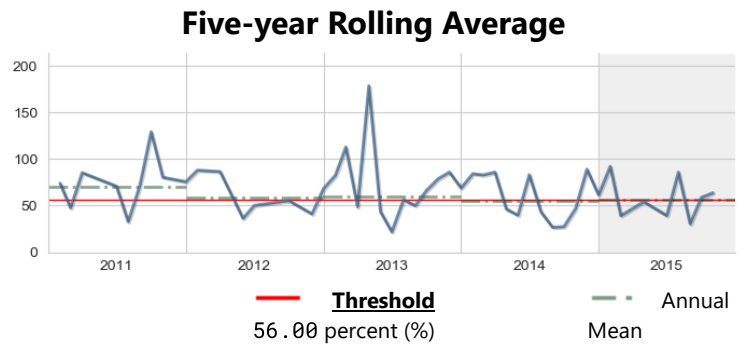


## Dissolved Oxygen Saturation

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

Score: Caution

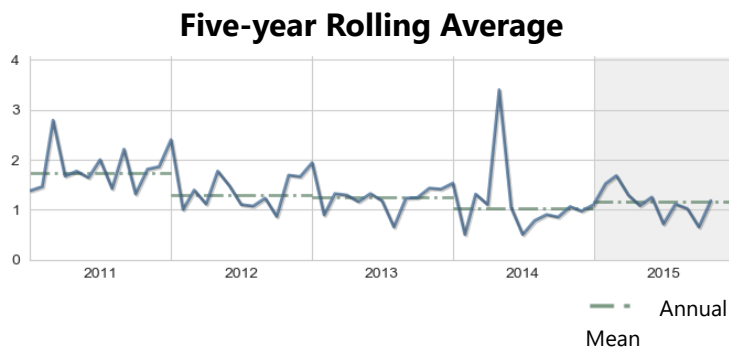
Units: percent (%)	Year 2015	Historical period of record
<b>High</b>	92.3	210.0
<b>Mean</b>	55.11	63.07
<b>Low</b>	30.40	8.6027
<b>No. of Samples</b>	36	448





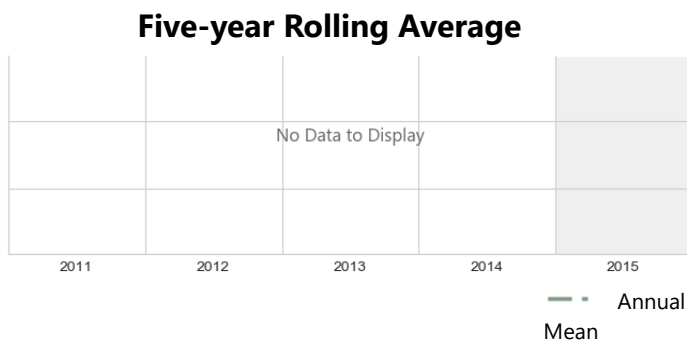
## BOD, Biochemical oxygen demand

Units: mg/l	Year 2015	Historical period of record
<b>High</b>	1.7	7.5
<b>Mean</b>	1.16	1.39
<b>Low</b>	0.652	0.50
<b>No. of Samples</b>	25	308



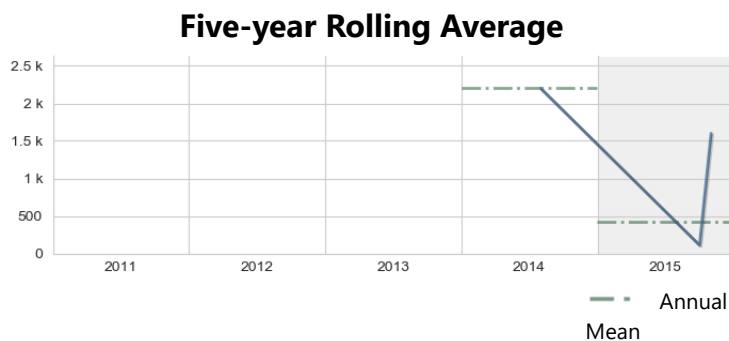
## Color

Units: PCU	Year 2015	Historical period of record
<b>High</b>		280.0
<b>Mean</b>		52.1
<b>Low</b>		15.00
<b>No. of Samples</b>	0	118



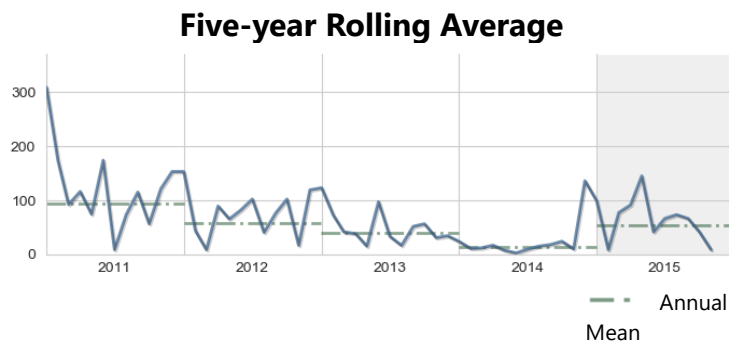
## Enterococcus Group Bacteria

Units: cfu/100ml	Year 2015	Historical period of record
<b>High</b>	1,600.0	2,200.0
<b>Mean</b>	419.52	728.86
<b>Low</b>	110.00	110.00
<b>No. of Samples</b>	2	3



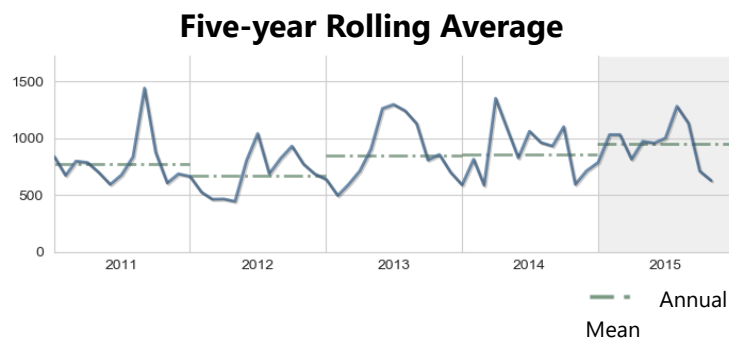
## Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2015	Historical period of record
<b>High</b>	145.0	945.0
<b>Mean</b>	53.05	27.24
<b>Low</b>	8.00	0.00
<b>No. of Samples</b>	25	450



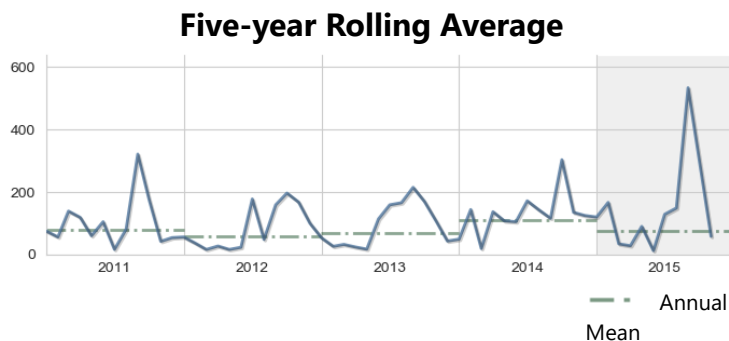
## Nitrogen, Kjeldahl

Units: ug/l	Year 2015	Historical period of record
<b>High</b>	1,280.0	3,092.0
<b>Mean</b>	951.01	807.81
<b>Low</b>	626.00	70.00
<b>No. of Samples</b>	25	444



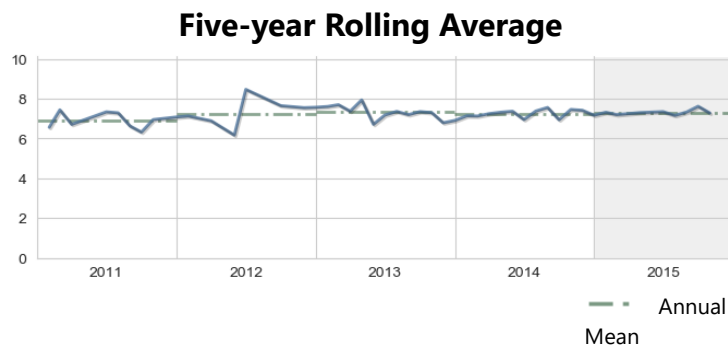
## Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2015	Historical period of record
<b>High</b>	534.0	1,140.0
<b>Mean</b>	75.3	75.57
<b>Low</b>	11.00	0.00
<b>No. of Samples</b>	24	396



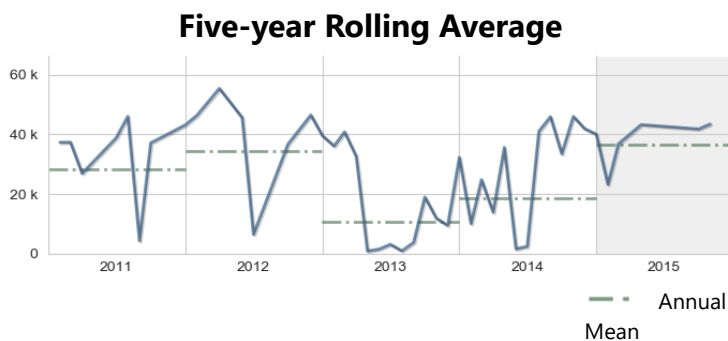
## pH

Units: None	Year 2015	Historical period of record
<b>High</b>	7.8	8.5
<b>Mean</b>	7.3	7.67
<b>Low</b>	7.05	5.58
<b>No. of Samples</b>	24	1,963



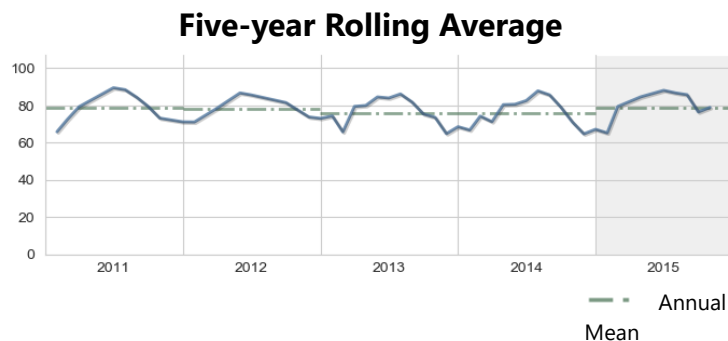
## Specific conductance

Units: umho	Year 2015	Historical period of record
<b>High</b>	43,393.0	55,333.0
<b>Mean</b>	36602.85	19689.52
<b>Low</b>	23148.00	8.083
<b>No. of Samples</b>	16	2,035



## Temperature, water

Units: deg F	Year 2015	Historical period of record
<b>High</b>	88.0	91.4
<b>Mean</b>	78.68	75.41
<b>Low</b>	65.138	49.10
<b>No. of Samples</b>	18	1,908

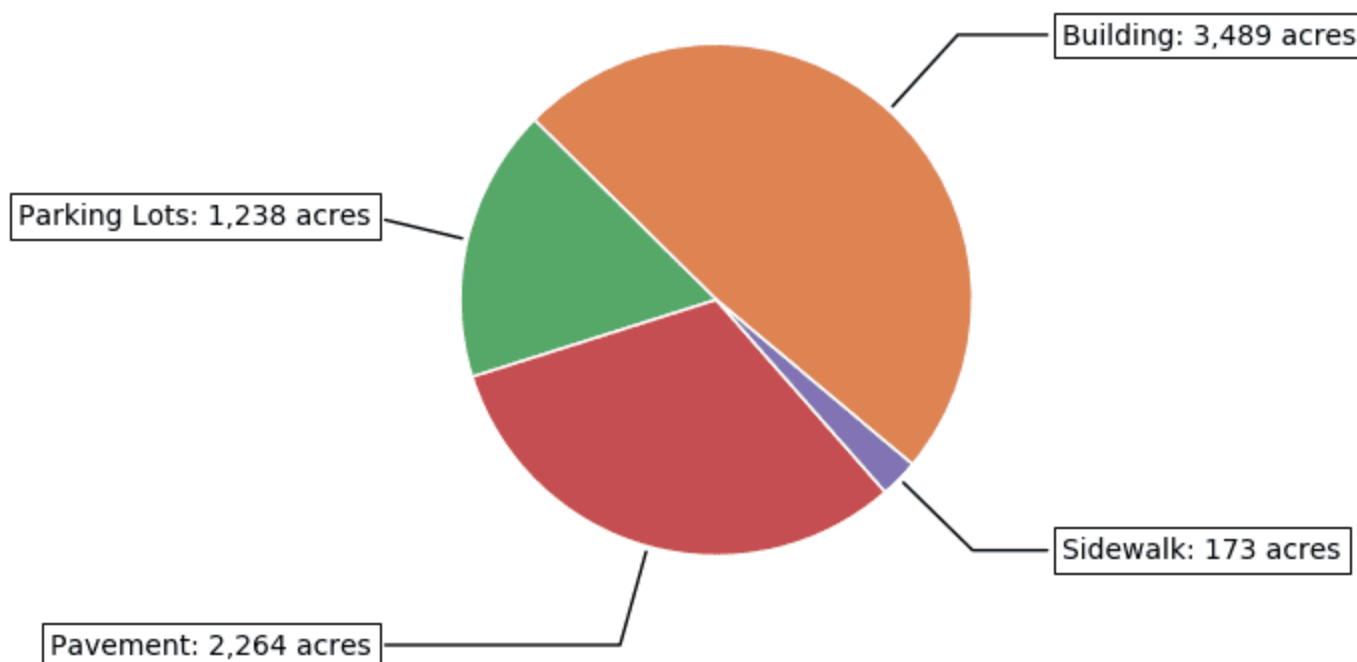


## Impervious Features

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.

**Acreeage and Percentage within each Land Use / Land Cover Category for Phillippi Creek Basin**

Land Use Classification	1990	1995	1999	2005	2011	2014	2017	Trend
<b>Urban &amp; Built-up</b>	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%	
<b>Agriculture</b>	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%	
<b>Rangeland</b>	523 1.5%	308 0.9%	262 0.7%	142 0.4%	147 0.4%	330 0.9%	129 0.4%	
<b>Upland Forests</b>	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%	
<b>Water</b>	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%	
<b>Wetlands</b>	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%	
<b>Barren Land</b>	19 0.1%	106 0.3%	634 1.8%	9 0%	99 0.3%	95 0.3%	100 0.3%	
<b>Transportation and Utilities</b>	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

