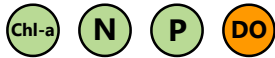


Phillippi Creek Condition Report for 2014



CAUTION



3 out of 4
indicators
were rated as
PASS.

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

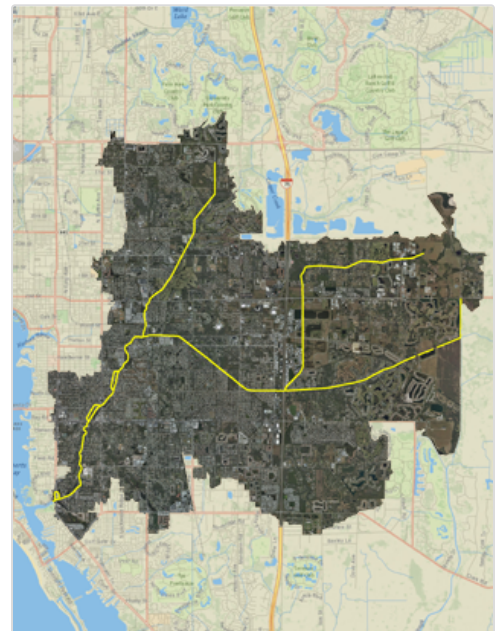
Size: 35,771 acres

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.

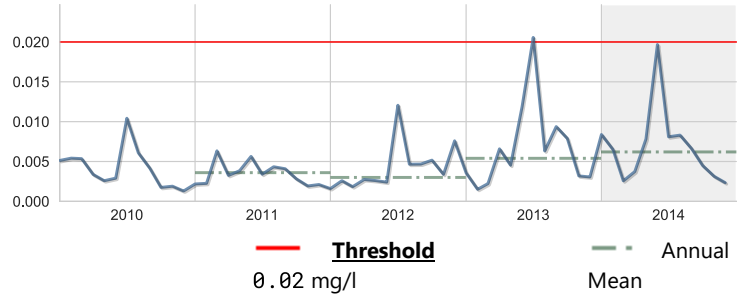


Chlorophyll a

Score: Pass

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 0.0746 | 0.115 |
| Mean | 0.0062 | 0.0039 |
| Low | 0.0003 | 0.00 |
| No. of Samples | 176 | 1,823 |

Five-year Rolling Average

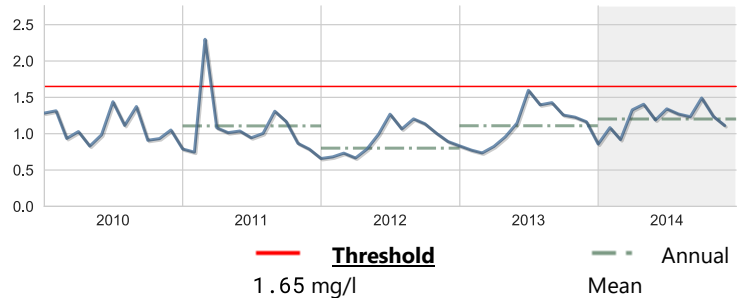


Nitrogen, Total

Score: Pass

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 1.832 | 19.23 |
| Mean | 1.2022 | 1.2007 |
| Low | 0.729 | 0.144 |
| No. of Samples | 72 | 1,558 |

Five-year Rolling Average



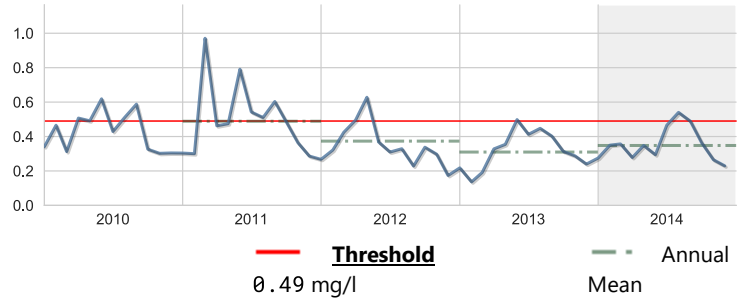


Phosphorus, Total

Score: Pass

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 0.932 | 7.36 |
| Mean | 0.348 | 0.4275 |
| Low | 0.134 | 0.034 |
| No. of Samples | 165 | 2,263 |

Five-year Rolling Average



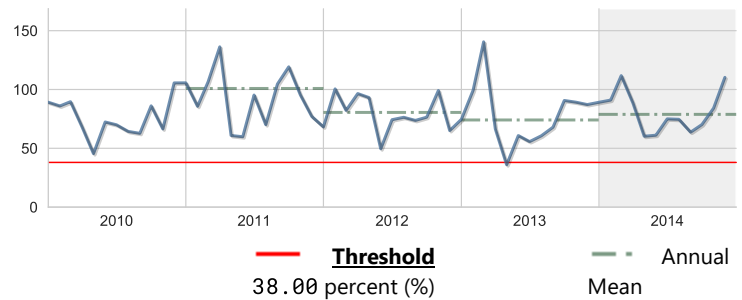
Dissolved Oxygen Saturation

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

Score: Pass

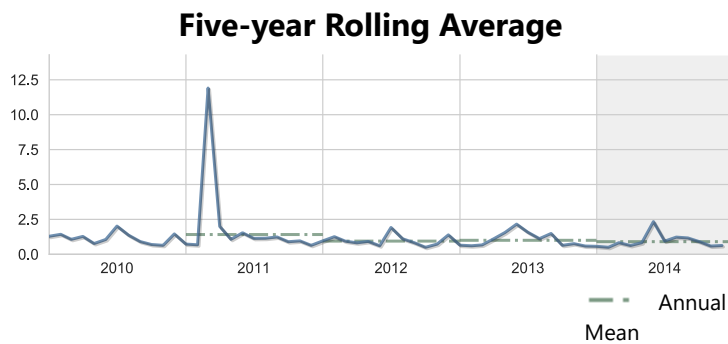
| Units: percent (%) | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 145.80 | 262.40 |
| Mean | 78.85 | 69.6 |
| Low | 28.6687 | 0.00 |
| No. of Samples | 251 | 2,958 |

Five-year Rolling Average



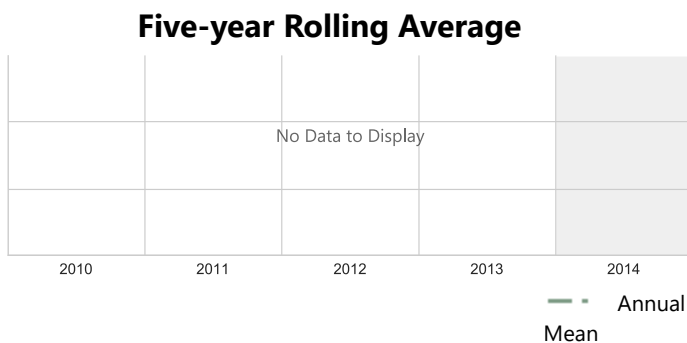
BOD, Biochemical oxygen demand

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 4.17 | 21.30 |
| Mean | 0.9 | 1.23 |
| Low | 0.50 | 0.071 |
| No. of Samples | 144 | 1,589 |



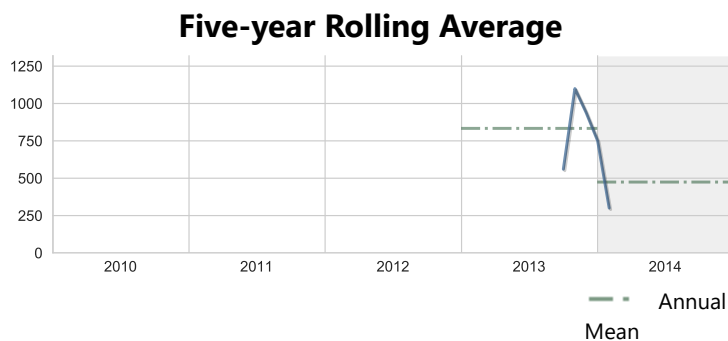
Color

| Units: PCU | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | | 350.00 |
| Mean | | 64.28 |
| Low | | 0.00 |
| No. of Samples | 0 | 990 |



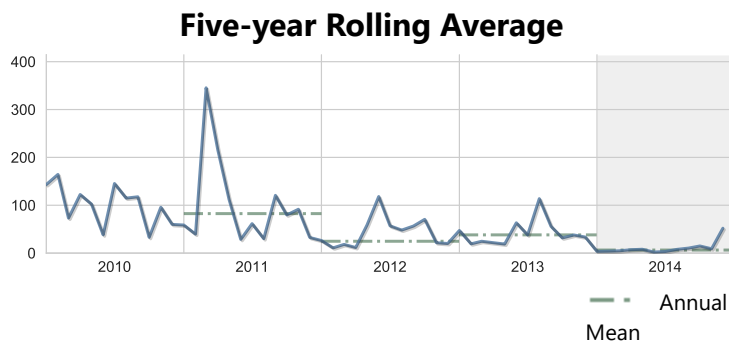
Escherichia coli

| Units: cfu/100ml | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 750.00 | 3400.00 |
| Mean | 474.34 | 291.77 |
| Low | 300.00 | 26.00 |
| No. of Samples | 2 | 24 |



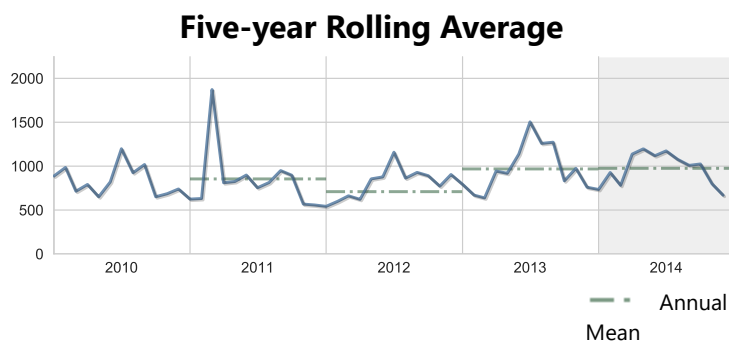
Nitrogen, Ammonia + Ammonium as N

| Units: ug/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 136.00 | 6696.00 |
| Mean | 6.41 | 21.36 |
| Low | 0.008 | 0.00 |
| No. of Samples | 199 | 2,605 |



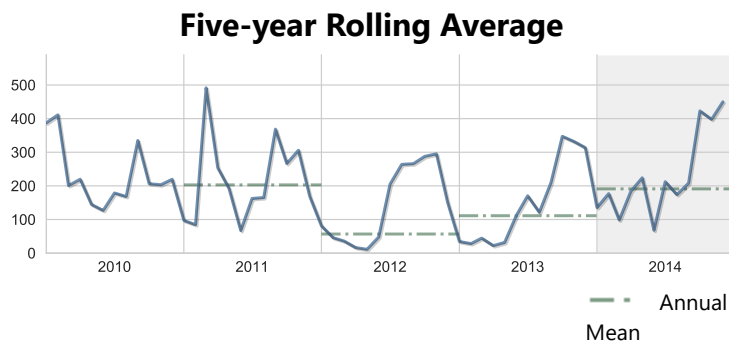
Nitrogen, Kjeldahl

| Units: ug/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 1720.00 | 17560.00 |
| Mean | 975.35 | 891.87 |
| Low | 555.00 | 2.00 |
| No. of Samples | 165 | 2,613 |



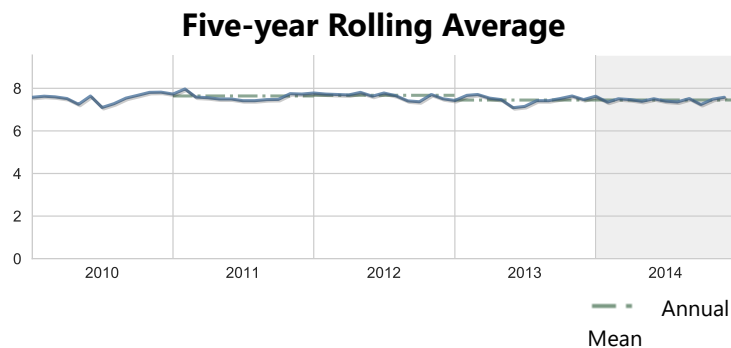
Nitrogen, Nitrite + Nitrate as N

| Units: ug/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 687.00 | 7556.00 |
| Mean | 191.05 | 158.47 |
| Low | 34.00 | 0.00 |
| No. of Samples | 165 | 2,240 |



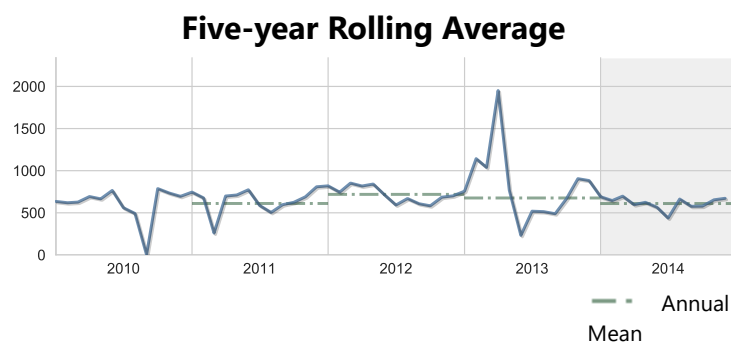
pH

| Units: None | Year 2014 | Historical period of record |
|-----------------------|--------------|--------------------------------|
| High | 7.90 | 12.00 |
| Mean | 7.45 | 7.44 |
| Low | 6.40 | 3.90 |
| No. of Samples | 186 | 3,148 |



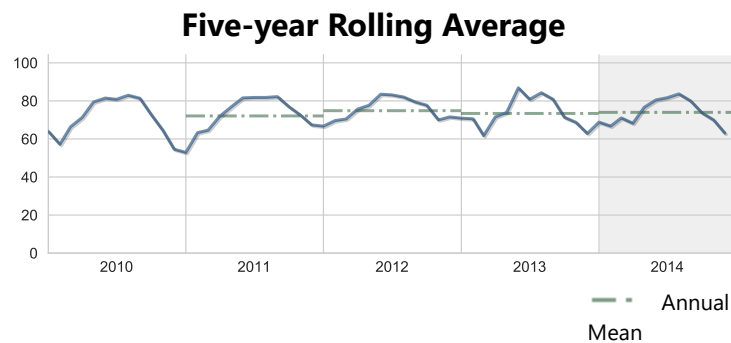
Specific conductance

| Units: umho | Year 2014 | Historical period of record |
|---------------------------|--------------|-----------------------------------|
| High | 860.00 | 51500.00 |
| Mean | 610.12 | 587.32 |
| Low | 347.00 | 0.369 |
| No. of Samples | 228 | 3,863 |



Temperature, water

| Units: deg F | Year 2014 | Historical period of record |
|-----------------------|--------------|--------------------------------|
| High | 87.08 | 139.46 |
| Mean | 73.98 | 72.39 |
| Low | 60.62 | 46.40 |
| No. of Samples | 165 | 2,628 |



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.

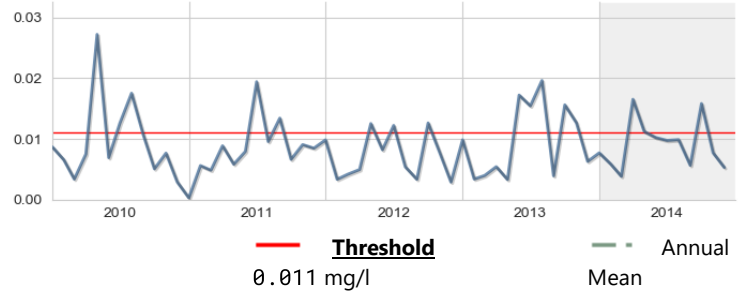


Chlorophyll a

Score: Pass

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 0.0 | 0.1 |
| Mean | 0.0084 | 0.0077 |
| Low | 0.0038 | 0.0003 |
| No. of Samples | 47 | 326 |

Five-year Rolling Average

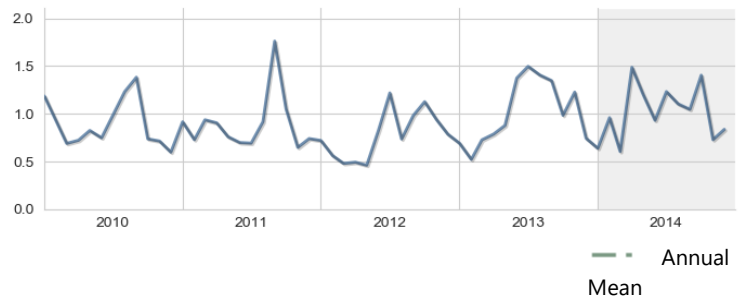


Nitrogen, Total

Score: Pass

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 1.5 | 8.9 |
| Mean | 0.9626 | 1.0182 |
| Low | 0.602 | 0.131 |
| No. of Samples | 19 | 230 |

Five-year Rolling Average



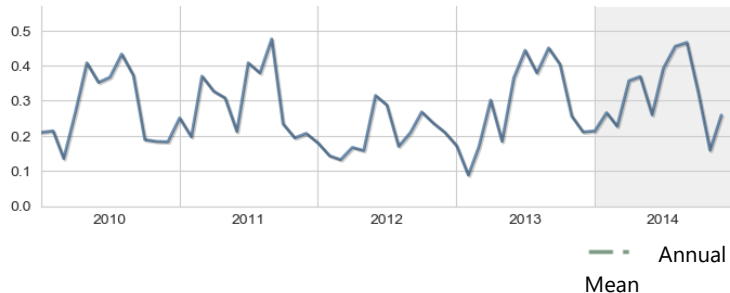


Phosphorus, Total

Score: Pass

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 0.5 | 2.2 |
| Mean | 0.299 | 0.2987 |
| Low | 0.159 | 0.084 |
| No. of Samples | 47 | 374 |

Five-year Rolling Average



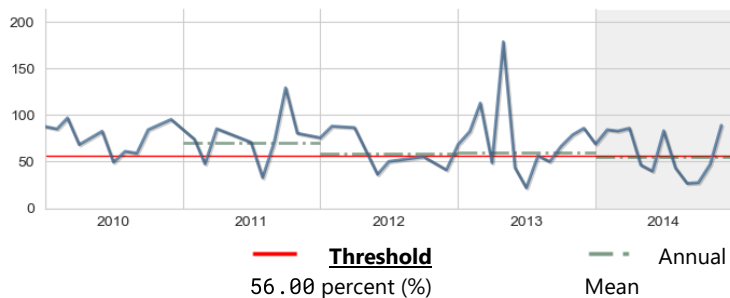
Dissolved Oxygen Saturation

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

Score: Caution

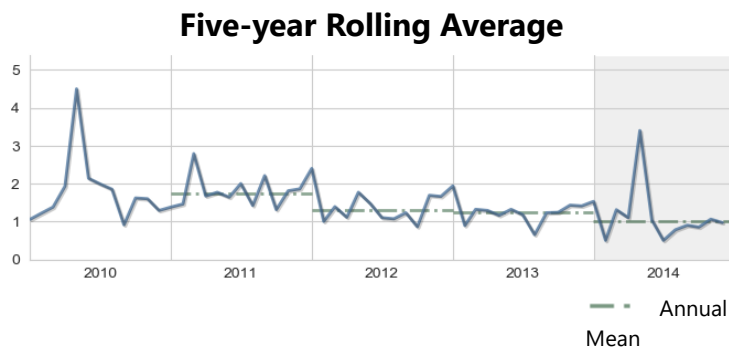
| Units: percent (%) | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 89.2 | 210.0 |
| Mean | 55.27 | 63.82 |
| Low | 26.4901 | 8.6027 |
| No. of Samples | 59 | 412 |

Five-year Rolling Average



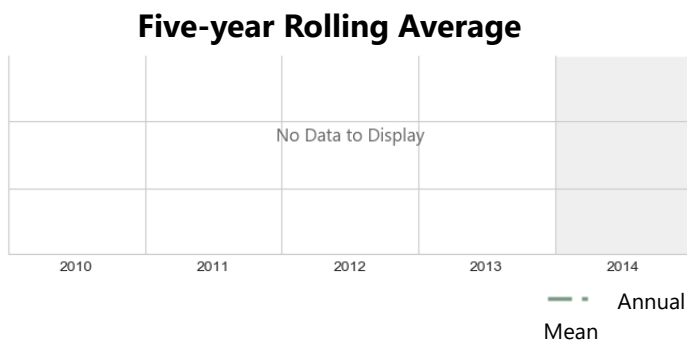
BOD, Biochemical oxygen demand

| Units: mg/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 3.4 | 7.5 |
| Mean | 1.02 | 1.41 |
| Low | 0.50 | 0.50 |
| No. of Samples | 47 | 283 |



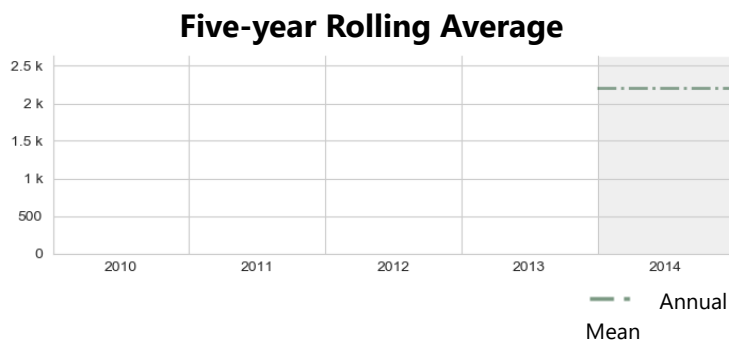
Color

| Units: PCU | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | | 280.0 |
| Mean | | 52.1 |
| Low | | 15.00 |
| No. of Samples | 0 | 118 |



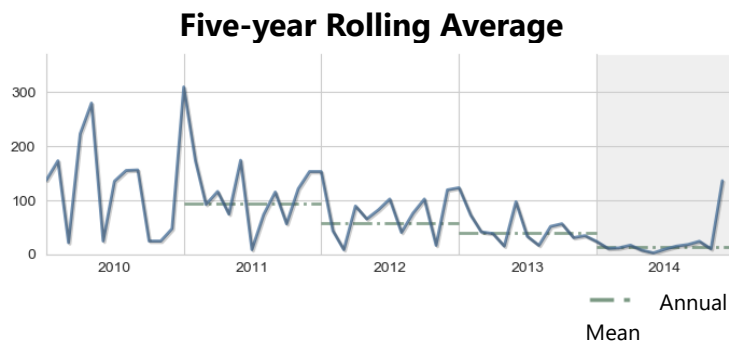
Enterococcus Group Bacteria

| Units: cfu/100ml | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 2,200.0 | 2,200.0 |
| Mean | 2200.0 | 2200.0 |
| Low | 2200.00 | 2200.00 |
| No. of Samples | 1 | 1 |



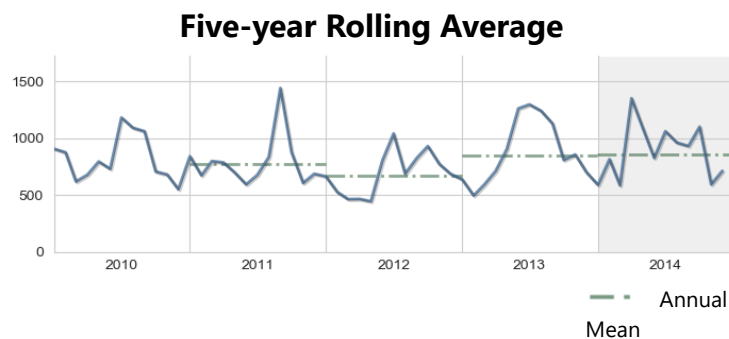
Nitrogen, Ammonia + Ammonium as N

| Units: ug/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 136.0 | 945.0 |
| Mean | 12.73 | 26.19 |
| Low | 0.008 | 0.00 |
| No. of Samples | 56 | 425 |



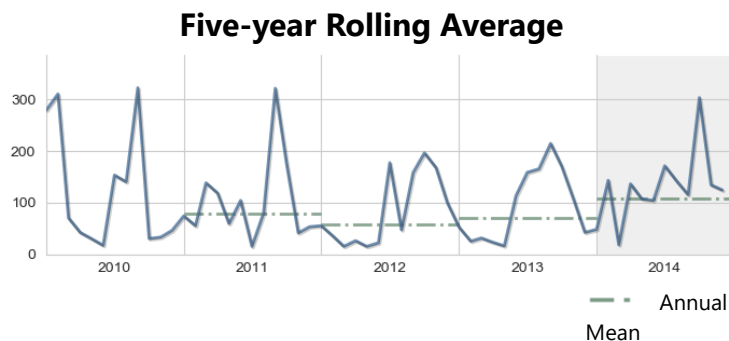
Nitrogen, Kjeldahl

| Units: ug/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 1,350.0 | 3,092.0 |
| Mean | 856.46 | 799.98 |
| Low | 584.00 | 70.00 |
| No. of Samples | 47 | 419 |



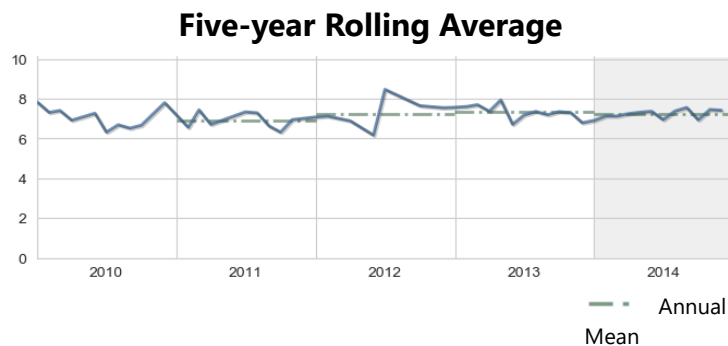
Nitrogen, Nitrite + Nitrate as N

| Units: ug/l | Year 2014 | Historical period of record |
|-----------------------|-----------|-----------------------------|
| High | 303.0 | 1,140.0 |
| Mean | 108.08 | 75.59 |
| Low | 18.00 | 0.00 |
| No. of Samples | 47 | 372 |



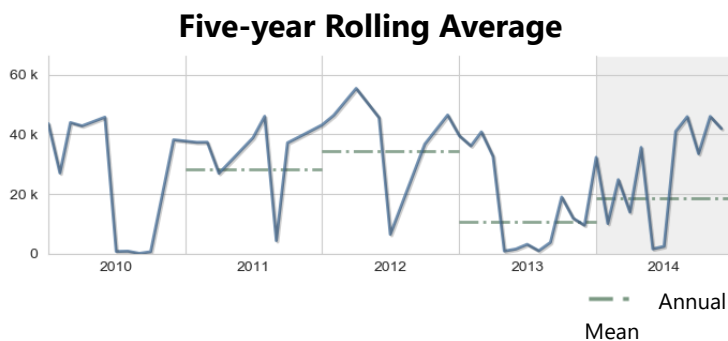
pH

| Units: None | Year 2014 | Historical period of record |
|-----------------------|--------------|--------------------------------|
| High | 7.6 | 8.5 |
| Mean | 7.23 | 7.67 |
| Low | 6.91 | 5.58 |
| No. of Samples | 44 | 1,939 |



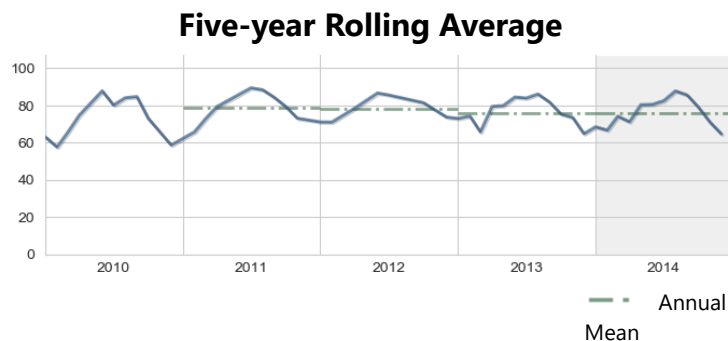
Specific conductance

| Units: umho | Year 2014 | Historical period of record |
|-----------------------|--------------|-----------------------------------|
| High | 45,932.0 | 55,333.0 |
| Mean | 18354.72 | 19593.01 |
| Low | 1503.00 | 8.083 |
| No. of Samples | 47 | 2,019 |



Temperature, water

| Units: deg F | Year 2014 | Historical period of record |
|-----------------------|--------------|-----------------------------------|
| High | 87.7 | 91.4 |
| Mean | 75.84 | 75.38 |
| Low | 64.616 | 49.10 |
| No. of Samples | 35 | 1,890 |

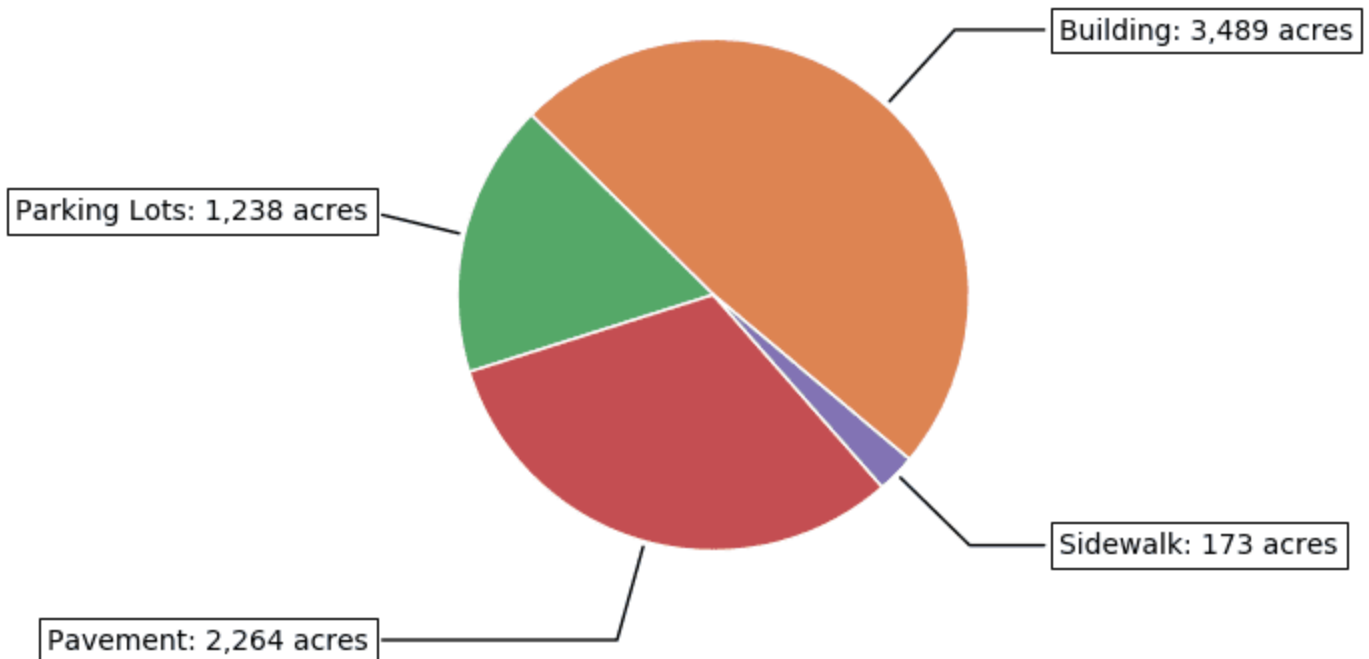


Impervious Features

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

| 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

