North Creek Condition Report for 2023

CAUTION

Chl-a N P DO

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

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

Size: 2,327 acres
Location: Central Sarasota County
Discharges into: Little Sarasota Bay

For more information, please see: **Little Sarasota Bay Water Quality Management Plan (2012)**

View county-wide water quality trends »

North Creek



Water Chemistry Ratings | Freshwater Portion of the Creek

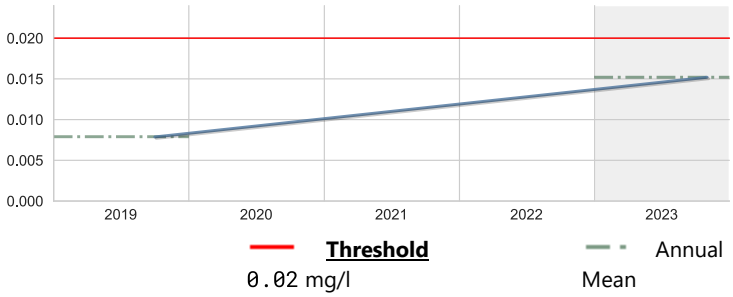
Creek Conditions Ratings are based on comparing nitrogen, phosphorus, chlorophyll and dissolved oxygen to water quality guidelines or regulations. Florida law defines a maximum allowable concentration of nitrogen, phosphorus, and chlorophyll *a*, and a minimum allowable concentration of dissolved oxygen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

Chlorophyll a

Score: Pass

Units: mg/l	Year 2023	Historical period of record
High	0.021	0.032
Mean	0.0152	0.0032
Low	0.011	0.0007
No. of Samples	2	45

Five-year Rolling Average

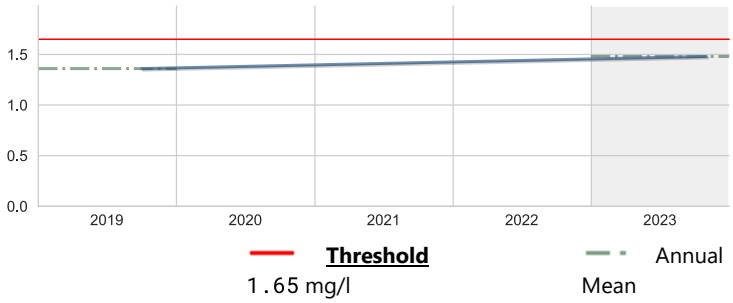


Nitrogen, Total

Score: Pass

Units: mg/l	Year 2023	Historical period of record
High	1.48	3.71
Mean	1.48	1.4633
Low	1.48	1.08
No. of Samples	1	27

Five-year Rolling Average

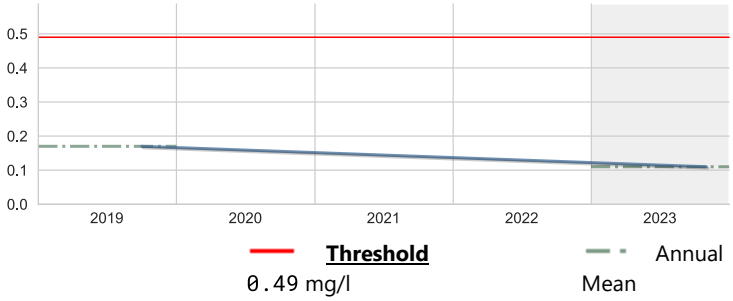


P Phosphorus, Total

Score: Pass

Units: mg/l	Year 2023	Historical period of record
High	0.11	2.70
Mean	0.11	0.1685
Low	0.11	0.041
No. of Samples	1	31

Five-year Rolling Average



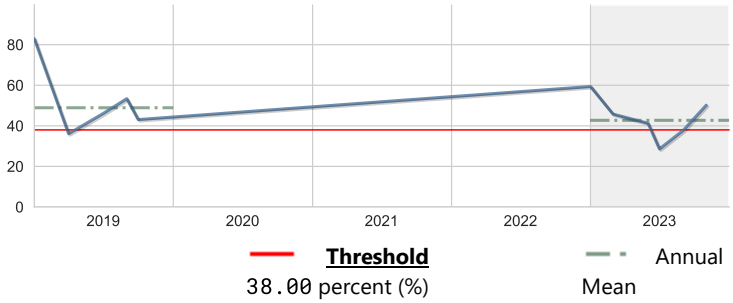
DO Dissolved Oxygen Saturation

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

Score: Pass

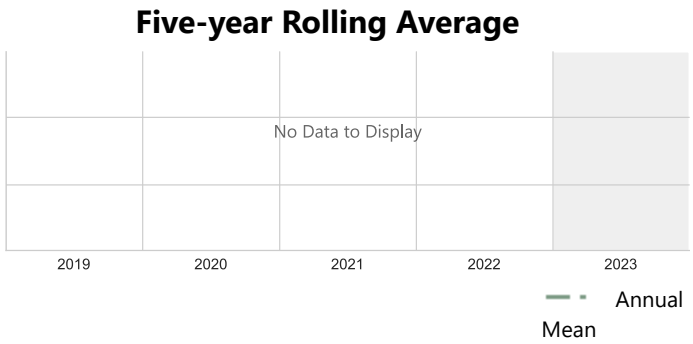
Units: percent (%)	Year 2023	Historical period of record
High	59.40	117.00
Mean	42.72	44.21
Low	28.60	10.70
No. of Samples	6	63

Five-year Rolling Average



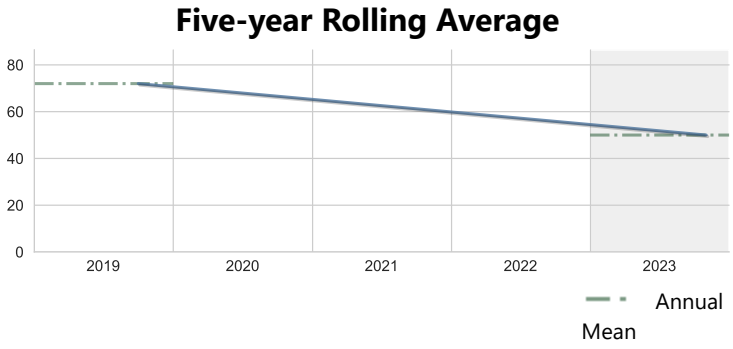
BOD, Biochemical oxygen demand

Units: mg/l	Year 2023	Historical period of record
High		1.70
Mean		1.54
Low		1.40
No. of Samples	0	2



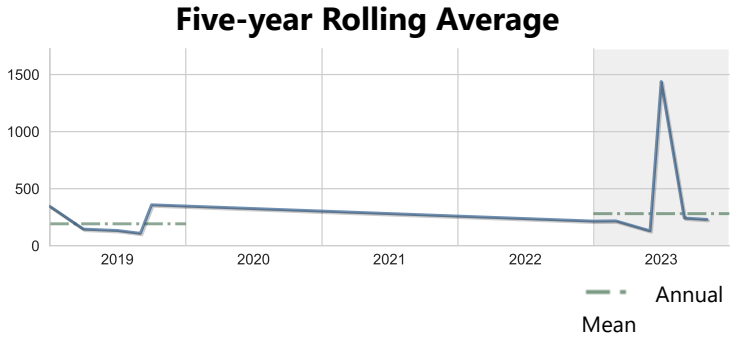
Color

Units: PCU	Year 2023	Historical period of record
High	50.00	250.00
Mean	50.0	84.33
Low	50.00	38.00
No. of Samples	1	28



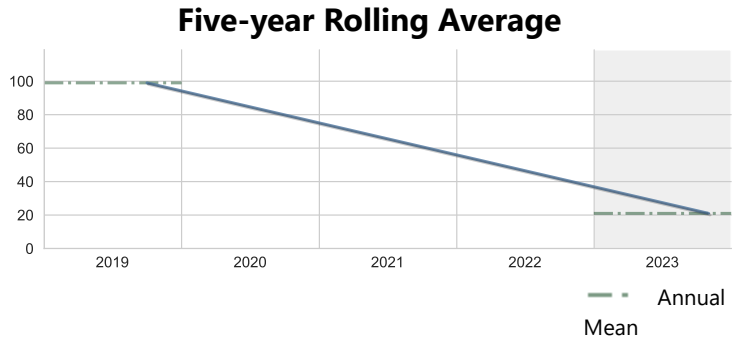
Escherichia coli

Units: cfu/100ml	Year 2023	Historical period of record
High	1439.00	1439.00
Mean	281.56	218.1
Low	131.00	74.00
No. of Samples	6	19



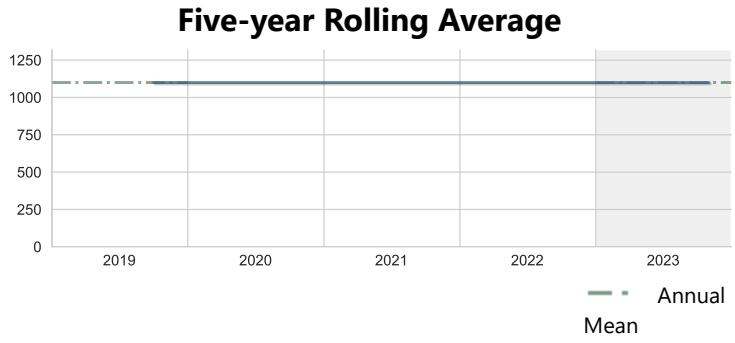
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2023	Historical period of record
High	21.00	460.00
Mean	21.0	65.86
Low	21.00	18.00
No. of Samples	1	28



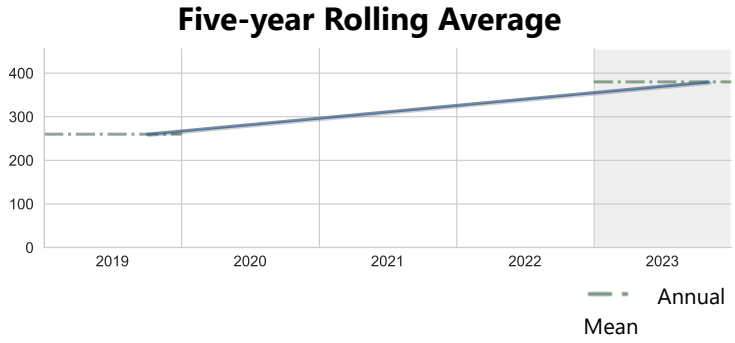
Nitrogen, Kjeldahl

Units: ug/l	Year 2023	Historical period of record
High	1100.00	27000.00
Mean	1100.0	1350.72
Low	1100.00	890.00
No. of Samples	1	28



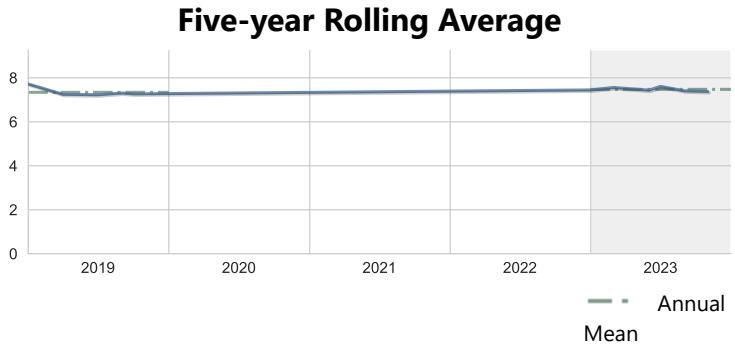
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2023	Historical period of record
High	380.00	520.00
Mean	380.0	119.97
Low	380.00	4.00
No. of Samples	1	28



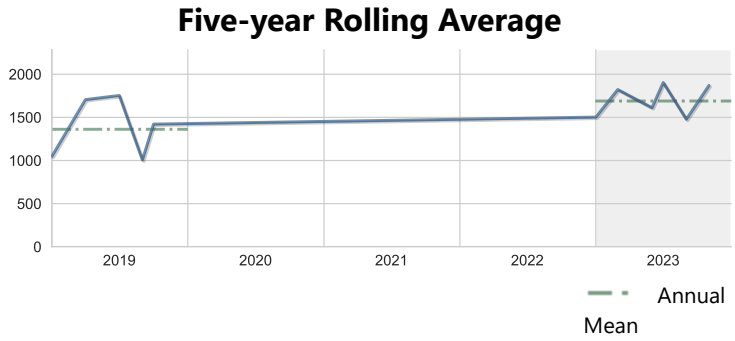
pH

Units: None	Year 2023	Historical period of record
High	7.61	7.72
Mean	7.47	7.31
Low	7.38	6.80
No. of Samples	6	63



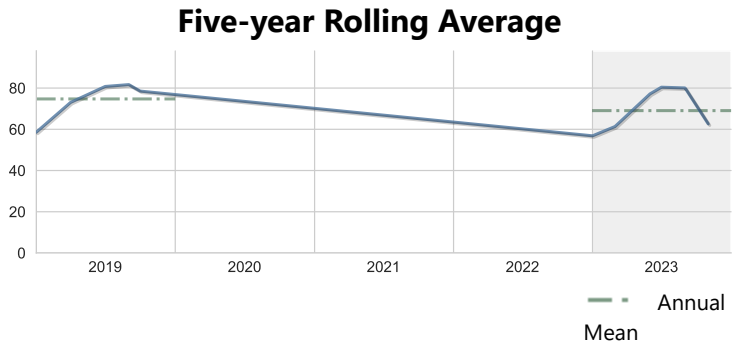
Specific conductance

Units: umho	Year 2023	Historical period of record
High	1904.00	24590.00
Mean	1689.48	1343.65
Low	1478.00	328.00
No. of Samples	6	63



Temperature, water

Units: deg F	Year 2023	Historical period of record
High	80.42	85.028
Mean	69.06	74.97
Low	56.84	55.94
No. of Samples	6	63



Water Chemistry Ratings | Tidal Portion of the Creek

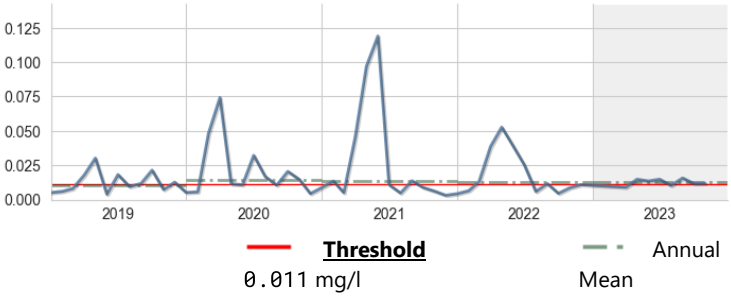
Creek Conditions Ratings are based on comparing nitrogen, phosphorus, chlorophyll and dissolved oxygen to water quality guidelines or regulations. Florida law defines a maximum allowable concentration of chlorophyll *a* and a minimum allowable concentration of dissolved oxygen in these streams. Florida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

Chlorophyll a

Score: Caution

Units: mg/l	Year 2023	Historical period of record
High	0.0	0.2
Mean	0.0125	0.0125
Low	0.009	0.0009
No. of Samples	8	308

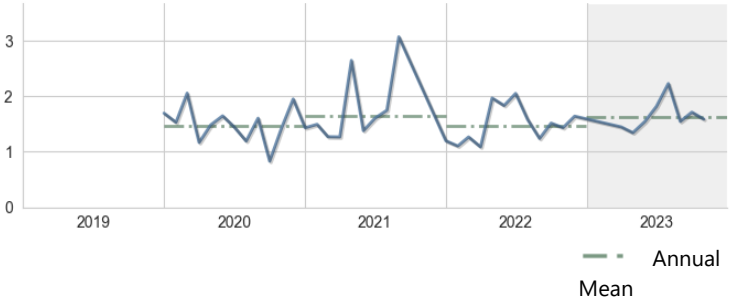
Five-year Rolling Average



Nitrogen, Total

Units: mg/l	Year 2023	Historical period of record
High	2.2	4.0
Mean	1.633	1.3181
Low	1.341	0.002
No. of Samples	8	283

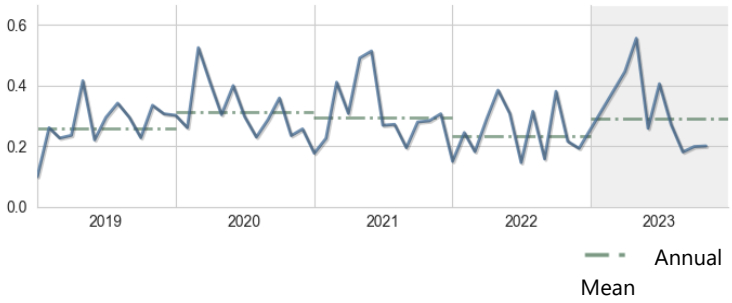
Five-year Rolling Average



Phosphorus, Total

Units: mg/l	Year 2023	Historical period of record
High	0.6	0.9
Mean	0.2897	0.2822
Low	0.18	0.08
No. of Samples	8	314

Five-year Rolling Average



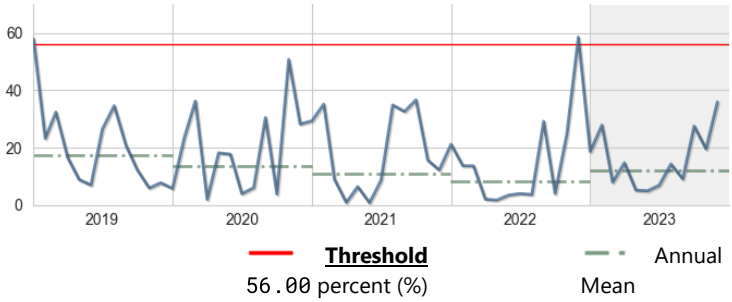
DO Dissolved Oxygen Saturation

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

Score: Caution

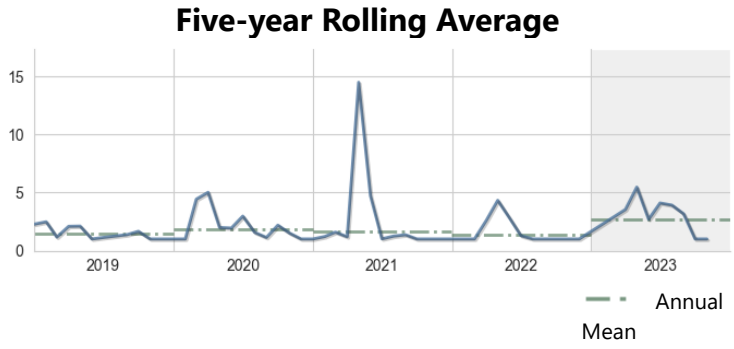
Units: percent (%)	Year 2023	Historical period of record
High	44.3	157.4
Mean	11.84	26.5
Low	4.3022	0.70
No. of Samples	18	396

Five-year Rolling Average



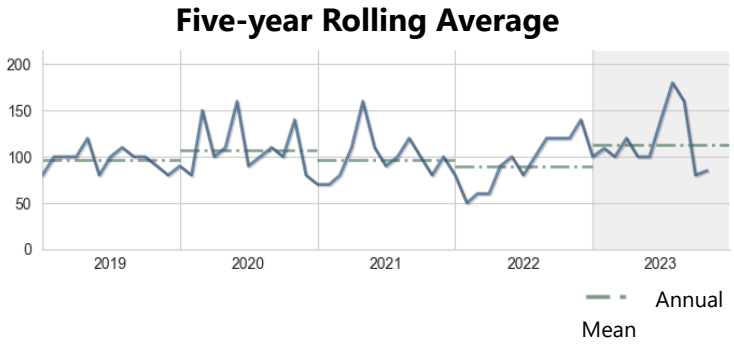
BOD, Biochemical oxygen demand

Units: mg/l	Year 2023	Historical period of record
High	5.5	14.5
Mean	2.68	1.76
Low	1.00	0.50
No. of Samples	8	250



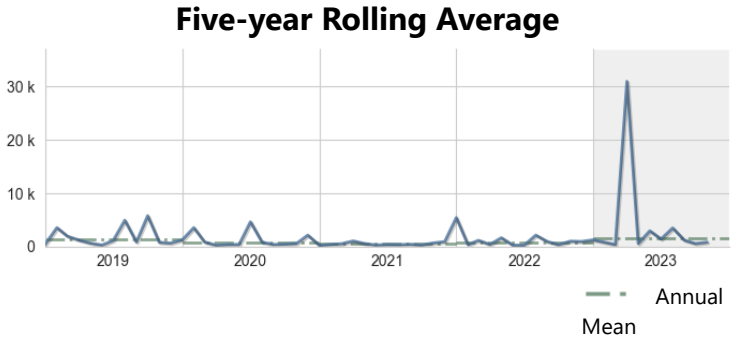
Color

Units: PCU	Year 2023	Historical period of record
High	180.0	300.0
Mean	112.31	82.53
Low	80.00	5.00
No. of Samples	11	404



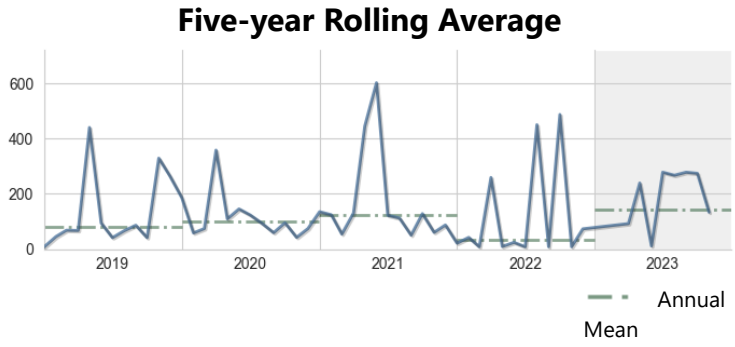
Enterococcus Group Bacteria

Units: cfu/100ml	Year 2023	Historical period of record
High	31,000.0	31,000.0
Mean	1425.05	929.47
Low	336.00	63.00
No. of Samples	14	155



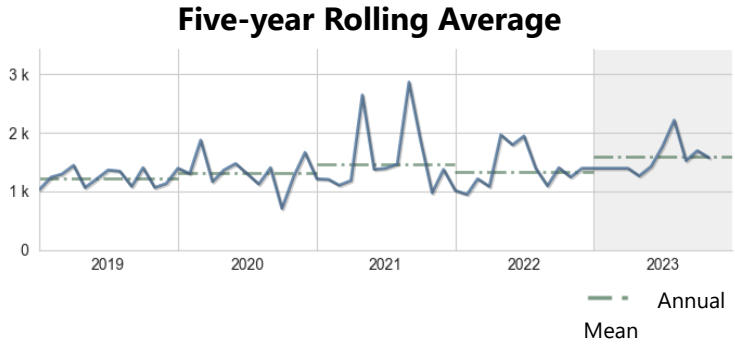
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2023	Historical period of record
High	278.0	602.0
Mean	143.71	23.57
Low	11.00	0.008
No. of Samples	8	380



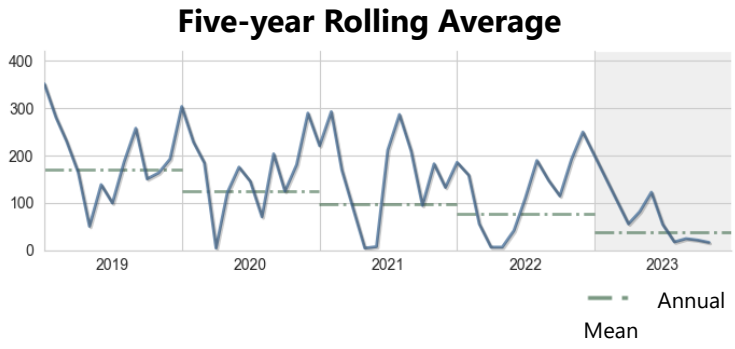
Nitrogen, Kjeldahl

Units: ug/l	Year 2023	Historical period of record
High	2,210.0	2,860.0
Mean	1580.89	1221.63
Low	1260.00	50.00
No. of Samples	8	361



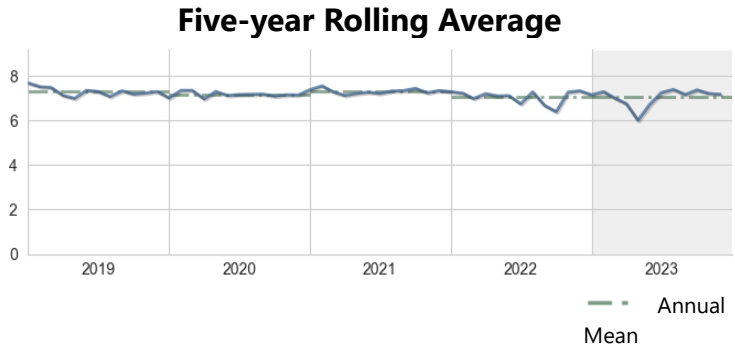
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2023	Historical period of record
High	122.0	2,380.0
Mean	37.63	96.93
Low	16.00	0.00
No. of Samples	8	320



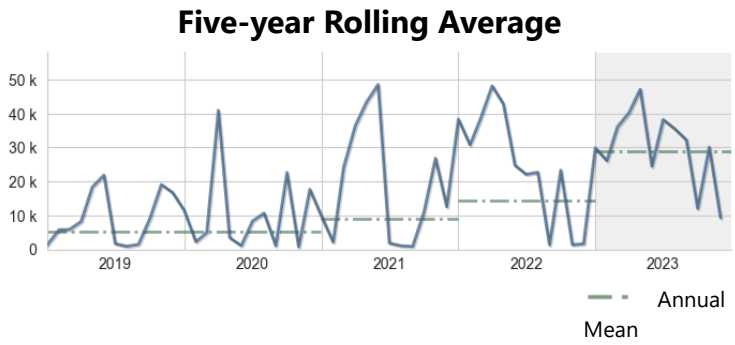
pH

Units: None	Year 2023	Historical period of record
High	7.5	8.8
Mean	7.06	7.4
Low	6.01	5.40
No. of Samples	18	453



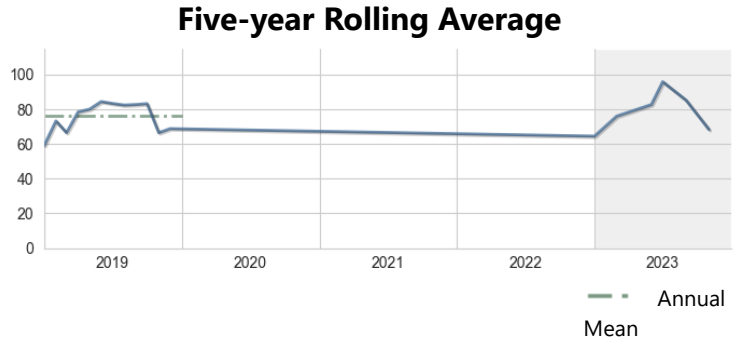
Specific conductance

Units: umho	Year 2023	Historical period of record
High	47,153.6	650,900.0
Mean	28839.88	12195.35
Low	9318.35	25.058
No. of Samples	18	481



Temperature, water

Units: deg F	Year 2023	Historical period of record
High	194.2	194.2
Mean	131.58	85.27
Low	64.40	48.56
No. of Samples	18	399

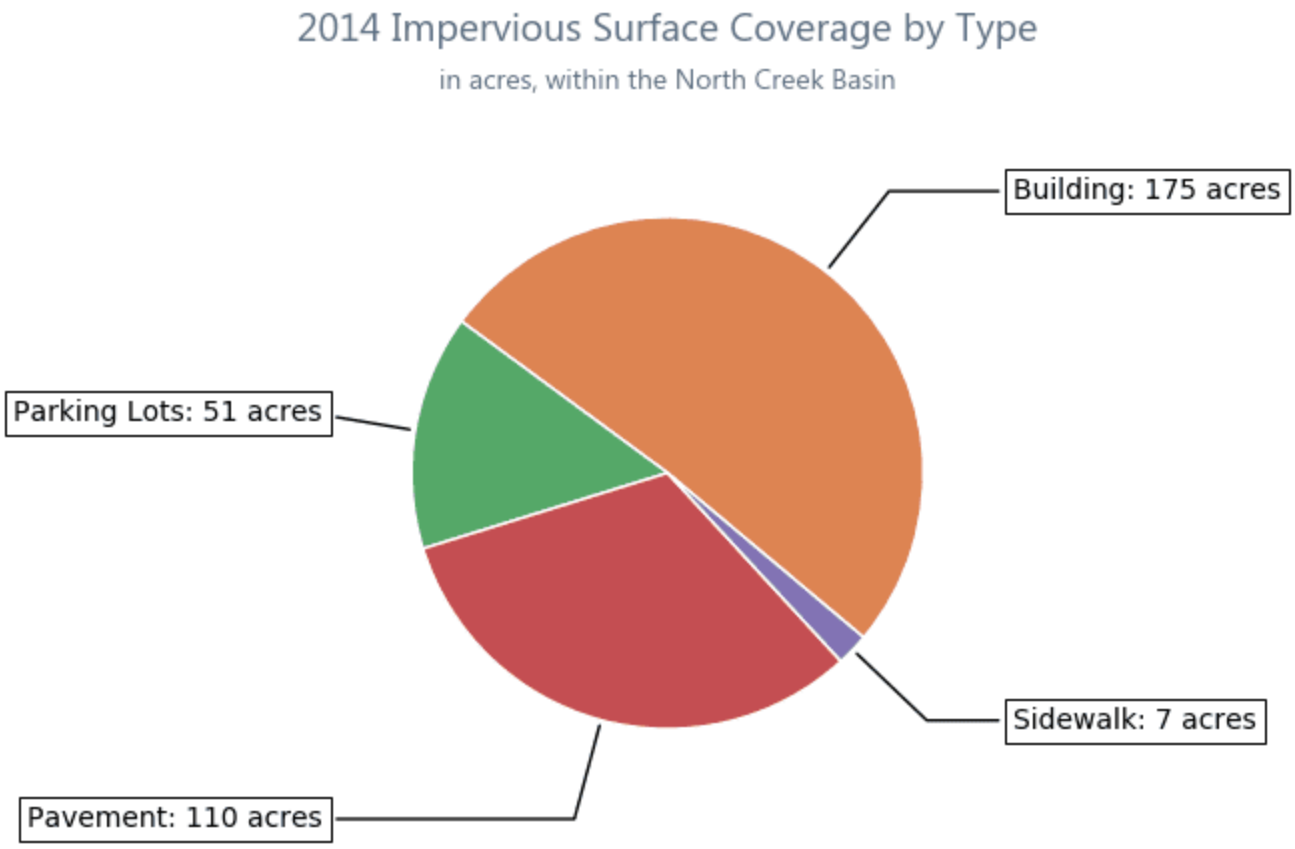


Impervious Features

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.



15% of the land area within the **North Creek Basin** is covered by impervious surfaces

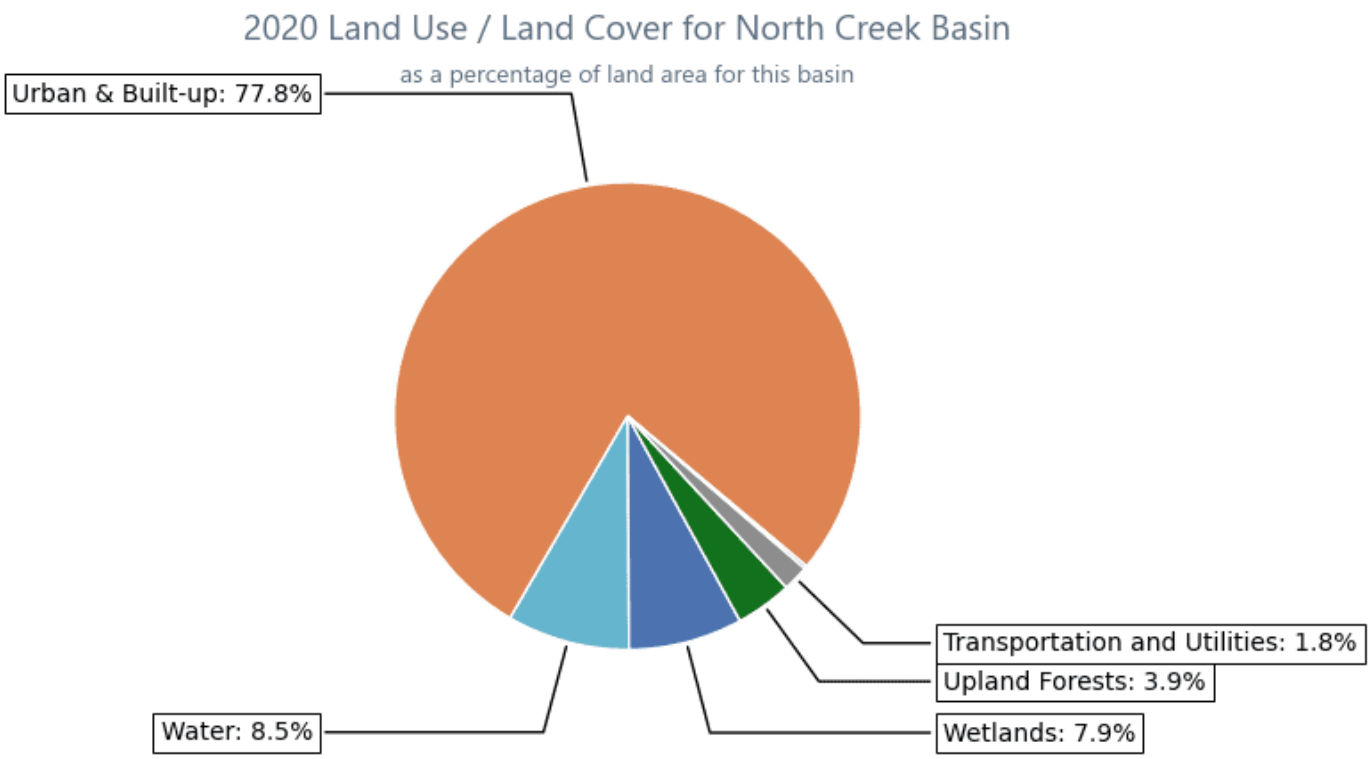


Land Use / Land Cover

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 North Creek Basin

Land Use Classification	1990	1995	1999	2005	2011	2014	2017	2020	Trend
Urban & Built-up	1,074 46.2%	1,584 68.1%	1,652 71%	1,702 73.2%	1,699 73%	1,679 72.2%	1,795 77.1%	1,809 77.8%	
Agriculture	79 3.4%	86 3.7%	18 0.8%	9 0.4%	4 0.2%	122 5.2%	4 0.2%	4 0.2%	
Rangeland	0 0%	0 0%	0 0%	75 3.2%	74 3.2%	20 0.9%	30 1.3%	0 0%	
Upland Forests	845 36.3%	275 11.8%	277 11.9%	142 6.1%	141 6.1%	97 4.2%	94 4.1%	90 3.9%	
Water	77 3.3%	161 6.9%	180 7.8%	180 7.7%	177 7.6%	177 7.6%	182 7.8%	197 8.5%	
Wetlands	216 9.3%	201 8.6%	179 7.7%	178 7.7%	191 8.2%	191 8.2%	182 7.8%	184 7.9%	
Barren Land	17 0.7%	0 0%	0 0%	0 0%	1 0%	0 0%	0 0%	0 0%	
Transportation and Utilities	18 0.8%	20 0.8%	20 0.8%	40 1.7%	40 1.7%	40 1.7%	40 1.7%	43 1.8%	


2020 Land Use / Land Cover for North Creek Basin
as a percentage of land area for this basin
Urban & Built-up: 77.8%
Transportation and Utilities: 1.8%
Upland Forests: 3.9%
Wetlands: 7.9%
Water: 8.5%