North Creek Condition Report for 2021

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

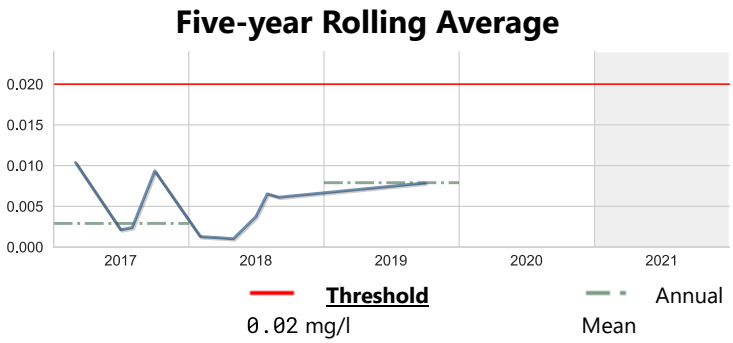


Water Chemistry Ratings | Freshwater Portion of the Creek

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.

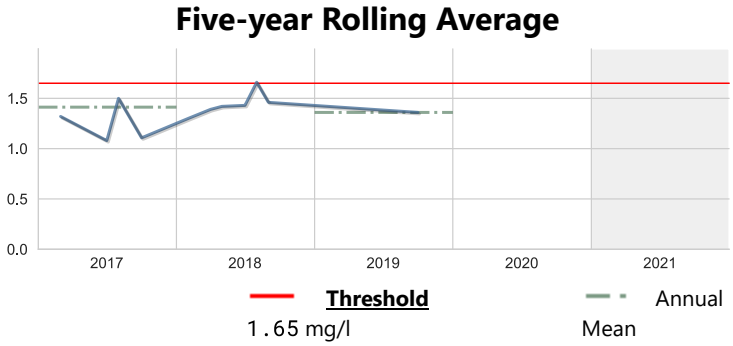
Chlorophyll a

Units: mg/l	Year 2021	Historical period of record
High		0.032
Mean		0.0035
Low		0.0007
No. of Samples	0	49



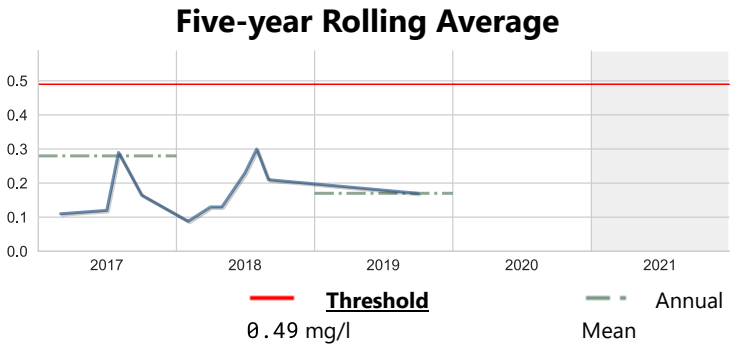
Nitrogen, Total

Units: mg/l	Year 2021	Historical period of record
High		3.71
Mean		1.4122
Low		1.042
No. of Samples	0	29



Phosphorus, Total

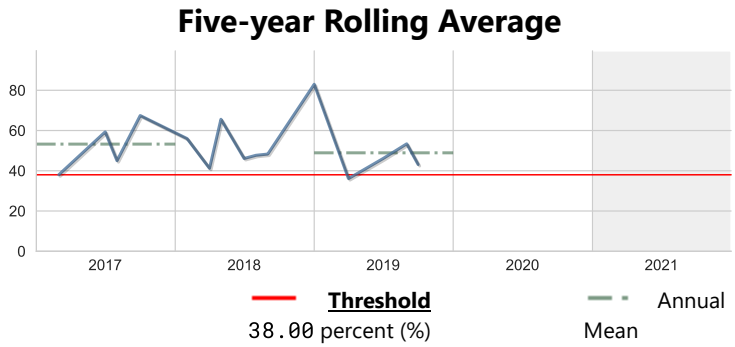
Units: mg/l	Year 2021	Historical period of record
High		2.70
Mean		0.1679
Low		0.041
No. of Samples	0	33



Dissolved Oxygen Saturation

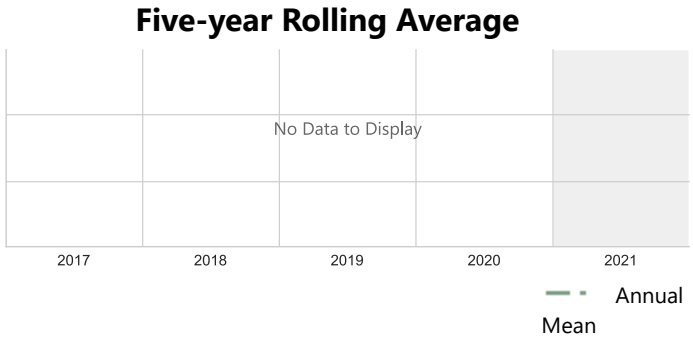
Note: Low DO saturation also may be naturally influenced by inflows from nearby wetlands or groundwater sources.

Units: percent (%)	Year 2021	Historical period of record
High		117.00
Mean		45.36
Low		10.70
No. of Samples	0	60



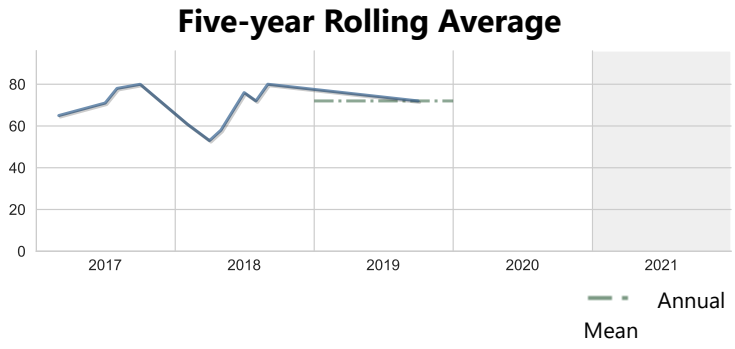
BOD, Biochemical oxygen demand

Units: mg/l	Year 2021	Historical period of record
High		1.70
Mean		1.54
Low		1.40
No. of Samples	0	2



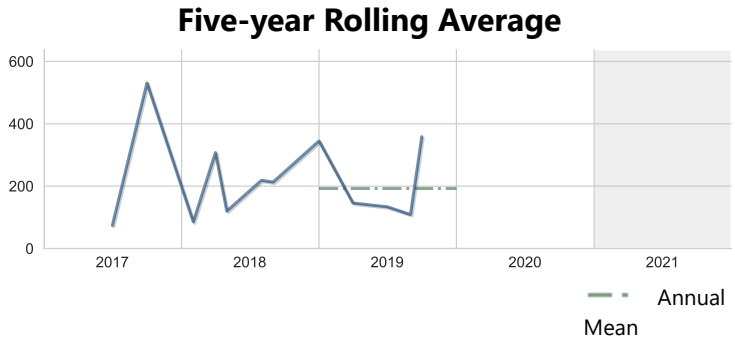
Color

Units: PCU	Year 2021	Historical period of record
High		250.00
Mean		85.47
Low		38.00
No. of Samples	0	30



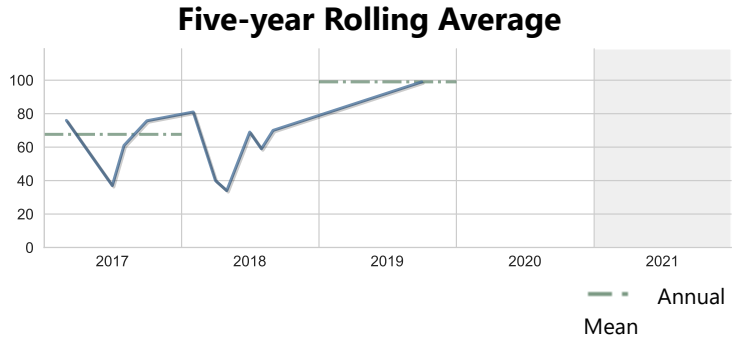
Escherichia coli

Units: cfu/100ml	Year 2021	Historical period of record
High		866.00
Mean		214.63
Low		74.00
No. of Samples	0	15



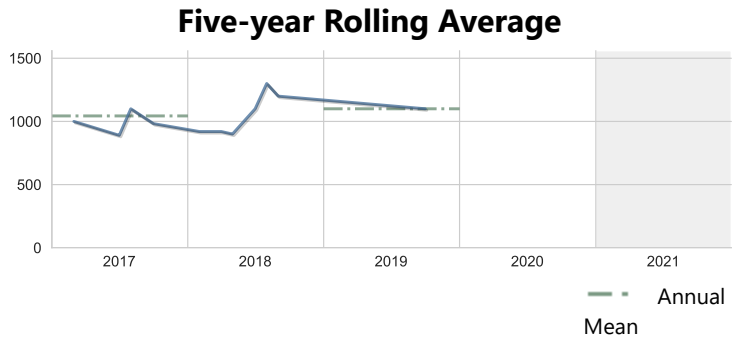
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2021	Historical period of record
High		460.00
Mean		69.41
Low		18.00
No. of Samples	0	30



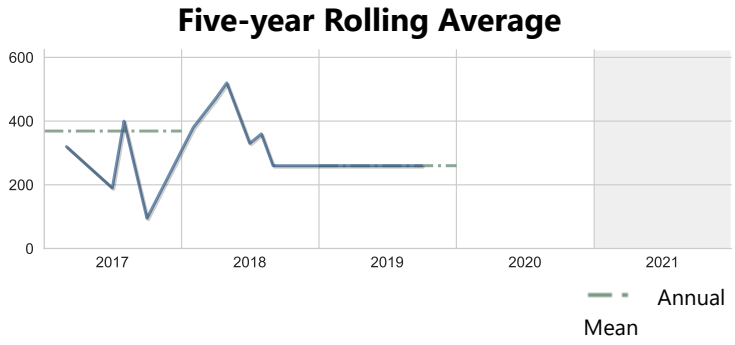
Nitrogen, Kjeldahl

Units: ug/l	Year 2021	Historical period of record
High		27000.00
Mean		1317.06
Low		890.00
No. of Samples	0	30



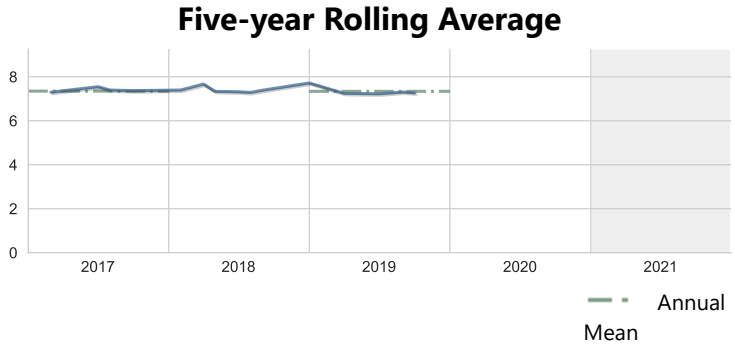
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2021	Historical period of record
High		520.00
Mean		108.07
Low		4.00
No. of Samples	0	30



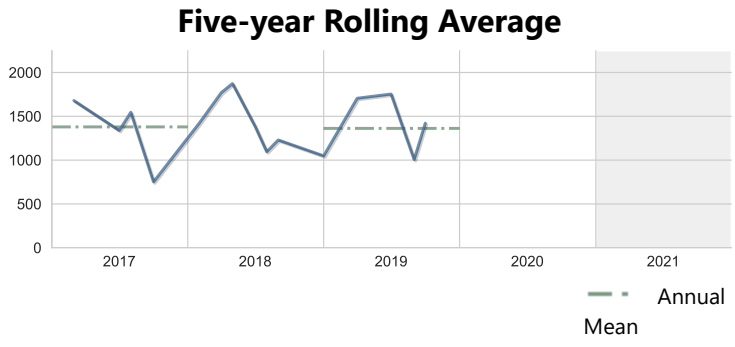
pH

Units: None	Year 2021	Historical period of record
High		7.72
Mean		7.3
Low		6.80
No. of Samples	0	60



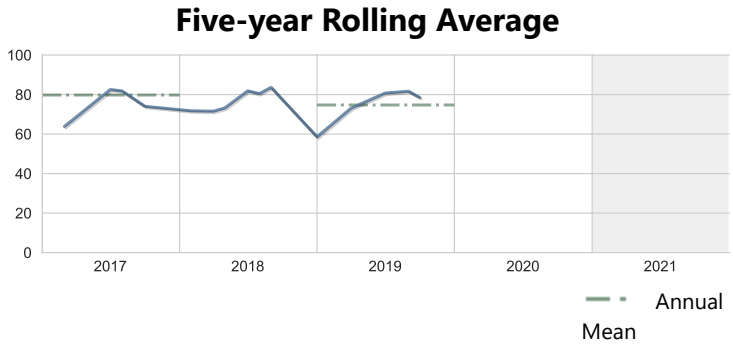
Specific conductance

Units: umho	Year 2021	Historical period of record
High		24590.00
Mean		1265.22
Low		328.00
No. of Samples	0	60



Temperature, water

Units: deg F	Year 2021	Historical period of record
High		85.028
Mean		75.48
Low		55.94
No. of Samples	0	60



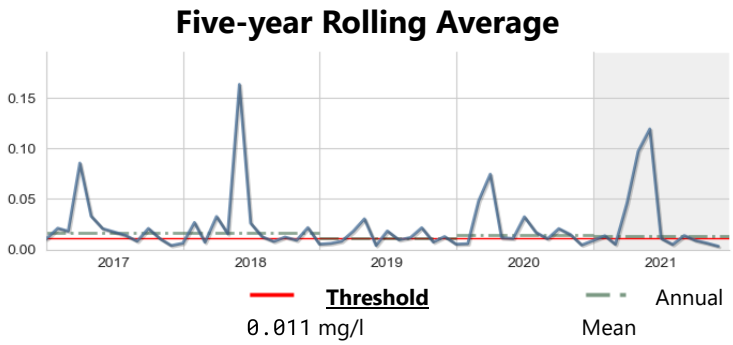
Water Chemistry Ratings | Tidal Portion of the Creek

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

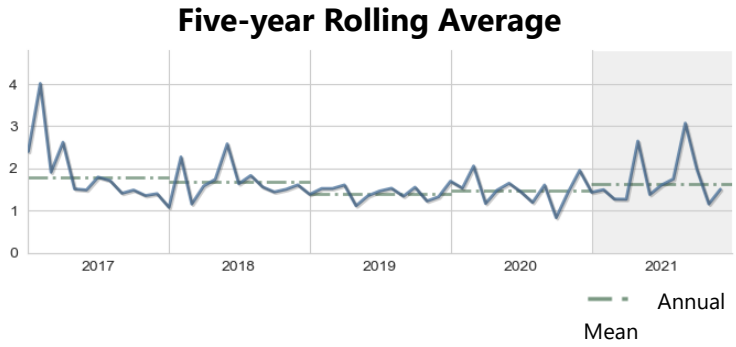
Score: Caution

Units: mg/l	Year 2021	Historical period of record
High	0.1	0.2
Mean	0.0136	0.0125
Low	0.0032	0.0009
No. of Samples	12	288



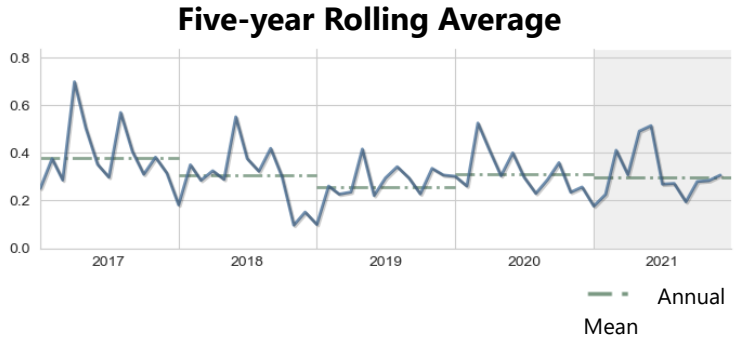
Nitrogen, Total

Units: mg/l	Year 2021	Historical period of record
High	3.1	4.0
Mean	1.6352	1.2968
Low	1.152	0.002
No. of Samples	12	249



Phosphorus, Total

Units: mg/l	Year 2021	Historical period of record
High	0.5	0.9
Mean	0.2946	0.2841
Low	0.176	0.08
No. of Samples	12	296



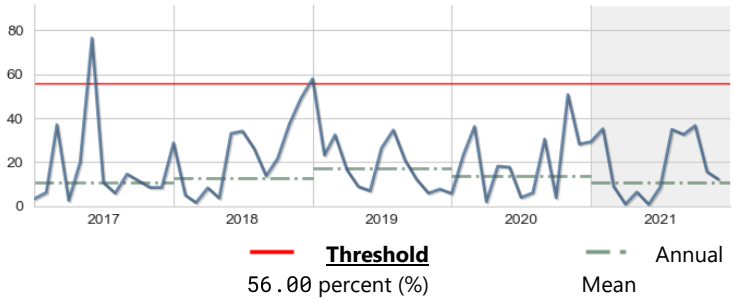
DO Dissolved Oxygen Saturation

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

Score: Caution

Units: percent (%)	Year 2021	Historical period of record
High	36.6	157.4
Mean	10.65	28.73
Low	0.70	0.70
No. of Samples	12	370

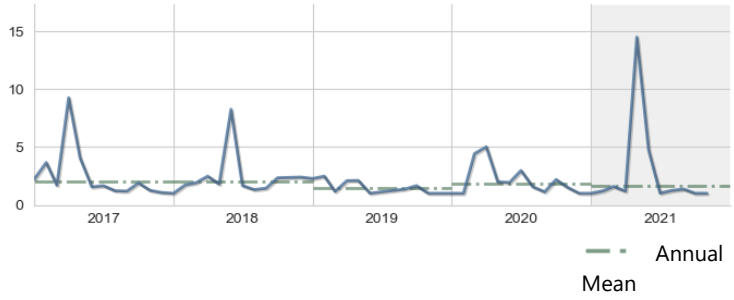
Five-year Rolling Average



BOD, Biochemical oxygen demand

Units: mg/l	Year 2021	Historical period of record
High	14.5	14.5
Mean	1.66	1.76
Low	1.00	0.50
No. of Samples	11	230

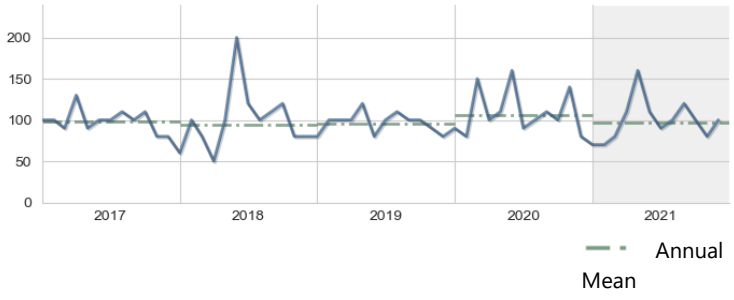
Five-year Rolling Average



Color

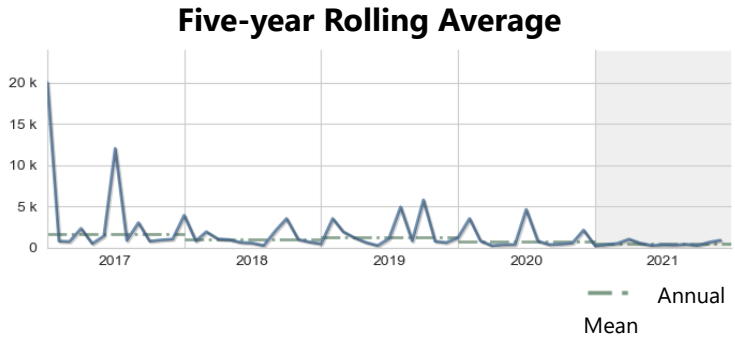
Units: PCU	Year 2021	Historical period of record
High	160.0	300.0
Mean	96.54	81.21
Low	70.00	5.00
No. of Samples	12	385

Five-year Rolling Average



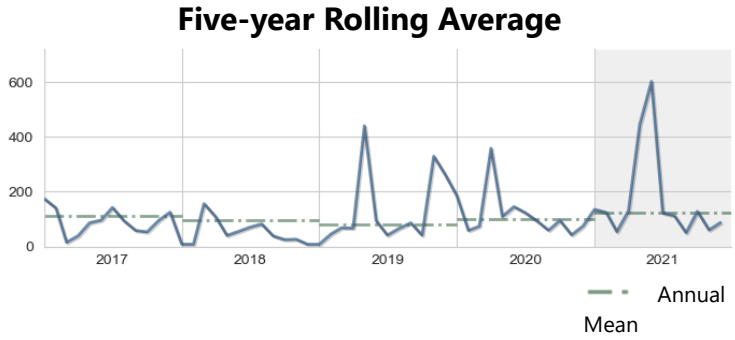
Enterococcus Group Bacteria

Units: cfu/100ml	Year 2021	Historical period of record
High	1,000.0	20,000.0
Mean	403.59	908.54
Low	180.00	63.00
No. of Samples	12	129



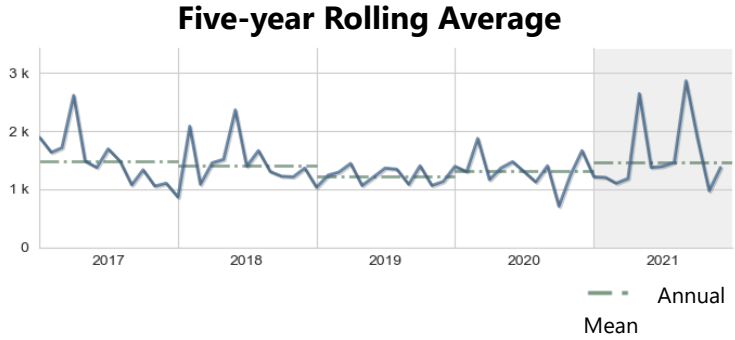
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2021	Historical period of record
High	602.0	602.0
Mean	124.87	22.35
Low	50.00	0.008
No. of Samples	12	360



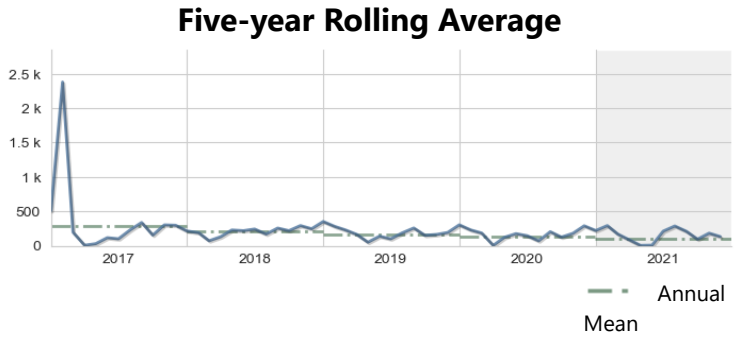
Nitrogen, Kjeldahl

Units: ug/l	Year 2021	Historical period of record
High	2,860.0	2,860.0
Mean	1466.38	1211.53
Low	970.00	50.00
No. of Samples	12	343



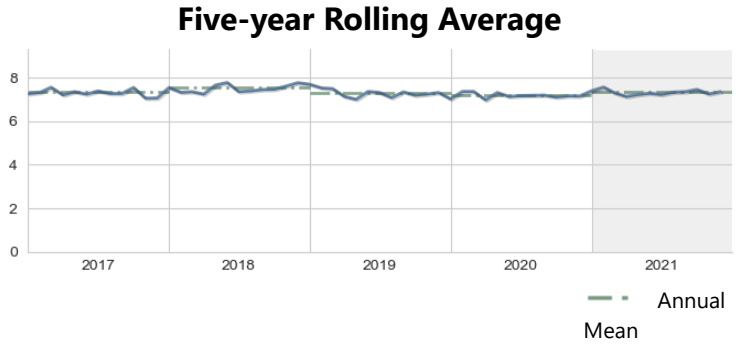
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2021	Historical period of record
High	292.0	2,380.0
Mean	97.48	99.34
Low	4.00	0.00
No. of Samples	12	302



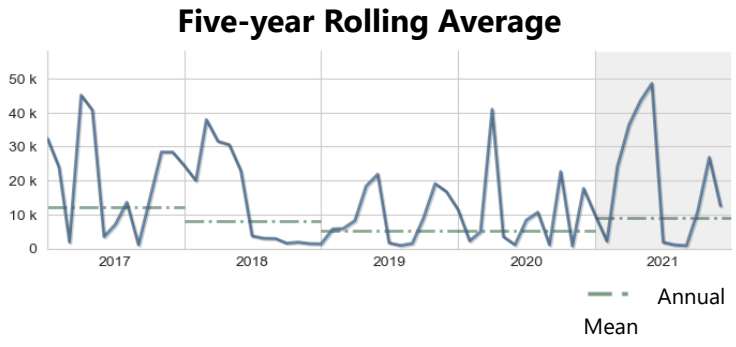
pH

Units: None	Year 2021	Historical period of record
High	7.6	8.8
Mean	7.32	7.43
Low	7.13	5.40
No. of Samples	12	428



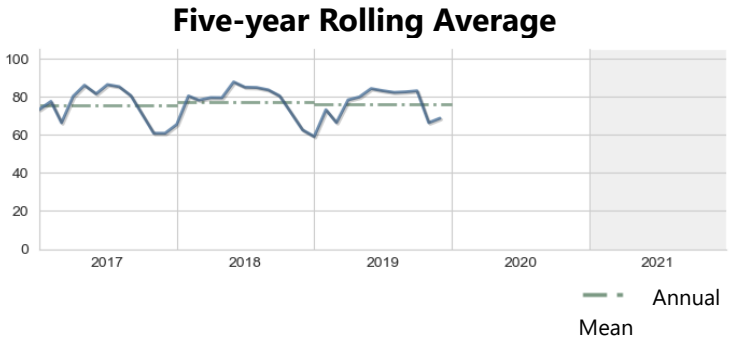
Specific conductance

Units: umho	Year 2021	Historical period of record
High	48,595.0	650,900.0
Mean	8862.47	11830.76
Low	854.629	25.058
No. of Samples	12	455



Temperature, water

Units: deg F	Year 2021	Historical period of record
High	190.1	190.1
Mean	171.99	81.52
Low	145.0879	48.56
No. of Samples	12	373

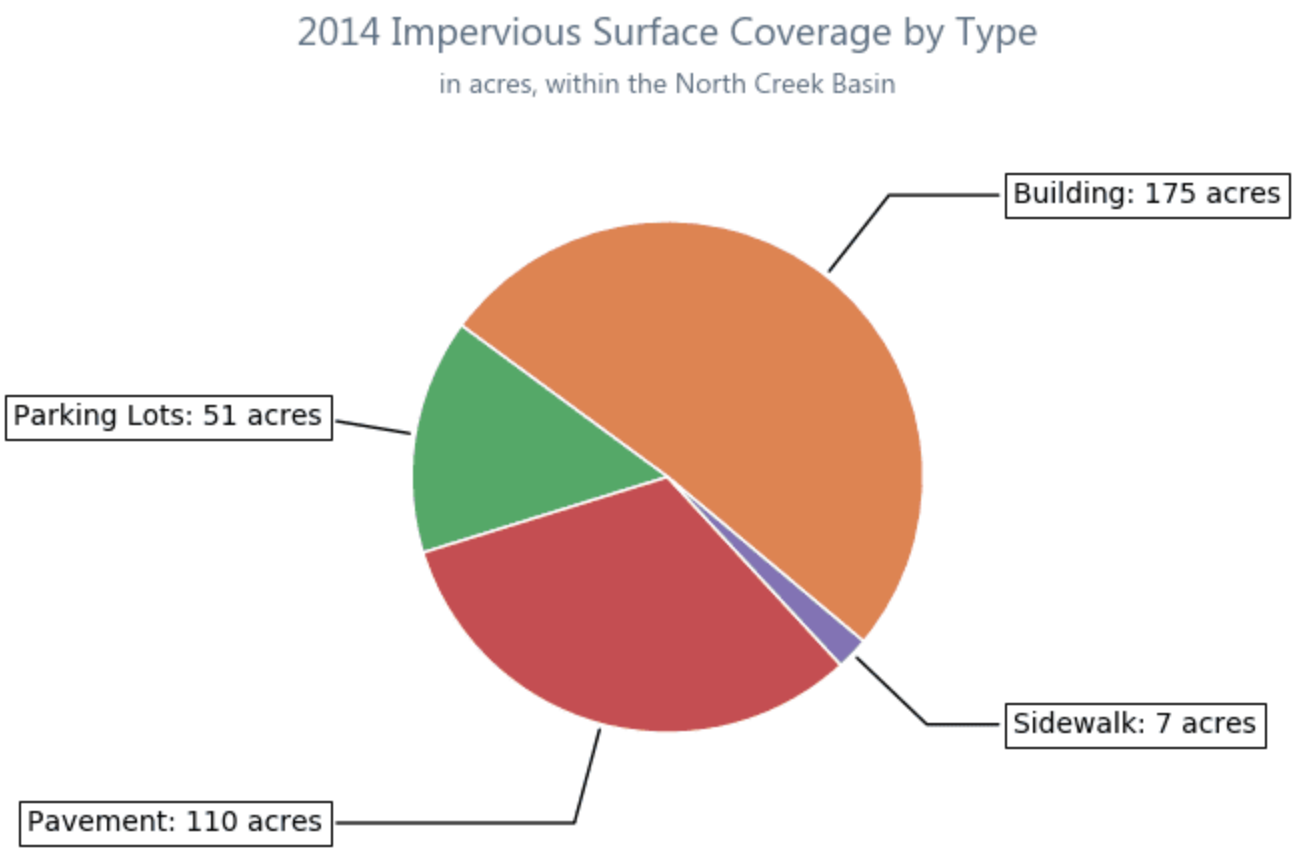


Impervious Features

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

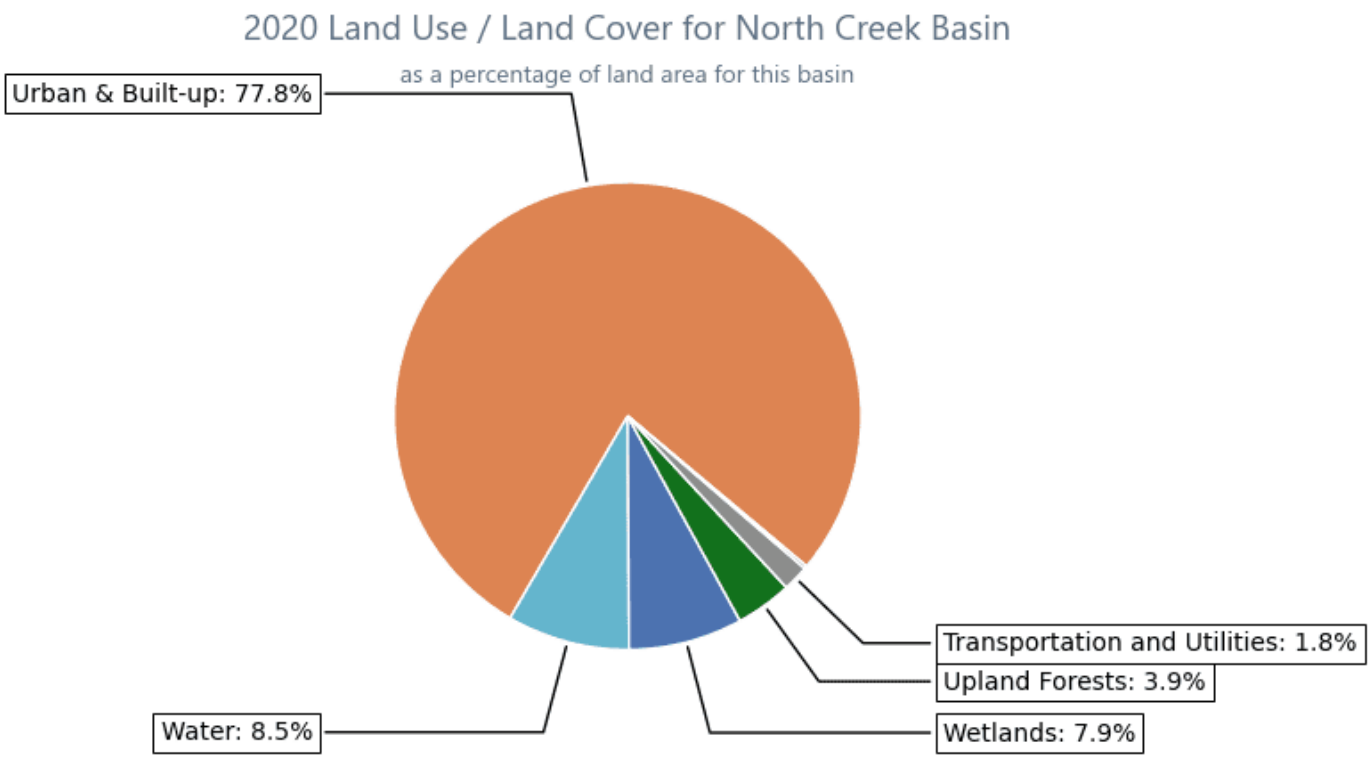


Land Use / Land Cover

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%