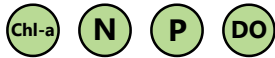


Whitaker Bayou Condition Report for 2022



PASS



4 out of 4
indicators
were rated as
PASS.

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

Size: 4,967 acres

Location: North Sarasota County, south Manatee County

Discharges into: Sarasota Bay

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

[View county-wide water quality trends >>](#)

Whitaker Bayou



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.

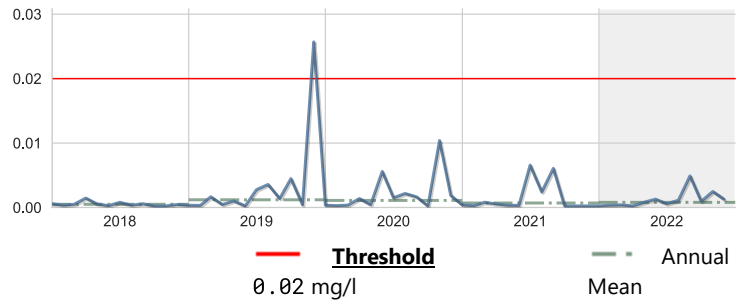


Chlorophyll a

Score: Pass

Units: mg/l	Year 2022	Historical period of record
High	0.0049	0.0595
Mean	0.0008	0.0014
Low	0.0003	0.00
No. of Samples	12	499

Five-year Rolling Average

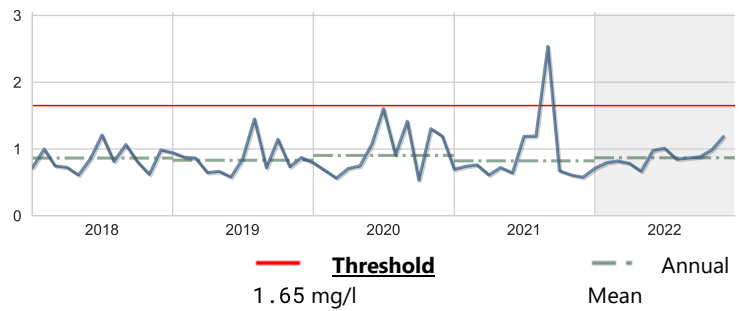


Nitrogen, Total

Score: Pass

Units: mg/l	Year 2022	Historical period of record
High	1.186	15.76
Mean	0.8682	0.8841
Low	0.666	0.0019
No. of Samples	12	425

Five-year Rolling Average



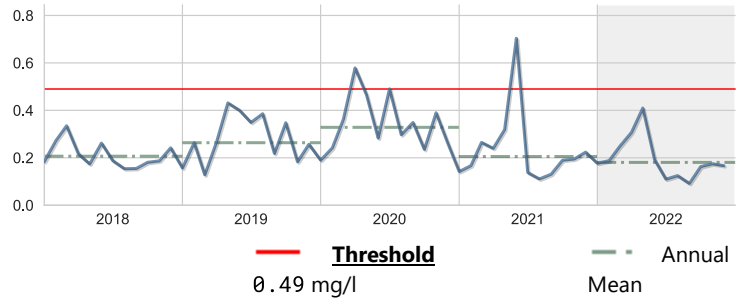


Phosphorus, Total

Score: Pass

Units: mg/l	Year 2022	Historical period of record
High	0.41	2.38
Mean	0.1806	0.2826
Low	0.092	0.082
No. of Samples	12	454

Five-year Rolling Average



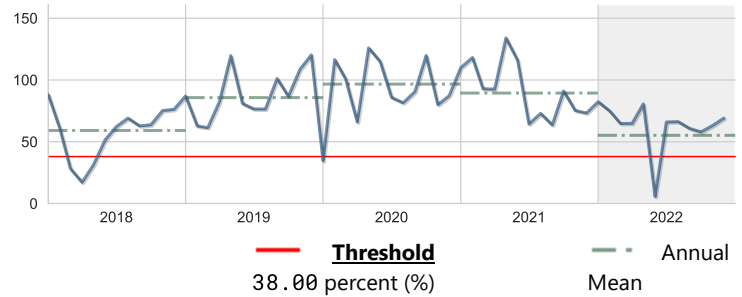
Dissolved Oxygen Saturation

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

Score: Pass

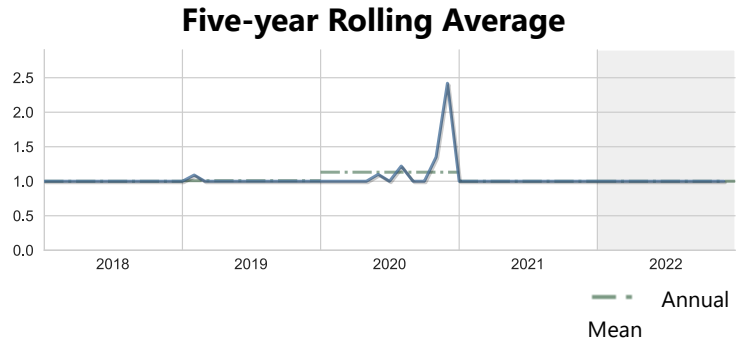
Units: percent (%)	Year 2022	Historical period of record
High	82.4403	262.30
Mean	55.19	69.1
Low	5.6517	2.20
No. of Samples	12	501

Five-year Rolling Average



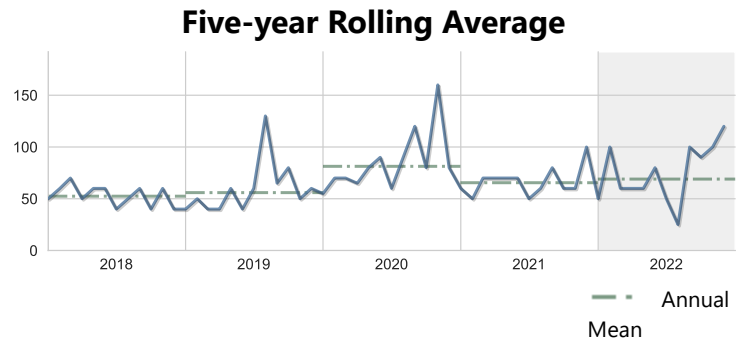
BOD, Biochemical oxygen demand

Units: mg/l	Year 2022	Historical period of record
High	1.00	175.00
Mean	1.0	0.96
Low	1.00	0.50
No. of Samples	12	381



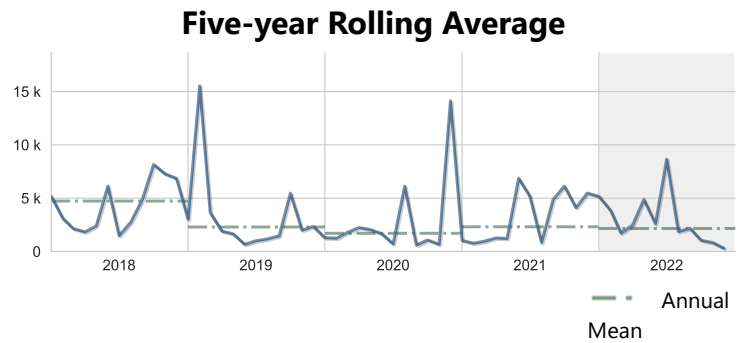
Color

Units: PCU	Year 2022	Historical period of record
High	120.00	330.00
Mean	69.01	67.74
Low	25.00	20.00
No. of Samples	12	570



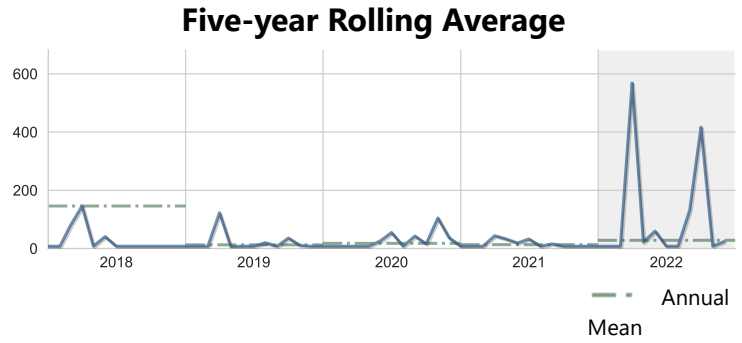
Escherichia coli

Units: cfu/100ml	Year 2022	Historical period of record
High	8664.00	15531.00
Mean	2160.43	2642.83
Low	307.00	97.00
No. of Samples	12	141



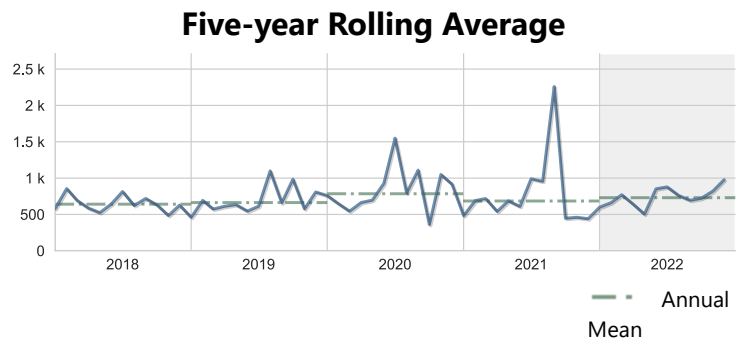
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2022	Historical period of record
High	569.00	30060.00
Mean	28.27	15.69
Low	8.00	0.008
No. of Samples	12	529



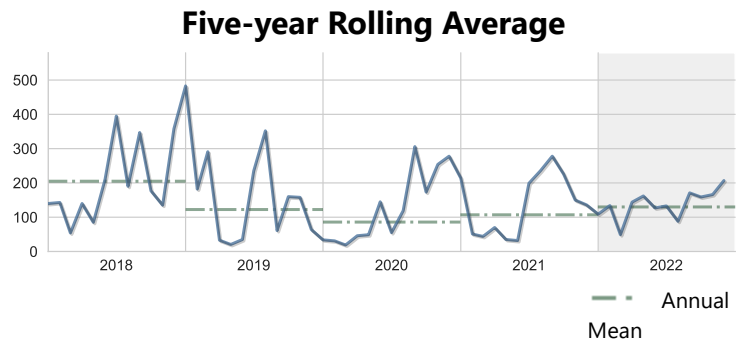
Nitrogen, Kjeldahl

Units: ug/l	Year 2022	Historical period of record
High	979.00	15360.00
Mean	730.23	774.15
Low	504.00	200.00
No. of Samples	12	497



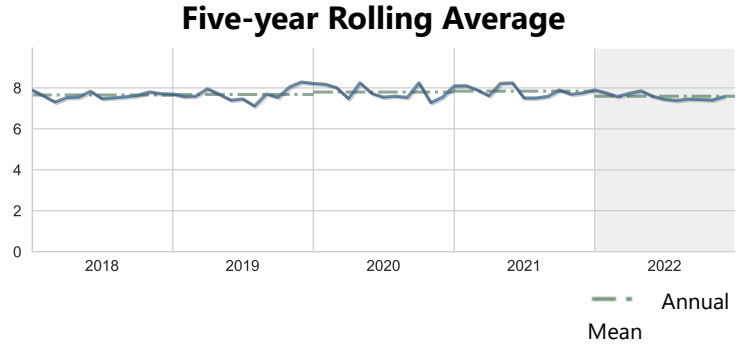
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2022	Historical period of record
High	207.00	1020.00
Mean	129.95	82.12
Low	49.00	0.00
No. of Samples	12	469



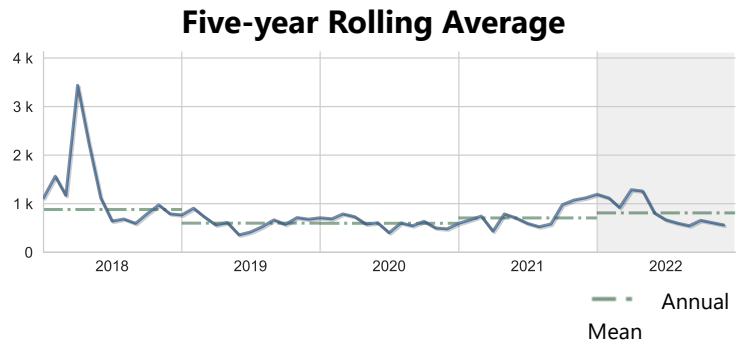
pH

Units: None	Year 2022	Historical period of record
High	7.8965	11.77
Mean	7.59	7.63
Low	7.39	6.10
No. of Samples	12	821



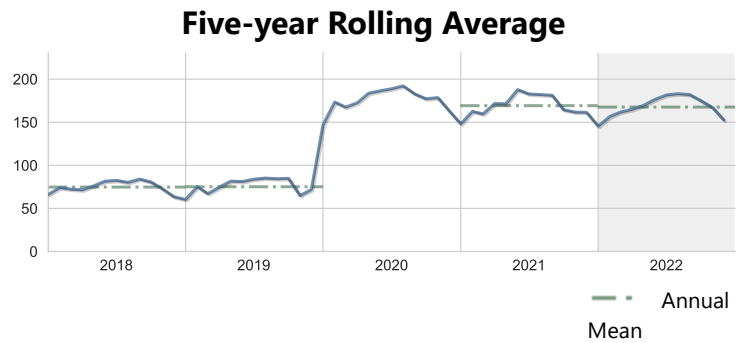
Specific conductance

Units: umho	Year 2022	Historical period of record
High	1288.15	49645.00
Mean	809.7	725.65
Low	546.335	0.524
No. of Samples	12	833



Temperature, water

Units: deg F	Year 2022	Historical period of record
High	183.1278	192.1758
Mean	167.6	72.38
Low	145.4139	46.40
No. of Samples	12	799



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.

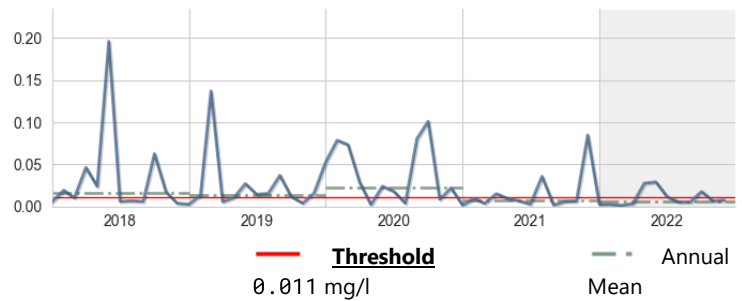


Chlorophyll a

Score: Pass

Units: mg/l	Year 2022	Historical period of record
High	0.0	0.2
Mean	0.0062	0.0109
Low	0.001	0.0004
No. of Samples	12	256

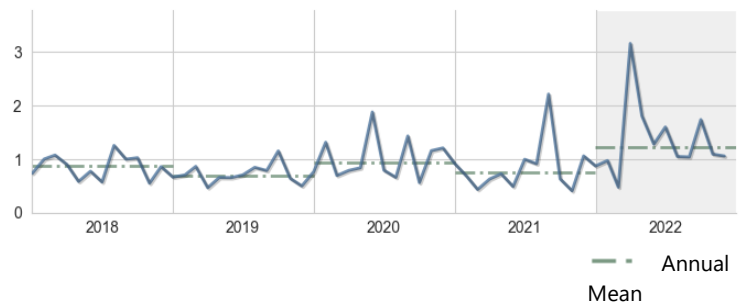
Five-year Rolling Average



Nitrogen, Total

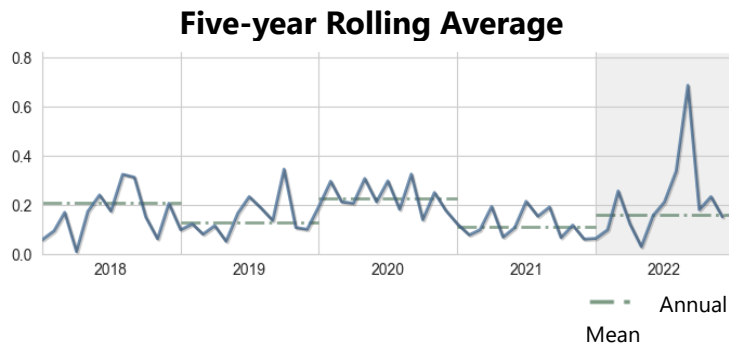
Units: mg/l	Year 2022	Historical period of record
High	3.2	7.0
Mean	1.2118	0.9782
Low	0.471	0.0018
No. of Samples	12	223

Five-year Rolling Average



Phosphorus, Total

Units: mg/l	Year 2022	Historical period of record
High	0.7	2.0
Mean	0.158	0.2138
Low	0.028	0.008
No. of Samples	12	264

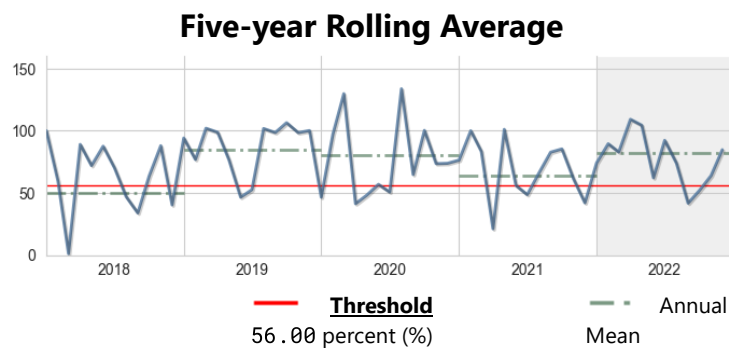


Dissolved Oxygen Saturation

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

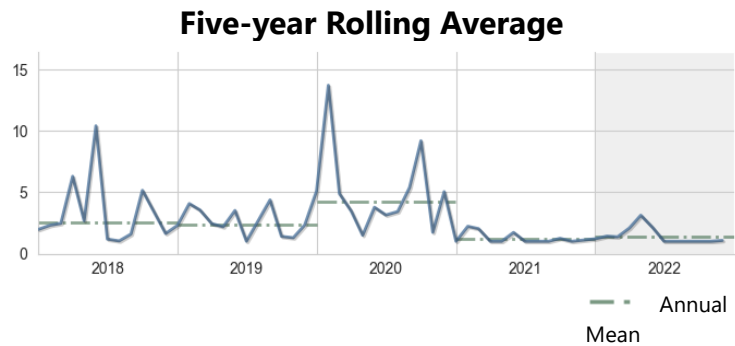
Score: Pass

Units: percent (%)	Year 2022	Historical period of record
High	127.5	827.0
Mean	82.05	64.61
Low	41.6851	0.00
No. of Samples	19	632



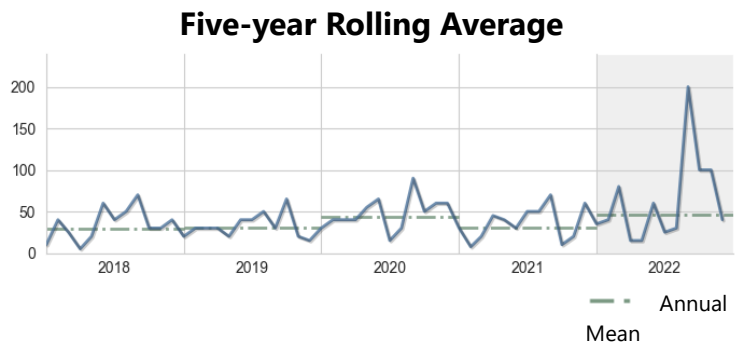
BOD, Biochemical oxygen demand

Units: mg/l	Year 2022	Historical period of record
High	3.1	13.7
Mean	1.34	2.35
Low	1.00	0.543
No. of Samples	12	196



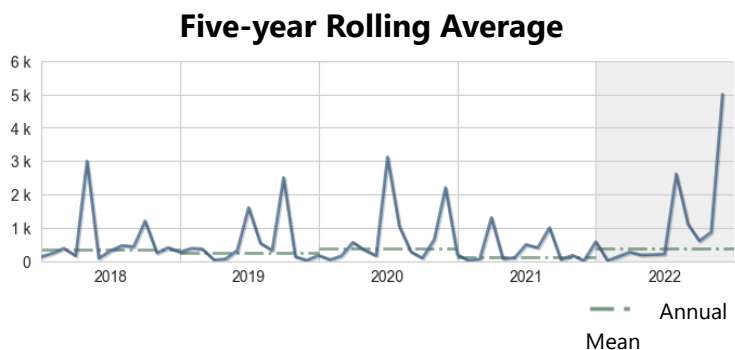
Color

Units: PCU	Year 2022	Historical period of record
High	200.0	200.0
Mean	46.04	39.83
Low	15.00	5.00
No. of Samples	12	353



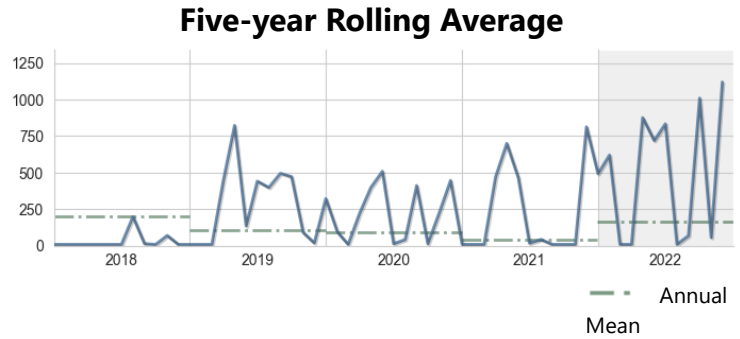
Enterococcus Group Bacteria

Units: cfu/100ml	Year 2022	Historical period of record
High	5,000.0	17,000.0
Mean	372.92	295.27
Low	10.00	10.00
No. of Samples	13	139



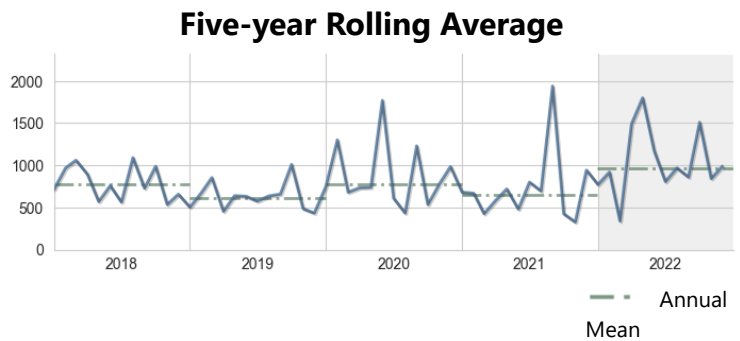
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2022	Historical period of record
High	1,120.0	1,930.0
Mean	162.82	20.01
Low	8.00	0.00
No. of Samples	12	320



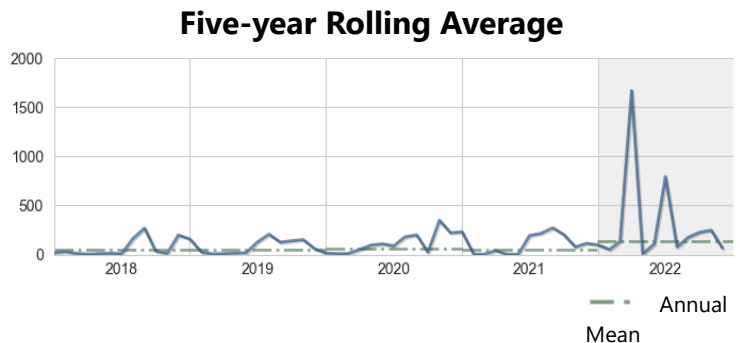
Nitrogen, Kjeldahl

Units: ug/l	Year 2022	Historical period of record
High	1,800.0	6,291.0
Mean	962.91	896.74
Low	338.00	50.00
No. of Samples	12	307



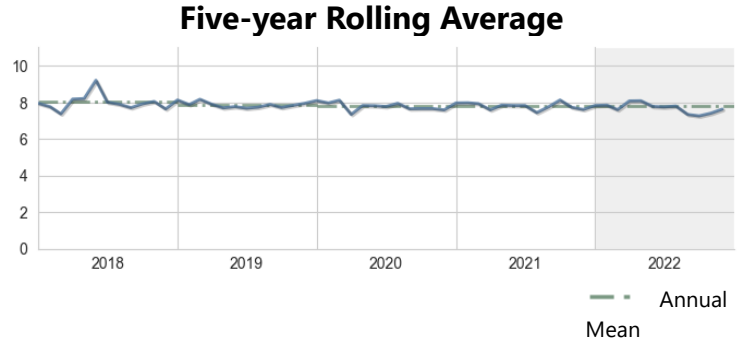
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2022	Historical period of record
High	1,670.0	3,275.0
Mean	132.19	62.9
Low	6.00	4.00
No. of Samples	12	270



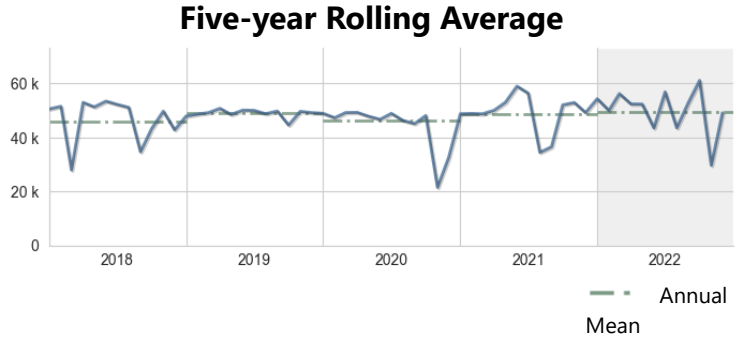
pH

Units: None	Year 2022	Historical period of record
High	8.2	9.6
Mean	7.81	7.62
Low	7.26	4.90
No. of Samples	19	2,930



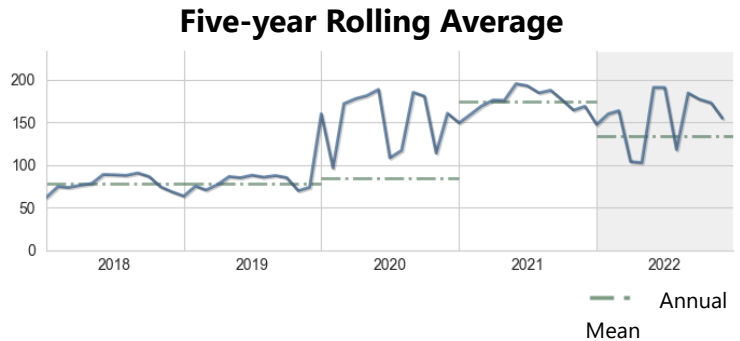
Specific conductance

Units: umho	Year 2022	Historical period of record
High	61,139.3	61,139.3
Mean	49525.01	7482.08
Low	29655.00	320.00
No. of Samples	19	2,744



Temperature, water

Units: deg F	Year 2022	Historical period of record
High	197.6	197.6
Mean	133.59	75.41
Low	78.44	49.10
No. of Samples	19	3,116



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.

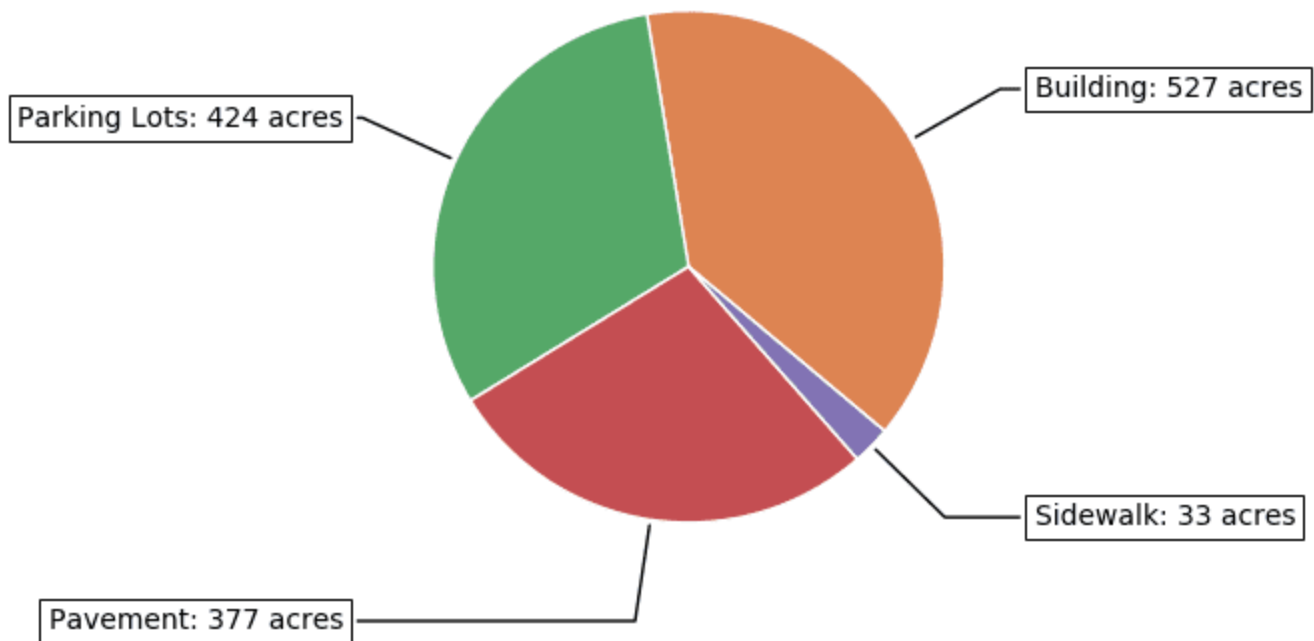


27% of the land area within the **Whitaker Bayou Basin** is covered by impervious

surfaces

2014 Impervious Surface Coverage by Type



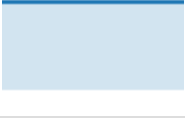




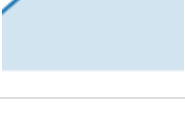
in acres, within the Whitaker Bayou Basin



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 Whitaker Bayou Basin

Land Use Classification	1990	1995	1999	2005	2011	2014	2017	2020	Trend
Urban & Built-up	3,830 77.1%	3,834 77.2%	3,831 77.1%	3,903 78.6%	3,952 79.6%	3,921 79%	3,951 79.6%	3,970 79.9%	
Agriculture	214 4.3%	182 3.7%	188 3.8%	181 3.6%	181 3.6%	181 3.6%	178 3.6%	168 3.4%	
Rangeland	4 0.1%	4 0.1%	4 0.1%	4 0.1%	4 0.1%	4 0.1%	4 0.1%	4 0.1%	
Upland Forests	235 4.7%	249 5%	249 5%	195 3.9%	164 3.3%	195 3.9%	164 3.3%	158 3.2%	
Water	130 2.6%	137 2.7%	140 2.8%	126 2.5%	88 1.8%	88 1.8%	89 1.8%	91 1.8%	
Wetlands	315 6.4%	232 4.7%	227 4.6%	229 4.6%	222 4.5%	222 4.5%	222 4.5%	221 4.4%	
Barren Land	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	3 0.1%	0 0%	
Transportation and Utilities	238 4.8%	329 6.6%	329 6.6%	328 6.6%	356 7.2%	356 7.2%	355 7.2%	356 7.2%	

2020 Land Use / Land Cover for Whitaker Bayou Basin

as a percentage of land area for this basin

