Alligator Creek Condition Report for 2021

CAUTION

Chl-a N P DO

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

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

Size: 6,789 acres
Location: South Sarasota County
Discharges into: Lemon Bay

For more information, please see: **Alligator Creek Sediment Management Plan (2006)**

View county-wide water quality trends »

Alligator Creek



Water Chemistry Ratings | Freshwater Portion of the Creek

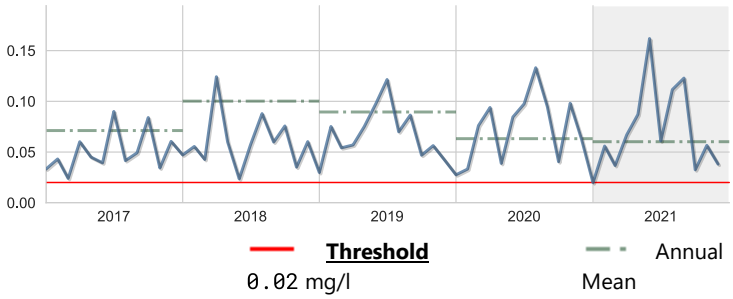
Creek Conditions Ratings are based on comparing nitrogen, phosphorus, chlorophyll and dissolved oxygen to water quality guidelines or regulations. Florida law defines a maximum allowable concentration of nitrogen, phosphorus, and chlorophyll *a*, and a minimum allowable concentration of dissolved oxygen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

Chl-a Chlorophyll a

Score: Caution

Units: mg/l	Year 2021	Historical period of record
High	2.651	2.651
Mean	0.0602	0.0468
Low	0.002	0.0003
No. of Samples	72	997

Five-year Rolling Average

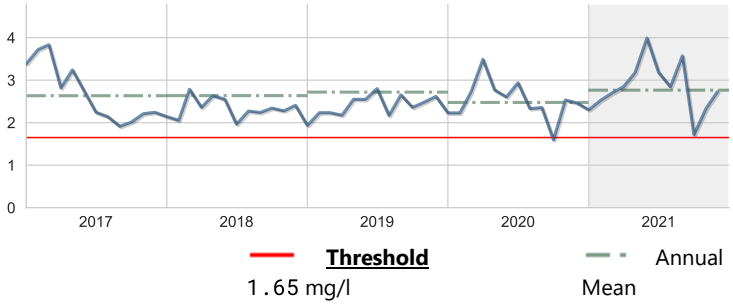


N Nitrogen, Total

Score: Caution

Units: mg/l	Year 2021	Historical period of record
High	10.506	10.506
Mean	2.7648	2.3197
Low	0.63	0.41
No. of Samples	72	782

Five-year Rolling Average

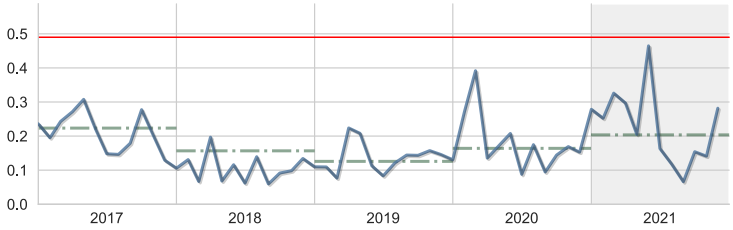


P Phosphorus, Total

Score: Pass

Units: mg/l	Year 2021	Historical period of record
High	0.827	0.87
Mean	0.2035	0.1773
Low	0.027	0.012
No. of Samples	72	890

Five-year Rolling Average



Threshold 0.49 mg/l

Annual Mean

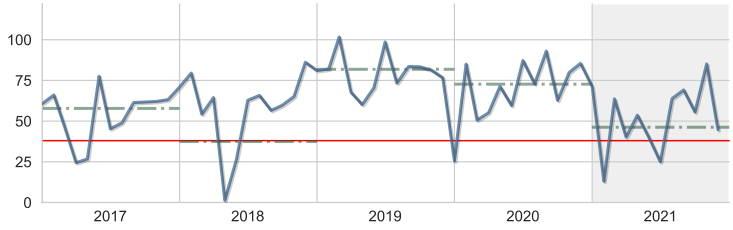
DO Dissolved Oxygen Saturation

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

Score: Pass

Units: percent (%)	Year 2021	Historical period of record
High	177.621	197.40
Mean	46.25	54.0
Low	0.40	0.05
No. of Samples	76	704

Five-year Rolling Average

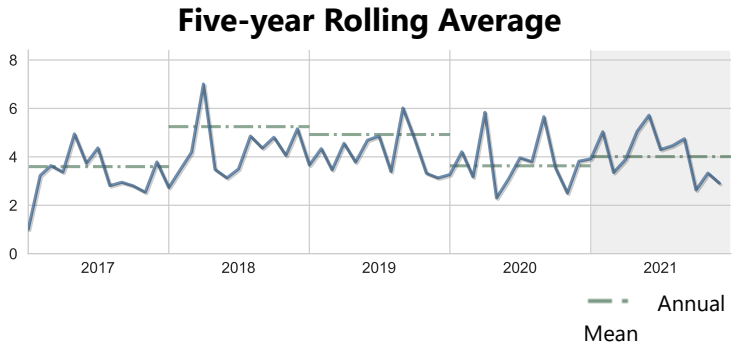


Threshold 38.00 percent (%)

Annual Mean

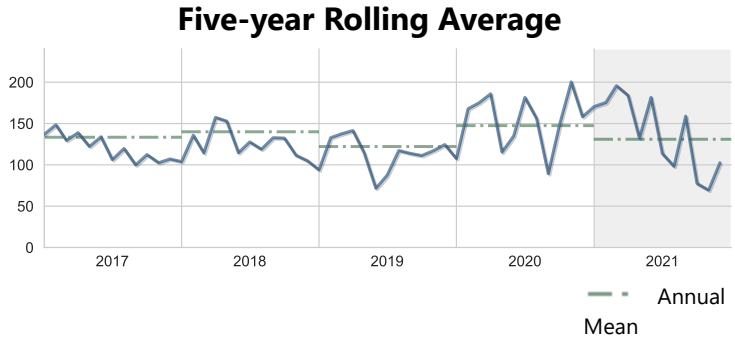
BOD, Biochemical oxygen demand

Units: mg/l	Year 2021	Historical period of record
High	17.20	17.30
Mean	4.01	3.37
Low	1.00	0.50
No. of Samples	72	848



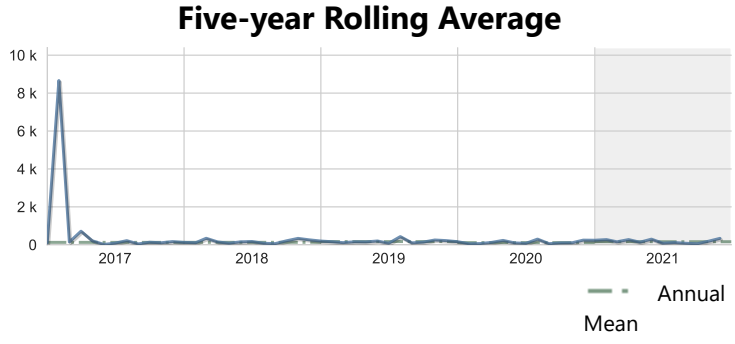
Color

Units: PCU	Year 2021	Historical period of record
High	400.00	500.00
Mean	130.98	114.84
Low	50.00	20.00
No. of Samples	72	1,007



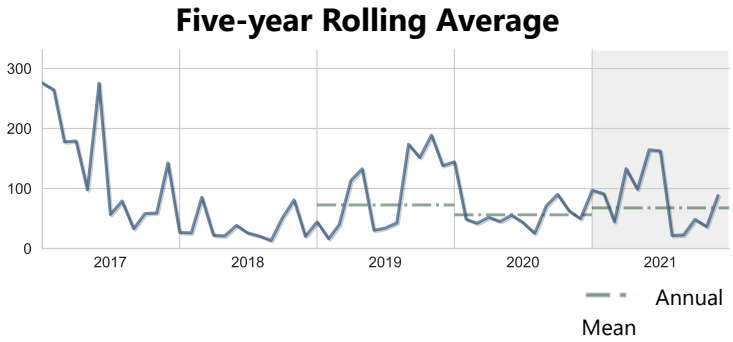
Escherichia coli

Units: cfu/100ml	Year 2021	Historical period of record
High	12033.00	19863.00
Mean	162.43	149.93
Low	10.00	9.70
No. of Samples	76	394



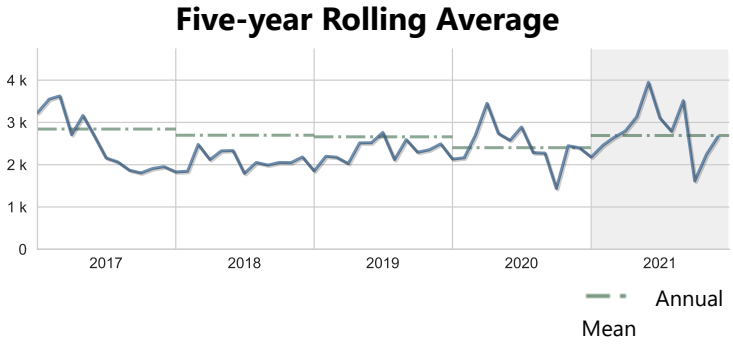
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2021	Historical period of record
High	2080.00	2430.00
Mean	67.72	45.91
Low	8.00	0.008
No. of Samples	71	944



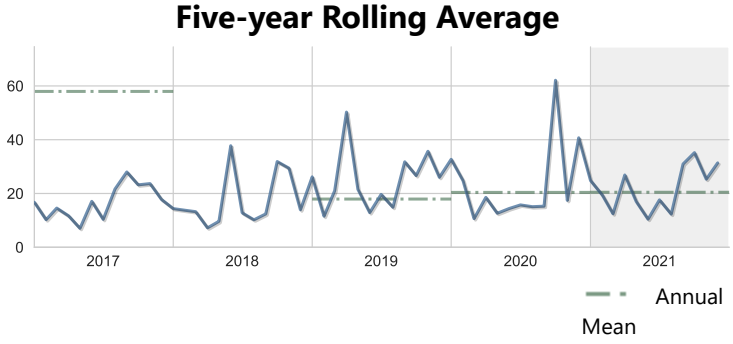
Nitrogen, Kjeldahl

Units: ug/l	Year 2021	Historical period of record
High	10500.00	10500.00
Mean	2690.85	2223.4
Low	503.00	140.00
No. of Samples	72	897



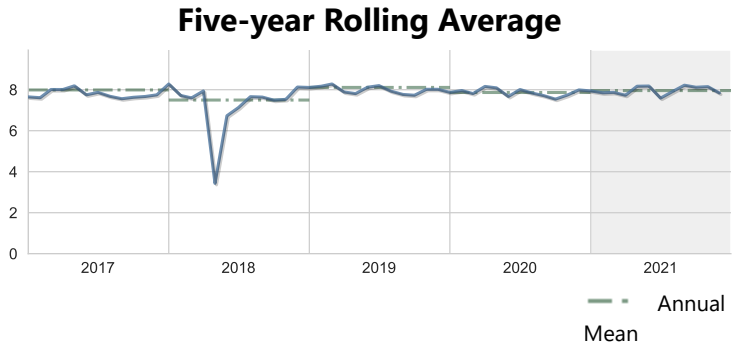
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2021	Historical period of record
High	296.00	895.00
Mean	20.45	20.36
Low	4.00	0.00
No. of Samples	72	872



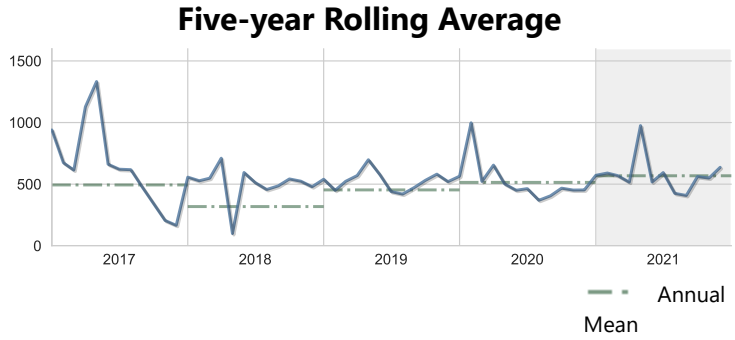
pH

Units: None	Year 2021	Historical period of record
High	9.82	9.94
Mean	7.96	7.32
Low	6.89	0.20
No. of Samples	76	2,440



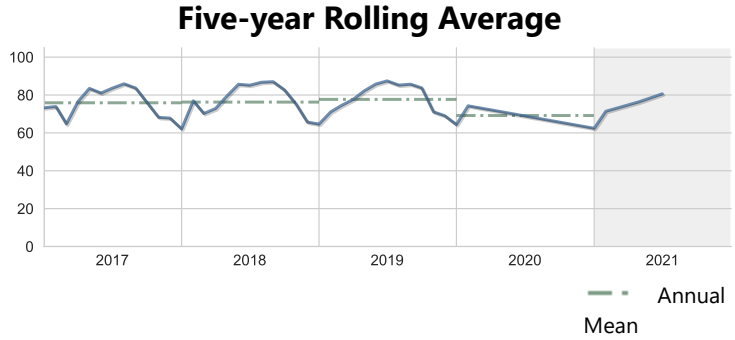
Specific conductance

Units: umho	Year 2021	Historical period of record
High	24822.00	40542.80
Mean	568.03	631.56
Low	10.49	0.859
No. of Samples	76	2,298



Temperature, water

Units: deg F	Year 2021	Historical period of record
High	191.5952	200.56
Mean	164.09	74.9
Low	62.42	53.528
No. of Samples	76	2,278



Water Chemistry Ratings | Tidal Portion of the Creek

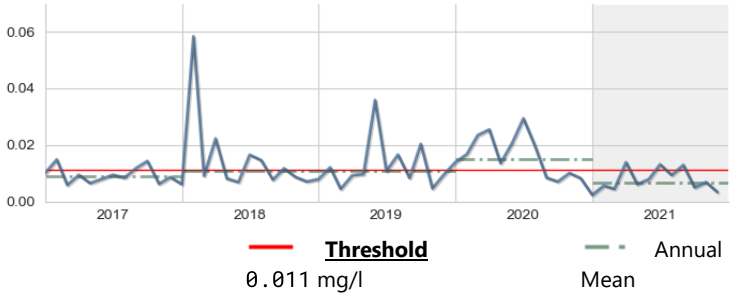
Creek Conditions Ratings are based on comparing nitrogen, phosphorus, chlorophyll and dissolved oxygen to water quality guidelines or regulations. Florida law defines a maximum allowable concentration of chlorophyll *a* and a minimum allowable concentration of dissolved oxygen in these streams. Florida 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 2021	Historical period of record
High	0.1	4.3
Mean	0.0065	0.0092
Low	0.0007	0.0004
No. of Samples	68	1,612

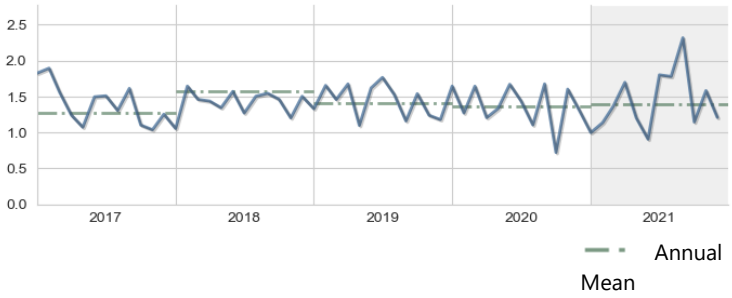
Five-year Rolling Average



Nitrogen, Total

Units: mg/l	Year 2021	Historical period of record
High	4.2	23.8
Mean	1.3988	1.23
Low	0.462	0.00
No. of Samples	68	1,164

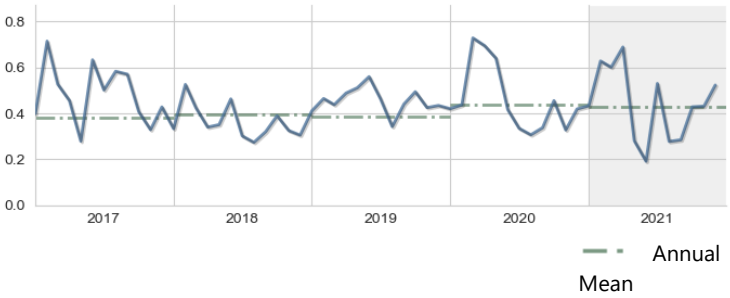
Five-year Rolling Average



Phosphorus, Total

Units: mg/l	Year 2021	Historical period of record
High	3.4	4.8
Mean	0.4268	0.2921
Low	0.062	0.004
No. of Samples	68	1,513

Five-year Rolling Average



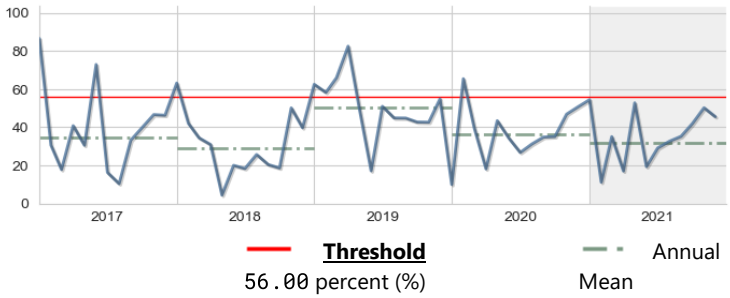
DO Dissolved Oxygen Saturation

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

Score: Caution

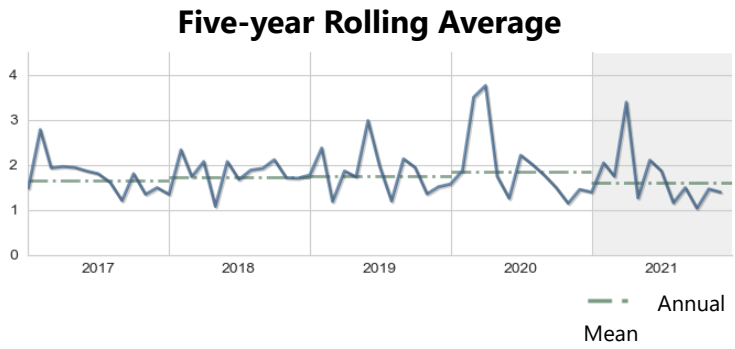
Units: percent (%)	Year 2021	Historical period of record
High	147.7	233.2
Mean	32.02	38.05
Low	0.7386	0.10
No. of Samples	71	852

Five-year Rolling Average



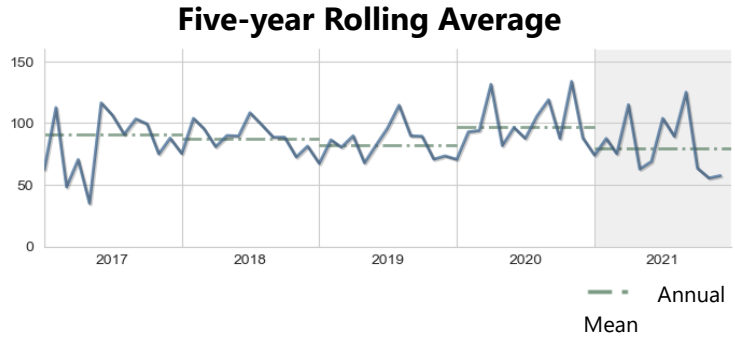
BOD, Biochemical oxygen demand

Units: mg/l	Year 2021	Historical period of record
High	8.1	20.0
Mean	1.6	1.78
Low	1.00	0.50
No. of Samples	68	896



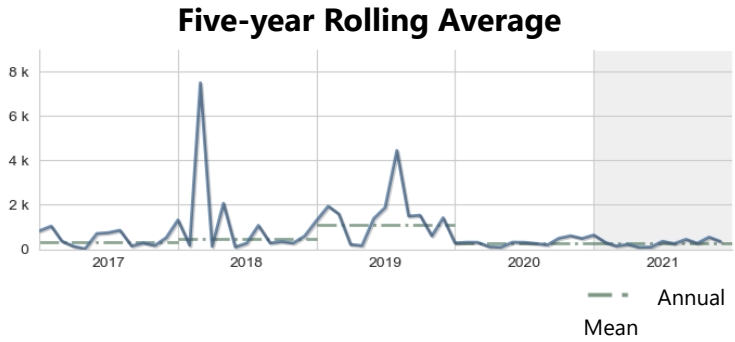
Color

Units: PCU	Year 2021	Historical period of record
High	1,000.0	1,000.0
Mean	79.47	62.79
Low	25.00	4.90
No. of Samples	68	1,706



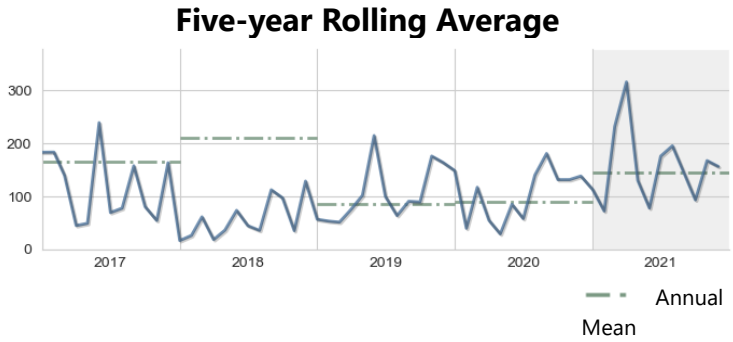
Enterococcus Group Bacteria

Units: cfu/100ml	Year 2021	Historical period of record
High	1,039.0	18,000.0
Mean	259.01	392.2
Low	30.00	10.00
No. of Samples	27	246



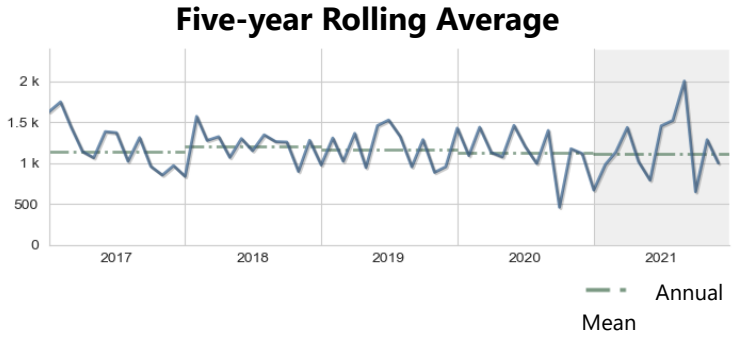
Nitrogen, Ammonia + Ammonium as N

Units: ug/l	Year 2021	Historical period of record
High	1,090.0	2,170.0
Mean	145.56	40.87
Low	8.00	0.008
No. of Samples	68	1,086



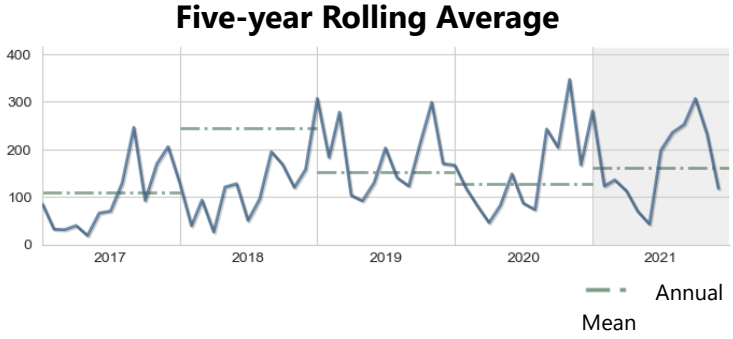
Nitrogen, Kjeldahl

Units: ug/l	Year 2021	Historical period of record
High	3,870.0	23,800.0
Mean	1112.74	1086.42
Low	247.00	80.00
No. of Samples	68	1,563



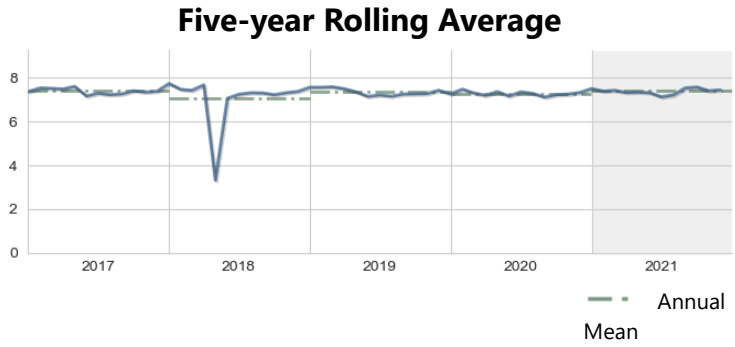
Nitrogen, Nitrite + Nitrate as N

Units: ug/l	Year 2021	Historical period of record
High	1,620.0	4,590.0
Mean	161.7	63.4
Low	4.00	0.00
No. of Samples	68	1,459



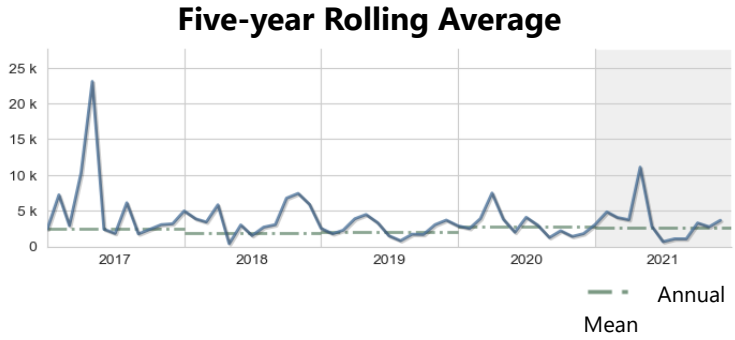
pH

Units: None	Year 2021	Historical period of record
High	8.0	9.3
Mean	7.38	7.39
Low	6.71	0.10
No. of Samples	71	6,352



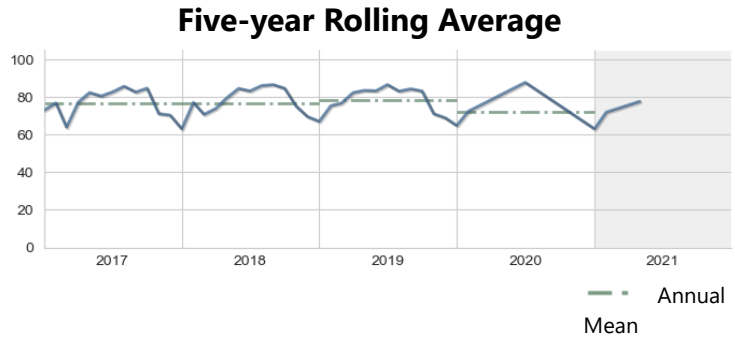
Specific conductance

Units: umho	Year 2021	Historical period of record
High	63,430.0	63,430.0
Mean	2697.14	3643.45
Low	14.38	0.823
No. of Samples	71	5,675



Temperature, water

Units: deg F	Year 2021	Historical period of record
High	193.4	200.9
Mean	164.94	76.82
Low	62.96	46.40
No. of Samples	71	5,976

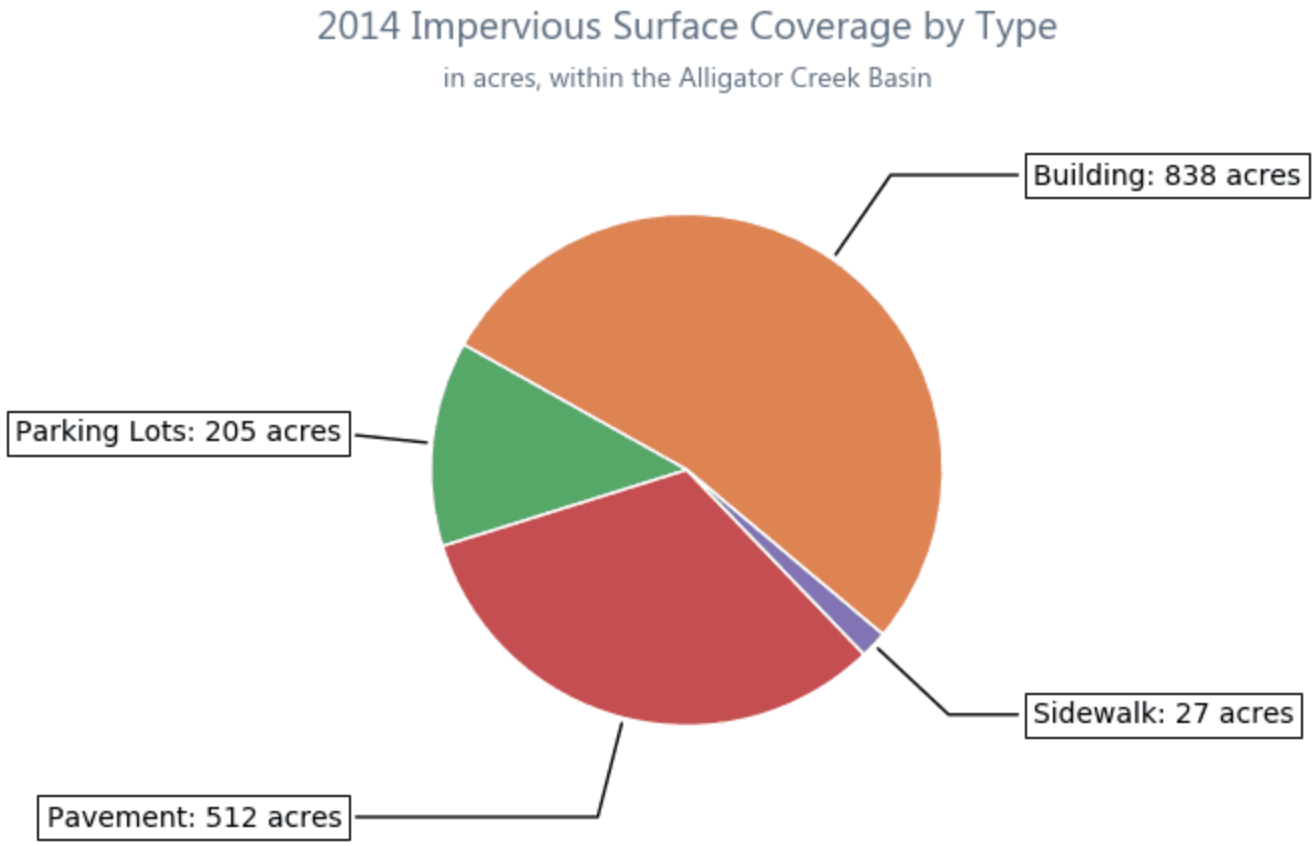


Impervious Features

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.



23% of the land area within the **Alligator Creek Basin** is covered by impervious surfaces

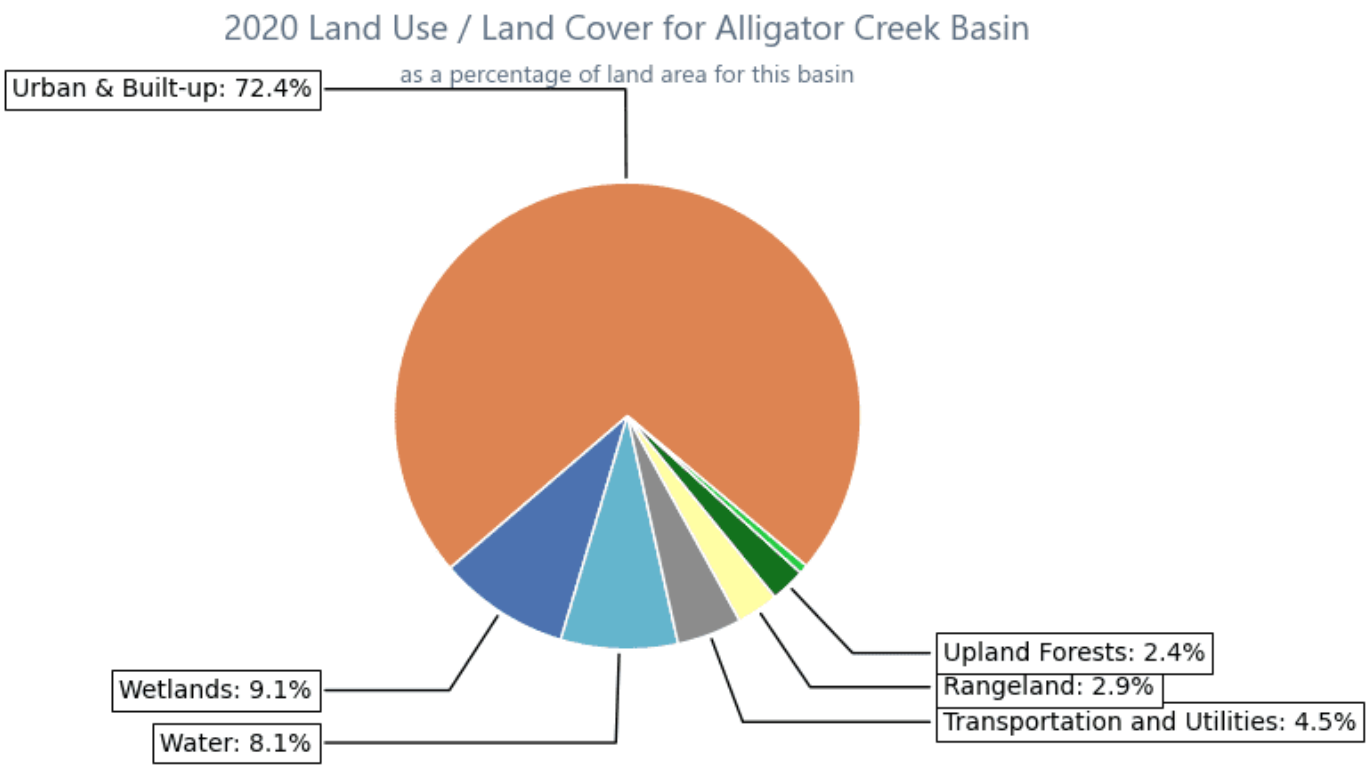


Land Use / Land Cover

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 Alligator Creek Basin

Land Use Classification	1990	1995	1999	2005	2011	2014	2017	2020	Trend
Urban & Built-up	3,990 58.8%	4,415 65%	5,066 74.6%	4,720 69.5%	4,812 70.9%	4,812 70.9%	4,927 72.6%	4,914 72.4%	
Agriculture	73 1.1%	62 0.9%	71 1%	282 4.2%	64 0.9%	64 0.9%	42 0.6%	42 0.6%	
Rangeland	550 8.1%	740 10.9%	95 1.4%	223 3.3%	294 4.3%	294 4.3%	200 2.9%	200 2.9%	
Upland Forests	821 12.1%	230 3.4%	190 2.8%	181 2.7%	173 2.6%	173 2.6%	162 2.4%	162 2.4%	
Water	361 5.3%	610 9%	574 8.4%	484 7.1%	528 7.8%	528 7.8%	548 8.1%	551 8.1%	
Wetlands	737 10.9%	459 6.8%	518 7.6%	619 9.1%	625 9.2%	625 9.2%	618 9.1%	618 9.1%	
Barren Land	22 0.3%	0 0%	2 0%	0 0%	0 0%	0 0%	0 0%	0 0%	
Transportation and Utilities	234 3.4%	272 4%	275 4%	280 4.1%	293 4.3%	293 4.3%	293 4.3%	303 4.5%	


2020 Land Use / Land Cover for Alligator Creek Basin
as a percentage of land area for this basin
Urban & Built-up: 72.4%
Wetlands: 9.1%
Water: 8.1%
Upland Forests: 2.4%
Rangeland: 2.9%
Transportation and Utilities: 4.5%