Alligator Creek Watershed Water Quality Summary

Summary of Data
2006 to Present

Sarasota County

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Summary

The Alligator Creek Watershed is located in Southwest Florida in Sarasota County, and includes all or portions of the communities of South Venice, Venice Gardens, and Plantation. It is home to many wading birds, manatees, and otters; and parts of the creek have been designated as Outstanding Florida Waters and are home to portions of the Lemon Bay Aquatic Preserve. There are many parks in the area and mile of scenic hiking trails, as well as a great place for paddling. It is a beautiful and vibrant area, deserving of recognition and protection. Both the South Venice Civic Association (SVCA) and the Venice Gardens Civic Association's Lakes Committee are active in improving the quality of their local waters, and regularly partner with the County on environmental projects. Unfortunately, parts of the watershed have been designated as impaired, and a subsequent TMDL (Total Maximum Daily Load; defined in the U.S. Clean Water Act as the maximum amount of a pollutant a waterbody can receive and still meet its designated standards) for nutrients has been established. Furthermore, downstream of the watershed, Lemon Bay has been designated as impaired for shellfish harvesting, due to elevated bacteria levels (downgraded from approved to conditional). The purpose of this report is to support both civic associations, to inform the community about the health of the Alligator Creek Watershed, to help guide management decisions, and support the TMDL and Impaired Waters Rule (IWR) efforts.

Trend analyses were conducted and summary statistics presented for the three monitoring projects within the watershed: The Coastal Creeks Program (***Figure 2***), the SVCA Project (***Figure 3***), and the Venice Gardens Lakes/Briarwood Project (***Figure 4***). The County is monitoring the Venice Gardens Lakes to develop data helpful to the operation of the Briarwood Stormwater Treatment Facility (BSTF) located nearby. The BSTF is not included in the analyses or in this report. The County began sampling the lakes in April 2014; whereas, SVCA sampling has occurred since May 2013. With such short periods of record, it is important to remember that the trend analyses for these data are potentially flawed, and caution is advised when interpreting them. However, the County began sampling for the Coastal Creeks Program in 2006; the trend analyses for these data are much more robust, and are much more reliable for drawing inferences. Data were aggregated and analyzed for the entire watershed (the complete dataset), flowing versus non-flowing (only locations within the Venice Gardens Lakes), by

monitoring project, and by waterbody. Summary statistics by parameter are presented for individual sampling locations, as well. Sampling includes taking water samples for laboratory analyses, measuring conditions with field meters, and recording observations of ambient conditions. This report covers the time period from July 2006 through May 2015.

Entire Region and Flowing versus Non-Flowing Waters

There were numerous watershed-wide trends, both increasing and decreasing, for the study period. The only large trend for the entire watershed was a decreasing trend in fecal coliform bacteria (FCOL) at a rate of approximately 58 colony-forming units per 100 milliliters of water (CFU/100mL) per year. The watershed was further divided into flowing and non-flowing waters. For this study, all stream and canal sampling locations were considered flowing; whereas, non-flowing locations were only those contained within the Venice Gardens Lakes (BSTF_TAIL not included). The flowing waters also had a large decreasing trend in FCOL at a rate of about 35 CFU/100mL. The Venice Gardens Lakes system had two large increasing trends; one for Total Kjeldahl Nitrogen (TKN; ~0.799 mg/L per year) and one for Total Nitrogen (TN; ~0.858 mg/L per year). Again, it is noted that caution is advised when interpreting trend results for Venice Gardens Lakes, as the sample size and period of record are small. For detailed results for the entire watershed and flowing vs. non-flowing waters, see ***Section 1***.

Monitoring Projects

The only water quality monitoring projects within the watershed to show large trends were the Coastal Creeks project and the Venice Gardens/Briarwood project (includes BSTF_TAIL). The Venice Gardens/Briarwood project had increasing trends in TKN and TN (~0.507 and ~0.584 mg/L per year, respectively); whereas, the Coastal Creeks project had an increasing FCOL trend of about 57 CFU/100mL per year. The SVCA project (does not include Woodmere Creek sampling locations) had one statistically significant trend; Total Phosphorus (TP) increased at a rate of 0.076 mg/L per year. Once again, caution is advised when interpreting results for the SVCA and Venice Gardens/Briarwood projects due to the small sample size and period of record. For detailed results from the three projects, see ***Section 2.***

Waterbodies and Sampling Locations

Alligator Creek – Period of Record: 28-Jul-06 – 20-May-15

Studies of the four waterbodies showed that Alligator Creek was the most variable with respect to biochemical oxygen demand (BOD; 0.573 – 20 mg/L) and chlorophyll *a* (ChlA-C; 0.34 – 365 µg/L), and may be due to the large salinity gradient among stations. On average, Alligator Creek had the lowest TP levels (Median = 0.201 mg/L), as well as the lowest median OP (0.124 mg/L), TKN (0.97 mg/L), and TN (1.073 mg/L) values. It also had moderate decreasing trends in BOD, NH3, and total suspended solids (TSS), and a large decreasing trend in FCOL (approximately 19 CFU/100mL per year). Sampling locations of note include: ALL-3 with the highest median Salinity (25.07 PSU; the only station classified as polyhaline), lowest median Color (50 PCU), TKN (0.652 mg/L), and TN (0.703 mg/L) values; ALL-2 with the lowest median TP (0.192 mg/L); and ALL was the only mesohaline site (median Salinity = 9.53 PSU).

Briarwood Waterway – Period of Record: 25-Mar-13 – 26-May-15

The Briarwood Waterway had highly variable dissolved oxygen (DO%), ranging from 0.05% to 169.5%. Briarwood also had the highest median concentrations of (NH3; 0.923 mg/L) and Nitrite + Nitrate (NOx; 0.172 mg/L). There were no statistically significant trends for the Briarwood Waterway; however, the period of record is small and results may change as more data is collected. Location Briar-Head had the highest median NH3 concentrations (1.300 mg/L), and Briar-Tail had the highest median NOx concentrations (0.496 mg/L). The Briarwood Waterway was very variable with respect to inorganic nutrients. The ranges for NH3, NOx, and OP were 2.422, 0.948, and 1.658 mg/L. In the future, these data should be compared to rainfall within the watershed, and to discharges from the BSTF in order to illuminate any relationships.

Datura Ditch – Period of Record: 17-Jun-08 – 23-Apr-12

The Datura Ditch had no statistically significant trends; however, the period of record is small and results may change as more data is collected. This waterbody lowest median values for DO% (49.4%), BOD (1.06 mg/L), TSS (3.0 mg/L), and Turbidity (TURB; 1.55 NTU); and the highest for Color (170 PCU) and FCOL (5200 CFU/100mL). Station ALL-4 had the lowest medians for BOD (0.65 mg/L), TSS (2.6 mg/L), and TURB (1.17 NTU), and the highest median FCOL (6600 CFU/100mL).

Siesta Waterway – Period of Record: 17-Jun-08 – 26-May-15

The Siesta Waterway had one small decreasing trend in NOx (-0.038 mg/L per year) and a very large decreasing trend for FCOL (-151 CFU/100mL per year); there were no other significant trends for this waterbody; however the period of record is fairly small. This waterbody had the lowest median values for ChlA-C (4.055 µg/L), and the highest for Orthophosphate (OP; 0.799 mg/L) and TP (1.04 mg/L). Notable sampling locations in the Siesta Waterway include: Siesta-Head had the lowest median DO% (26.30%); ALL-6 had the highest median Color (350 PCU), OP (0.974 mg/L), TP (1.320 mg/L), and TSS (43.6 mg/L), and the lowest median NOx (all non-detects); and Siesta-Tail had the lowest median ChlA-C (1.12 µg/L) and NH3 concentrations (0.022 mg/L). Siesta-Head had one anomalous sampling event that occurred on 08-Sep-14; the sample was extremely high for TP (4.78 mg/L), TKN (23.8 mg/L), BOD (17 mg/L), and TSS (2268 mg/L). It also had high concentrations of pheophytin *a* (191 µg/L), a by-product of the decomposition or degradation of chlorophyll *a*. With all these factors combined, it appears that the sample contained a large amount of dead phytoplankton and may indicate a recent algae bloom followed by a crash, which lead to the low DO% (2.9%) that occurred that day.

Venice Gardens Lakes – Period of Record: 08-Aug-13 – 13-May-15

The results for the Venice Gardens Lakes waterbody are the same as when comparing flowing vs. non-flowing waters (they are the same data). However, when compared to the other three waterbodies in the watershed, Venice Gardens Lakes had the highest median DO% (82.6%), BOD (6.34 mg/L), ChlA-C (105 µg/L), TKN (2.700 mg/L), TN (2.732 mg/L), TSS (31.9 mg/L), and TURB (23.0 NTU). It also had the lowest median FCOL (160 CFU/100mL), NH3 (0.035 mg/L), NOx (0.013 mg/L), and OP (0.005 mg/L). It is also the only waterbody in the study that is always fresh water (never exceeding 0.5 PSU). The Florida Department of Environmental Protection defines all four waterbodies as predominantly freshwater (<4580 µmhos/cm conductivity) and defines stations ALL and ALL-3 as predominantly marine. This is the only predominantly freshwater segment to achieve the new DO standard. It also had the most variable DO% (range = 188.5) of all the waterbodies. There were two notable stations in the Venice Gardens Lakes: VEN_GAR-2 with the highest median DO% (103.80%), ChlA-C (155.00 µg/L), TKN (3.010 mg/L), TN (3.016 mg/L), and TURB (35.00 NTU), and the lowest median Salinity (0.15 PSU), FCOL (100 cfu/mL), and OP (0.004 mg/L); and VEN_GAR-3 with the highest median BOD values (7.08 mg/L).

For detailed results for waterbodies, see ***Section 3***; and for sampling location-specific summaries, see ***Section 4***. Stations were ranked against each other based upon water quality parameters, with lower numbers indicating better water quality and higher numbers indicating poorer water quality.

Conclusions and Recommendations

For the entire watershed, and within the smaller study segments, it is encouraging to see declining trends in FCOL. Although smaller in scale, improving trends in BOD and NH3 are encouraging. However, we still need to be diligent in reducing other nutrients that show increasing trends, albeit at smaller scales. These trends are further bolstered for flowing waters, the Coastal Creeks program, and the Alligator Creek waterbody, all of which benefitted from having a more robust dataset. The lack of statistically significant trends in both the Siesta and Briarwood Waterways are most likely due to the limited data, and require further study and future analyses. Although the data for these areas are scant, we can still glean some information from them. For instance, the Siesta waterway has relatively good water quality, with the exceptions of phosphorus (both TP and OP) and FCOL. Whereas, results for Briarwood were more similar to Venice Gardens Lakes. Not surprising, as the lakes feed directly into Briarwood.

The high values for organic nutrients, water clarity parameters and DO%, combined with the low values for inorganic nutrients are most likely due to high levels of phytoplankton within the Venice Gardens Lakes. The phytoplankton take up the inorganic nutrients so rapidly that they become virtually undetectable, and their sheer numbers cause the organic fractions of nutrients to rise, as well as Color, TURB, and TSS. This would explain the elevated DO% and BOD levels, as well as the large range of DO% values (from 8.9% to 197.4%). Additional data are required for more accurate analyses of trends, and for a better understanding of the dynamics within the lakes.

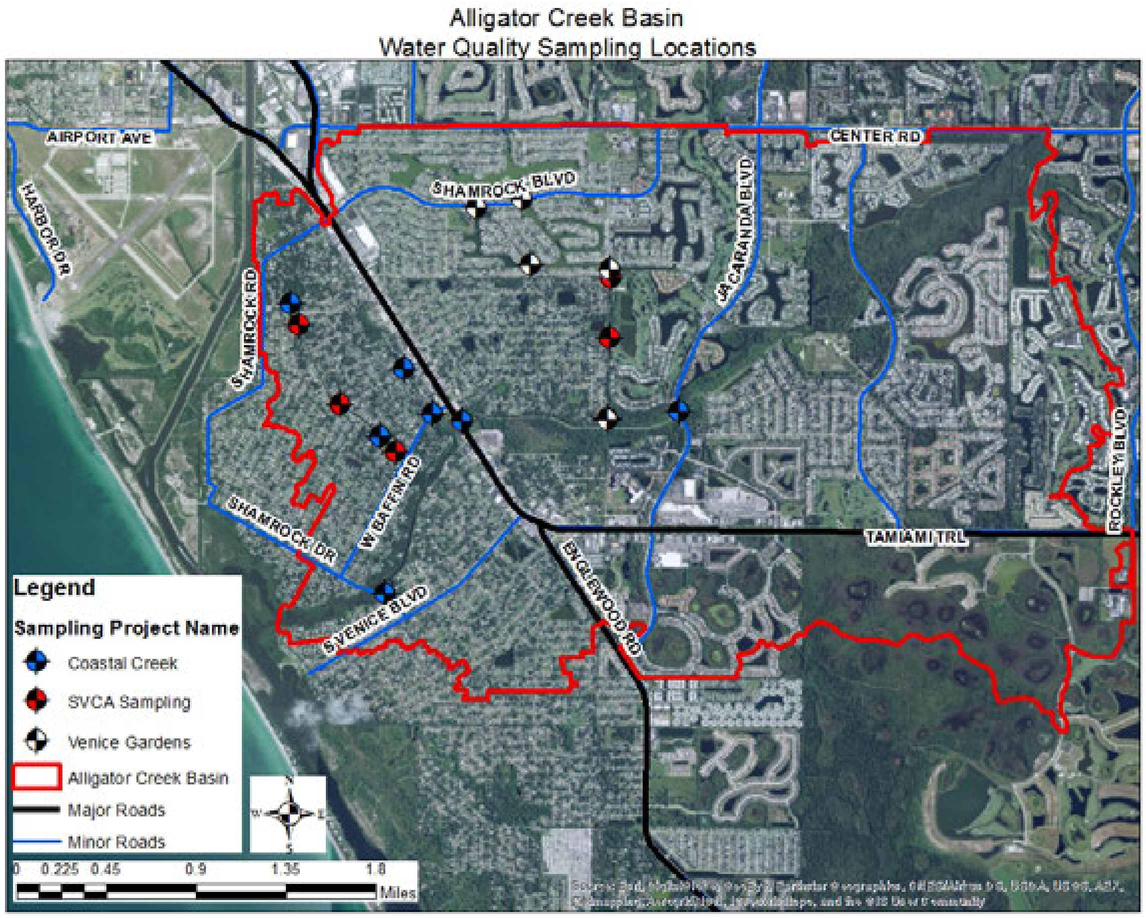


Figure 1. All sampling locations used in this study.

For sampling location descriptions and site information, see individual project-specific detailed maps (Figures 2 – 4).

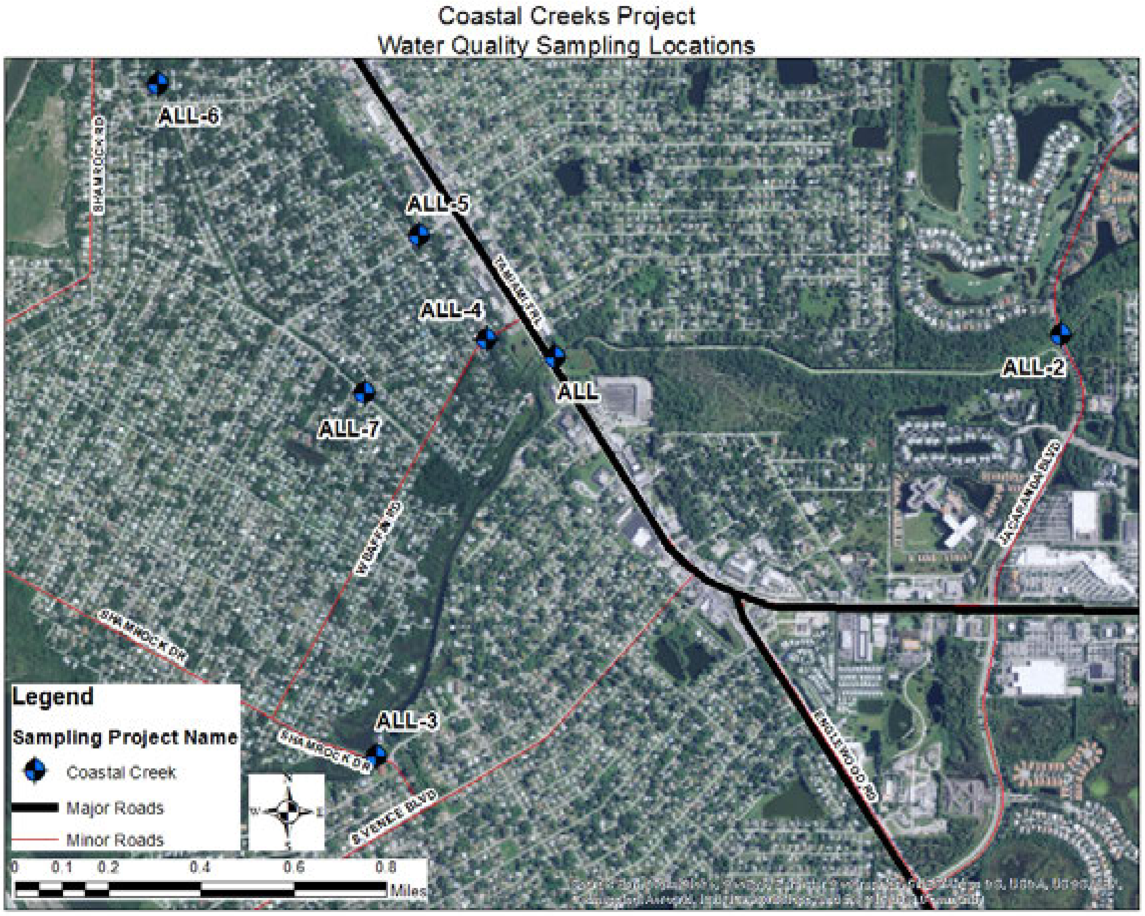


Figure 2. Coastal Creeks Project sampling locations used in this study. Note: these data were only used for analyses of the entire region and watershed-specific (Alligator Creek and Woodmere Creek) analyses.

Table 1. Coastal Creeks Sampling Locations

STATION ID	STATION NAME	WATERBODY	WBID	WATERSHED
ALL	Alligator Creek at US 41, Venice	Alligator Creek	2030	Alligator Creek
ALL-2	Alligator Creek at Jacaranda Blvd.	Alligator Creek	2030A	Alligator Creek
ALL-3	Alligator Creek at Shamrock Blvd.	Alligator Creek	2030	Alligator Creek
ALL-4	W. Baffin at Datura	Alligator Creek	2030	Alligator Creek
ALL-5	Seminole at Datura	Alligator Creek	2030	Alligator Creek
ALL-6	Zephyr Rd. at Siesta Dr.	Alligator Creek	2018	Alligator Creek
ALL-7	Siesta Dr. at Roanoke Rd.	Alligator Creek	2030	Alligator Creek

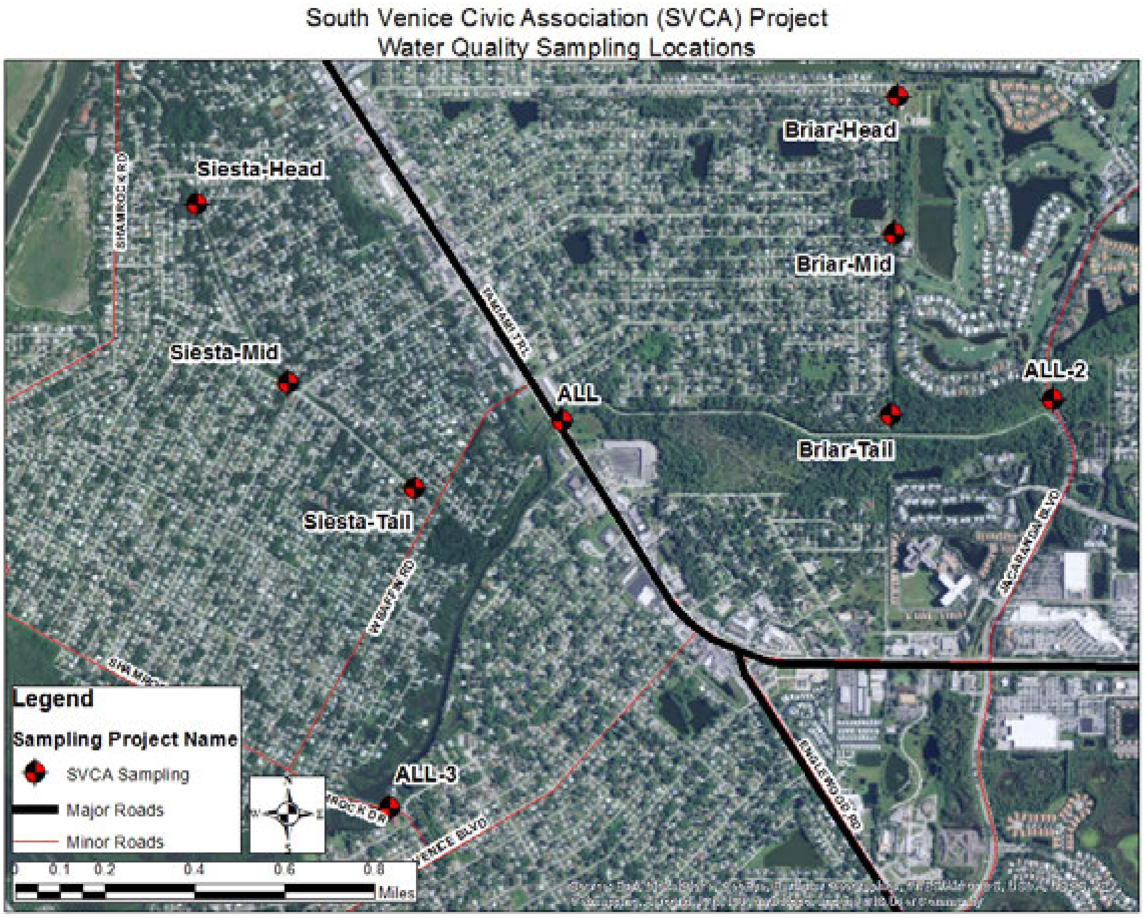


Figure 3. South Venice Civic Association (SVCA) Project sampling locations.

Table 2. South Venice Civic Association (SVCA) Sampling Locations

STATION ID	AKA	STATION NAME	WATERBODY	WBID	WATERSHED
ALL		Alligator Creek at US 41, Venice	Alligator Creek	2030	Alligator Creek
ALL-2		Alligator Creek at Jacaranda Blvd.	Alligator Creek	2030A	Alligator Creek
ALL-3		Alligator Creek at Shamrock Blvd.	Alligator Creek	2030	Alligator Creek
Briar-Head		North End of Briarwood Canal	Briarwood Waterway	2030A	Alligator Creek
Briar-Mid		Midway along Briarwood canal North of Golf Course Facility	Briarwood Waterway	2030A	Alligator Creek
Briar-Tail	BSTF_TAIL	Briarwood Canal at Trojan Rd	Briarwood Waterway	2030A	Alligator Creek
Siesta-Head		Quincy at North Quincy	Siesta Waterway	2018	Alligator Creek
Siesta-Mid		Quincy at Burke	Siesta Waterway	2018	Alligator Creek
Siesta-Tail		Siesta Dr. North of Baffin	Siesta Waterway	2030	Alligator Creek

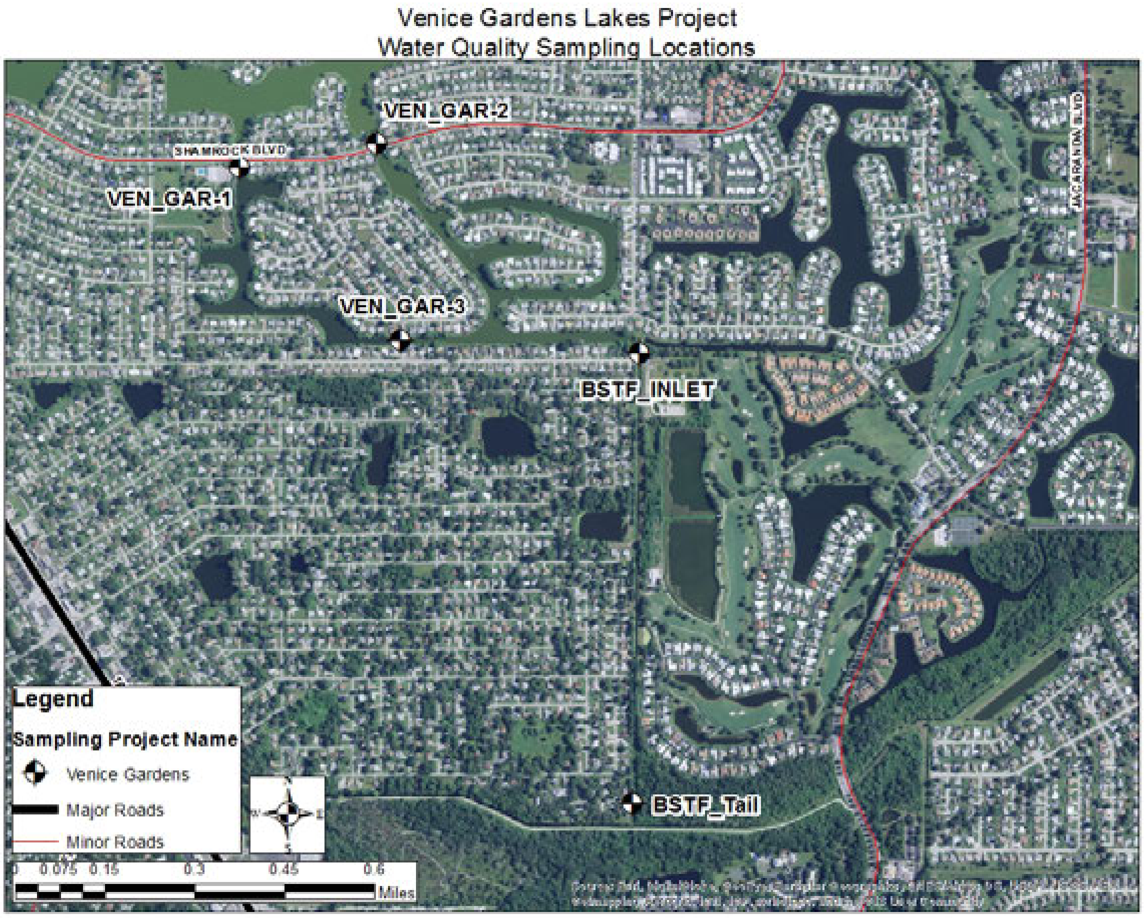


Figure 4. Venice Gardens Lakes/Briarwood Stormwater Treatment Facility (BSTF) sampling locations.

Table 3. Venice Gardens Lakes Sampling Locations

STATION ID	AKA	STATION NAME	WATERBODY	WBID	WATERSHED
BSTF_INLET		Surface at Inlet Structure to BSTF	Venice Gardens Lakes	2030A	Alligator Creek
BSTF_INLET		Deep at Inlet Structure to BSTF	Venice Gardens Lakes	2030A	Alligator Creek
BSTF_TAIL	Briar-Tail	Briarwood Waterway at Trojan Rd. (Current SVCA sampling location)	Briarwood Waterway	2030A	Alligator Creek
VEN_GAR-1		Boat Ramp at Community Center	Venice Gardens Lakes	2030A	Alligator Creek
VEN_GAR-2		Upstream Bridge Crossing at Shamrock and La Gorge Dr.	Venice Gardens Lakes	2030A	Alligator Creek
VEN_GAR-3		Upstream Bridge Crossing at Valencia Dr and Briarwood Rd.	Venice Gardens Lakes	2030A	Alligator Creek

Glossary

Biochemical Oxygen Demand (mg/L): is the amount of dissolved oxygen (DO) required by aquatic aerobic organisms in order to break down organic materials. In this study, Biochemical Oxygen Demand (BOD) is reported as the milligrams of DO consumed in one liter of water within five days in darkness at 20˚C, and is used as a proxy for the amount of organic pollution of water.

Chlorophyll *a* (µg/L): is a green pigment used by plants for photosynthesis and is a useful indicator of algae levels in the water; important because algae form the base of the food chain and help in oxygenating the water, but too much algae can cause oxygen levels to collapse due to decomposition of dead algae. In this study corrected chlorophyll *a* (corrected for pheophytin, a pigment resulting from the decomposition of chlorophyll; ChlA-C) is used, and is measured in micrograms per liter (µg/L).

Color (PCU): is a measure of colored dissolved organic matter (such as tannins) in the water. It can be true (filtered to remove chlorophyll and other particulates) or apparent (not filtered). This study uses Apparent Color, which is measured in platinum/cobalt units (PCU) and approximates milligrams per liter.

Dissolved oxygen (DO%): is the concentration of oxygen contained in the water; it is influenced by water temperature and salinity (the higher the temperature or salinity, the lower the amount of oxygen that can dissolve in the water); it is necessary for organisms to breathe; at low levels, fish and other animals can become stressed or even die. Dissolved Oxygen (DO) concentration is measured in milligrams per liter (mg/L); however, for this study, dissolved oxygen percent saturation (DO%) was used. This is the percentage of oxygen in the water compared to saturation levels at the specific temperature and salinity.

Fecal Coliform Bacteria (CFU/100mL): rod-shaped bacteria that can grow in elevated temperatures and are usually associated with the fecal material of warm blooded animals; includes E. coli. In this study, fecal coliforms (FCOL) were measured in colony-forming units per 100 milliliters of water (CFU/100mL).

Inorganic: not relating to or arising from living organisms; usually does not contain carbon.

Organic: related to or arising from living organisms; always contains carbon.

Phaeophytin: is a grayish-green plant pigment that results from a digested or degraded chlorophyll molecule and lacks the central magnesium ion. These digested and degraded chlorophylls are collectively called phaeopigments. For each form of chlorophyll (*a*, *b*, *c*, etc.) there is a corresponding phaeophytin (fluoresces in response to excitation light) and phaeophorbide (colorless and does not fluoresce).

Salinity (PSU): is a measure of how salty water is; important because of its influence on DO and other compounds in the water; it influences where certain aquatic organisms are found (i.e., in freshwater or salt water); measured in Practical Salinity Units (PSU), 1 PSU = 1 part per thousand (ppt). The Venice System of 1958 places salinity ranges into the following classifications:

Class	**Salinity Range (PSU)**
Hyperhaline	>40
Euhaline (Marine)	30 - 40
Mixohaline (Brackish)	
Polyhaline	18 - 30
Mesohaline	5 - 18
Oligohaline	0.5 - 5
Limnetic (Freshwater)	<0.5

Total Nitrogen (mg/L): is a necessary nutrient for plant growth; at low levels it may limit plant growth but at high levels it can cause excess growth (blooms); plants require inorganic forms such as Ammonia (NH3), nitrites and nitrates. Total nitrogen (TN) is a measure all the organic and inorganic forms of nitrogen that are dissolved in the water, and is calculated by adding Nitrate + Nitrite (NOx) and Total Kjeldahl Nitrogen (TKN), and is measured in milligrams per liter (mg/L). Total Kjeldahl Nitrogen is named for Johan Kjeldahl, a Danish chemist who worked for the Carlsberg Brewery and developed a method for determining the amount of ammonia + organic nitrogen in organic compounds. Ammonia, NOx, and TKN are all measured in milligrams per liter (mg/L) for this study.

Total Phosphorus (mg/L): is a nutrient required by plants; plants require inorganic forms such as Orthophosphate (OP). Total phosphorus (TP**)** is a measure of all organic and inorganic forms dissolved in the water and is used in this study. Parts of Florida (e.g., the Bone Valley) are naturally high in phosphorus. Human sources include: detergents, fertilizers, water softeners and pesticides. Both TP and OP are measured in milligrams per liter (mg/L) for this study.

Total Suspended Solids (mg/L): is a measure of all suspended particulates in the water column. It is important because too many suspended solids will shade aquatic plants, preventing their growth; it also gives waters a murky appearance. Total Suspended Solids (TSS) is measured in milligrams per liter (mg/L).

Turbidity (NTU): measures the cloudiness of water. Its measure is influenced by Total Suspended Solids, Color, and Chlorophyll a. Turbidity (TURB) is measured in Nephelometric Turbidity Units (NTU; derived from nephele, Greek for cloud) and is approximately equivalent to milligrams per liter.

Table 4. Physical & Chemical Parameters

PARAMETERS	
Field	**Laboratory**
Temperature**	Ammonia (NH3)
Specific Conductance**	Nitrate + Nitrite (NOx)
Salinity	Total Kjeldahl Nitrogen (TKN)
pH**	Total Nitrogen (TN)
Dissolved Oxygen (DO)	Orthophosphate (OP)
DO Percent Saturation (DO%)	Total Phosphorus (TP)
Depth	Corrected Chlorophyll *a* (ChlA-C)
	Pheophytin**
	Apparent Color
	Biochemical Oxygen Demand (BOD)
	Turbidity (TURB)
	Total Suspended Solids (TSS)
	Volatile Suspended Solids (VSS)**
	Fecal Coliform (FCOL)
	Enterococci*
	E. coli*

* - Collection of these parameters began in May 2015, and data are not included in the analyses for this report.
** - Indicates that these parameters were not explored in this study.

Section 1. Trend Analyses and Summary Statistics for the Entire Alligator Creek Watershed

Table 5. Alligator Creek Watershed

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	Y	↑	0.18
DO%	Y	↑	2.03
BOD	N	N/A	N/A
ChlA-C	Y	↑	0.51
Color	Y	↑	2.83
FCOL	Y	↓	-58.04
NH3	Y	↓	-0.012
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	Y	↑	0.139
TN	Y	↑	0.158
TP	Y	↑	0.014
TSS	Y	↑	0.33
TURB	Y	↑	0.30

Table 6. Key to Trend Tables

↑ or ↓ (large)	Large Trend
↑ or ↓ (moderate)	Moderate Trend
↑ or ↓ (small)	Small Trend
Y/N	Was a Statistically Significant Trend Detected?
(green)	Water Quality Improving with Respect to this Parameter.
(red)	Water Quality Declining with Respect to this Parameter.
(beige)	Water Quality is Neither Improving or Declining with Respect to this Parameter.

Table 7. Alligator Creek Watershed

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	54	477	477	0	0.00%	0.05	197.4	58.49
Salinity	0.69	481	481	0	0.00%	0.06	34.72	5.148
BOD	1.97	422	403	19	4.50%	0.5	20	3.137
ChlA-C	13.6	422	422	0	0.00%	0.28	365	37.46
Color	80	422	422	0	0.00%	5	400	88.39
FCOL	635	517	504	13	2.51%	10	96000	3031
NH3	0.138	436	379	57	13.07%	0.008	2.43	0.214
NOx	0.078	436	351	85	19.50%	0.004	0.952	0.104
OP	0.144	422	380	42	9.95%	0.002	1.66	0.225
TKN	1.13	436	436	0	0.00%	0.126	23.8	1.526
TN	1.26	436	436	0	0.00%	0.126	23.81	1.629
TP	0.249	436	436	0	0.00%	0.045	4.78	0.369
TSS	6.6	422	415	7	1.66%	0.57	2268	19.49
TURB	3.2	422	422	0	0.00%	0.52	85	7.094

Table 8. Flowing Waters (Canals and Streams) Only

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	Y	↓	-0.09
ChlA-C	Y	↓	-0.72
Color	N	N/A	N/A
FCOL	Y	↓	-35.19
NH3	Y	↓	-0.007
NOx	Y	↑	0.009
OP	Y	↑	0.013
TKN	Y	↑	0.058
TN	Y	↑	0.076
TP	Y	↑	0.021
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 9. Venice Gardens Lakes

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	Y	↑	64.24
Color	N	N/A	N/A
FCOL	N	N/A	N/A
NH3	Y	↑	0.027
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	Y	↑	0.799
TN	Y	↑	0.858
TP	Y	↑	0.080
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 10. Flowing Waters (Canals and Streams) Only

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	51.15	412	412	0	0.00%	0.05	175.1	54.41
Salinity	0.75	416	416	0	0.00%	0.06	34.72	5.924
BOD	1.76	366	347	19	5.19%	0.5	20	2.55
ChlA-C	11.15	366	366	0	0.00%	0.28	365	23.53
Color	80	366	366	0	0.00%	5	400	82.04
FCOL	800	465	453	12	2.58%	10	96000	3323
NH3	0.16	366	331	35	9.56%	0.008	2.43	0.25
NOx	0.083	366	326	40	10.93%	0.004	0.952	0.119
OP	0.148	366	364	2	0.55%	0.002	1.66	0.259
TKN	1.04	366	366	0	0.00%	0.126	23.8	1.283
TN	1.169	366	366	0	0.00%	0.126	23.81	1.401
TP	0.251	366	366	0	0.00%	0.066	4.78	0.393
TSS	5.4	366	359	7	1.91%	0.57	2268	17.31
TURB	2.7	366	366	0	0.00%	0.52	85	4.435

Table 11. Venice Gardens Lakes

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	82.6	65	65	0	0.00%	8.9	197.4	84.32
Salinity	0.18	65	65	0	0.00%	0.13	0.36	0.179
BOD	6.34	56	56	0	0.00%	3.25	16.3	6.971
ChlA-C	105	56	56	0	0.00%	32	300	128.5
Color	140	56	56	0	0.00%	50	250	129.9
FCOL	160	52	51	1	1.92%	10	6200	415.6
NH3	0.0345	70	48	22	31.43%	0.008	0.085	0.0295
NOx	0.013	70	25	45	64.29%	0.004	0.855	0.0309
OP	0.005	56	16	40	71.43%	0.002	0.033	0.00338
TKN	2.7	70	70	0	0.00%	1.97	5.11	2.795
TN	2.732	70	70	0	0.00%	1.97	5.11	2.824
TP	0.243	70	70	0	0.00%	0.045	0.448	0.245
TSS	31.9	56	56	0	1.91%	5.6	95	33.73
TURB	23	56	56	0	0.00%	8.4	63	24.47

Section 2. Project Trend Analyses and Summary Statistics

Table 12. Coastal Creeks Sampling Program within the Alligator Creek Watershed

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	Y	↑	1.14
Color	N	N/A	N/A
FCOL	Y	↑	57.31
NH3	Y	↓	-0.013
NOx	Y	↑	0.010
OP	N	N/A	N/A
TKN	Y	↑	0.061
TN	Y	↑	0.072
TP	N	N/A	N/A
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 13. Summary Statistics Coastal Creeks Sampling Program

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	50.3	237	237	0	0.00%	1.3	175.1	54.36
Salinity	0.81	240	240	0	0.00%	0.4	34.72	6.786
BOD	2	190	181	9	4.74%	0.5	20	2.997
ChlA-C	14.55	190	190	0	0.00%	0.28	365	28.71
Color	72.5	190	190	0	0.00%	5	400	82.66
FCOL	1000	294	293	1	0.34%	10	96000	4366
NH3	0.167	190	186	4	2.11%	0.008	0.712	0.184
NOx	0.07	190	163	27	14.21%	0.004	0.261	0.072
OP	0.122	190	190	0	0.00%	0.033	1.46	0.175
TKN	0.99	190	190	0	0.00%	0.126	3.24	1.013
TN	1.079	190	190	0	0.00%	0.126	3.244	1.084
TP	0.208	190	190	0	0.00%	0.066	1.48	0.272
TSS	5.4	190	189	1	0.53%	0.57	204	10.91
TURB	2.5	190	190	0	0.00%	0.52	64.4	3.793

Table 14. SVCA Sampling Program within the Alligator Creek Watershed

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	N	N/A	N/A
Color	N	N/A	N/A
FCOL	N	N/A	N/A
NH3	N	N/A	N/A
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	N	N/A	N/A
TN	N	N/A	N/A
TP	Y	↑	0.076
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 15. SVCA Sampling Program

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	51.7	163	163	0	0.00%	0.05	169.5	53.03
Salinity	0.67	164	164	0	0.00%	0.06	29.48	5.06
BOD	1.43	164	154	10	6.10%	0.5	19.6	2.029
ChlA-C	105	164	164	0	0.00%	0.34	274	18.18
Color	140	164	164	0	0.00%	25	160	81.37
FCOL	510	160	149	11	6.88%	10	19000	1496
NH3	0.134	164	133	31	18.90%	0.008	2.43	0.3
NOx	0.102	164	151	13	7.93%	0.004	0.952	0.149
OP	0.194	164	162	2	1.22%	0.002	1.56	0.348
TKN	1.1	164	164	0	0.00%	0.561	23.8	1.547
TN	1.26	164	164	0	0.00%	0.576	23.81	1.696
TP	0.325	164	164	0	0.00%	0.069	4.78	0.522
TSS	5.4	164	159	5	3.05%	0.6	2268	25.41
TURB	2.8	164	164	0	0.00%	0.6	85	5.208

Table 16. Venice Gardens Lakes/Briarwood Sampling Program

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	N	N/A	N/A
Color	N	N/A	N/A
FCOL	N	N/A	N/A
NH3	Y	↑	0.032
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	Y	↑	0.507
TN	Y	↑	0.584
TP	Y	↑	0.086
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 17. Venice Gardens Lakes/Briarwood Sampling Program

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	81.8	77	77	0	0.00%	8.9	197.4	82.75
Salinity	0.18	77	77	0	0.00%	0.13	0.57	0.228
BOD	6.34	68	68	0	0.00%	0.697	16.3	6.203
ChlA-C	105	68	68	0	0.00%	1.77	300	108.4
Color	140	68	68	0	0.00%	50	250	121.3
FCOL	200	63	62	1	1.59%	10	6200	697.3
NH3	0.0375	82	60	22	26.83%	0.008	2.17	0.113
NOx	0.042	82	37	45	54.88%	0.004	0.917	0.0898
OP	0.0115	68	28	40	58.82%	0.002	1.66	0.0716
TKN	2.565	82	82	0	0.00%	0.918	5.11	2.672
TN	2.636	82	82	0	0.00%	1.292	5.11	2.759
TP	0.255	82	82	0	0.00%	0.045	1.75	0.288
TSS	28	68	67	1	1.47%	0.6	95	29.17
TURB	20	68	68	0	0.00%	0.76	63	20.87

Section 3. Waterbody Trend Analyses and Summary Statistics

Table 18. Alligator Creek Waterbody

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	Y	↓	-0.10
ChlA-C	N	N/A	N/A
Color	N	N/A	N/A
FCOL	Y	↓	-19.31
NH3	Y	↓	-0.014
NOx	Y	↑	0.006
OP	Y	↑	0.004
TKN	Y	↑	0.031
TN	Y	↑	0.041
TP	N	N/A	N/A
TSS	Y	↓	-0.20
TURB	N	N/A	N/A

Table 19. Alligator Creek Waterbody

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	50.4	226	226	0	0.00%	1.3	160.5	52.89
Salinity	4.49	229	229	0	0.00%	0.24	34.72	10.21
BOD	1.85	256	245	11	4.30%	0.573	20	2.758
ChlA-C	12.8	256	256	0	0.00%	0.34	365	27.08
Color	70	256	256	0	0.00%	5	150	70.41
FCOL	400	253	247	6	2.37%	10	46000	1717
NH3	0.138	256	236	20	7.81%	0.01	0.712	0.144
NOx	0.078	256	227	29	11.33%	0.004	0.403	0.084
OP	0.124	256	256	0	0.00%	0.023	0.691	0.136
TKN	0.97	256	256	0	0.00%	0.126	3.24	1
TN	1.073	256	256	0	0.00%	0.126	3.244	1.083
TP	0.201	256	256	0	0.00%	0.066	0.812	0.226
TSS	5.2	256	253	3	1.17%	0.57	204	9.069
TURB	2.6	256	256	0	0.00%	0.52	64.4	3.502

Table 20. Briarwood Waterway

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	N	N/A	N/A
Color	N	N/A	N/A
FCOL	N	N/A	N/A
NH3	N	N/A	N/A
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	N	N/A	N/A
TN	N	N/A	N/A
TP	N	N/A	N/A
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 21. Briarwood Waterway

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	59.9	52	52	0	0.00%	0.05	169.5	61.45
Salinity	0.49	53	53	0	0.00%	0.15	0.58	0.432
BOD	1.89	53	53	0	0.00%	0.556	8.55	2.458
ChlA-C	8.78	53	53	0	0.00%	1.33	125	22.89
Color	80	53	53	0	0.00%	50	160	88.02
FCOL	1705	51	50	1	1.96%	10	12000	2828
NH3	0.923	53	50	3	5.66%	0.008	2.43	0.881
NOx	0.172	53	48	5	9.43%	0.004	0.952	0.277
OP	0.227	53	51	2	3.77%	0.002	1.66	0.271
TKN	2.3	53	53	0	0.00%	0.918	6.74	2.287
TN	2.454	53	53	0	0.00%	1.154	6.745	2.563
TP	0.404	53	53	0	0.00%	0.207	1.75	0.46
TSS	7.8	53	51	2	3.77%	0.6	85	14.99
TURB	5.2	53	53	0	0.00%	0.62	36	7.432

Table 22. Datura Ditch

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	N	N/A	N/A
Color	N	N/A	N/A
FCOL	N	N/A	N/A
NH3	N	N/A	N/A
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	N	N/A	N/A
TN	N	N/A	N/A
TP	N	N/A	N/A
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 23. Datura Ditch

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	49.4	48	48	0	0.00%	7.2	141.7	53.18
Salinity	0.71	48	48	0	0.00%	0.53	4.58	0.805
BOD	1.06	8	8	0	0.00%	0.533	4.35	1.412
ChlA-C	6.19	8	8	0	0.00%	0.28	23.9	8.466
Color	170	8	8	0	0.00%	140	200	172.5
FCOL	5200	66	66	0	0.00%	90	96000	10198
NH3	0.28	8	8	0	0.00%	0.136	0.546	0.316
NOx	0.035	8	7	1	12.50%	0.013	0.244	0.113
OP	0.587	8	8	0	0.00%	0.2	0.76	0.553
TKN	1.19	8	8	0	0.00%	0.905	1.71	1.211
TN	1.304	8	8	0	0.00%	0.937	1.745	1.309
TP	0.624	8	8	0	0.00%	0.3	0.999	0.652
TSS	3	8	8	0	0.00%	1.4	36	9.55
TURB	1.545	8	8	0	0.00%	0.67	8.4	2.861

Table 24. Siesta Waterway

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	N	N/A	N/A
Color	N	N/A	N/A
FCOL	Y	↓	-150.75
NH3	Y	↓	-0.020
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	N	N/A	N/A
TN	N	N/A	N/A
TP	N	N/A	N/A
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 25. Siesta Waterway

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	51.35	86	86	0	0.00%	2.9	175.1	54.85
Salinity	0.78	86	86	0	0.00%	0.06	1.28	0.755
BOD	1.19	49	41	8	16.33%	0.506	17	1.756
ChlA-C	4.59	49	49	0	0.00%	0.38	51.9	8.167
Color	100	49	49	0	0.00%	70	400	121.5
FCOL	1055	95	90	5	5.26%	10	40000	3090
NH3	0.122	49	37	12	24.49%	0.009	0.401	0.107
NOx	0.114	49	44	5	10.20%	0.006	0.465	0.131
OP	0.799	49	49	0	0.00%	0.045	1.56	0.842
TKN	1.06	49	49	0	0.00%	0.561	23.8	1.687
TN	1.21	49	49	0	0.00%	0.576	23.81	1.817
TP	1.04	49	49	0	0.00%	0.325	4.78	1.149
TSS	5	49	47	2	4.08%	1	2268	64.13
TURB	2.5	49	49	0	0.00%	0.6	85	6.329

Table 26. Venice Gardens Lakes

Parameter	Trend (Y/N)	Direction (↑/↓)	Rate (per year)
DO	N	N/A	N/A
DO%	N	N/A	N/A
BOD	N	N/A	N/A
ChlA-C	Y	↑	64.24
Color	N	N/A	N/A
FCOL	N	N/A	N/A
NH3	Y	↑	0.027
NOx	N	N/A	N/A
OP	N	N/A	N/A
TKN	Y	↑	0.799
TN	Y	↑	0.858
TP	Y	↑	0.080
TSS	N	N/A	N/A
TURB	N	N/A	N/A

Table 27. Venice Gardens Lakes

Parameter	Median	N	# Detects	# Non-Detects	% Non-Detects	Minimum	Maximum	Mean
DO%	82.6	65	65	0	0.00%	8.9	197.4	84.32
Salinity	0.18	65	65	0	0.00%	0.13	0.36	0.179
BOD	6.34	56	56	0	0.00%	3.25	16.3	6.971
ChlA-C	105	56	56	0	0.00%	32	300	128.5
Color	140	56	56	0	0.00%	50	250	129.9
FCOL	160	52	51	1	1.92%	10	6200	415.6
NH3	0.0345	70	48	22	31.43%	0.008	0.085	0.0295
NOx	0.013	70	25	45	64.29%	0.004	0.855	0.0309
OP	0.005	56	16	40	71.43%	0.002	0.033	0.00338
TKN	2.7	70	70	0	0.00%	1.97	5.11	2.795
TN	2.732	70	70	0	0.00%	1.97	5.11	2.824
TP	0.243	70	70	0	0.00%	0.045	0.448	0.245
TSS	31.9	56	56	0	1.91%	5.6	95	33.73
TURB	23	56	56	0	0.00%	8.4	63	24.47

Sub-Section 3.1. Waterbody Box-Plots

Figure 5. DO% by waterbody

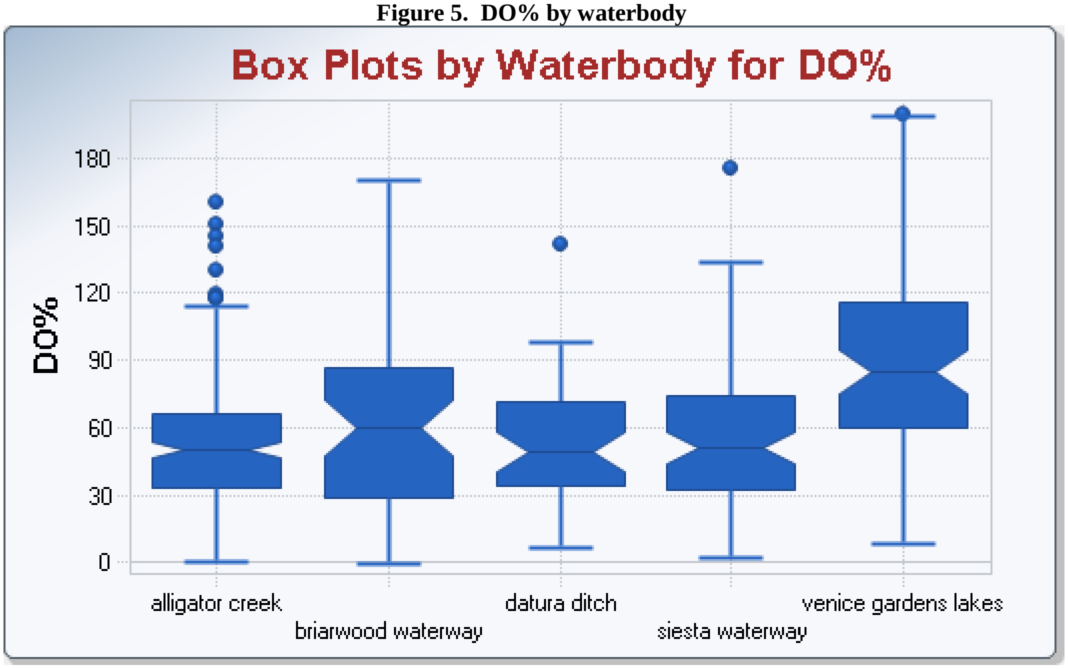


Figure 6. Salinity by waterbody

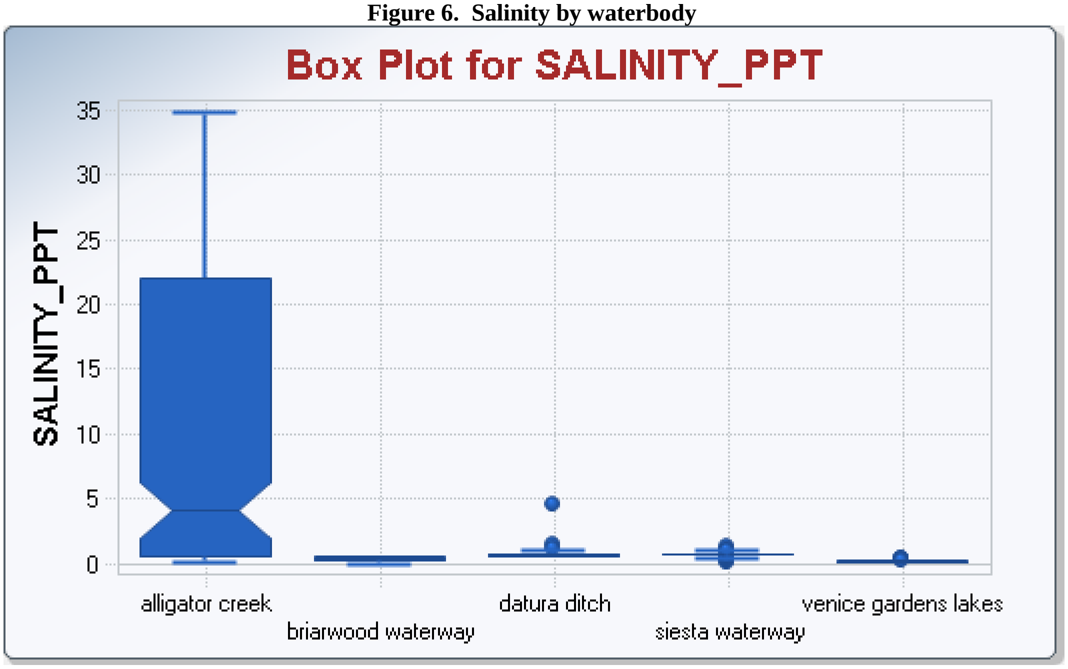


Figure 7. BOD by waterbody

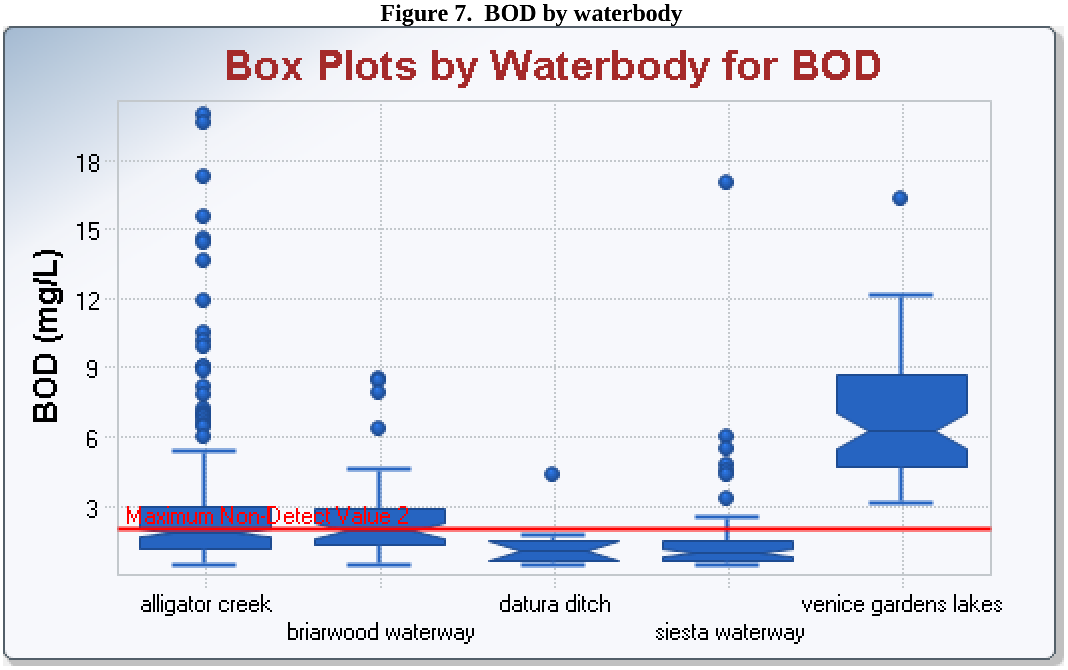


Figure 8. ChlA-C by waterbody

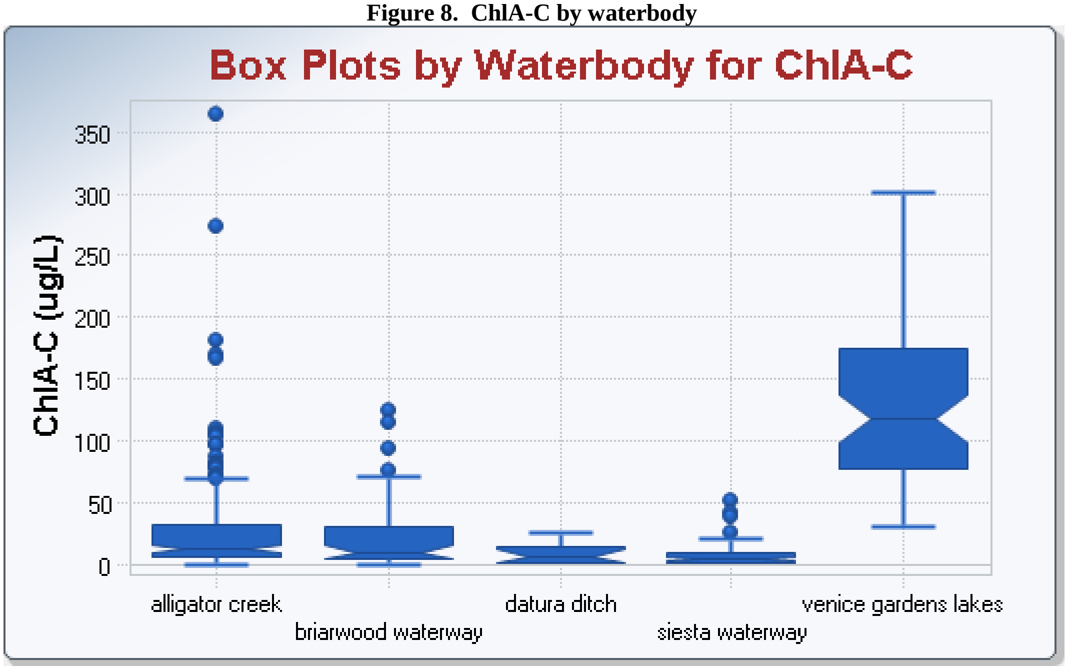


Figure 9. Color by waterbody

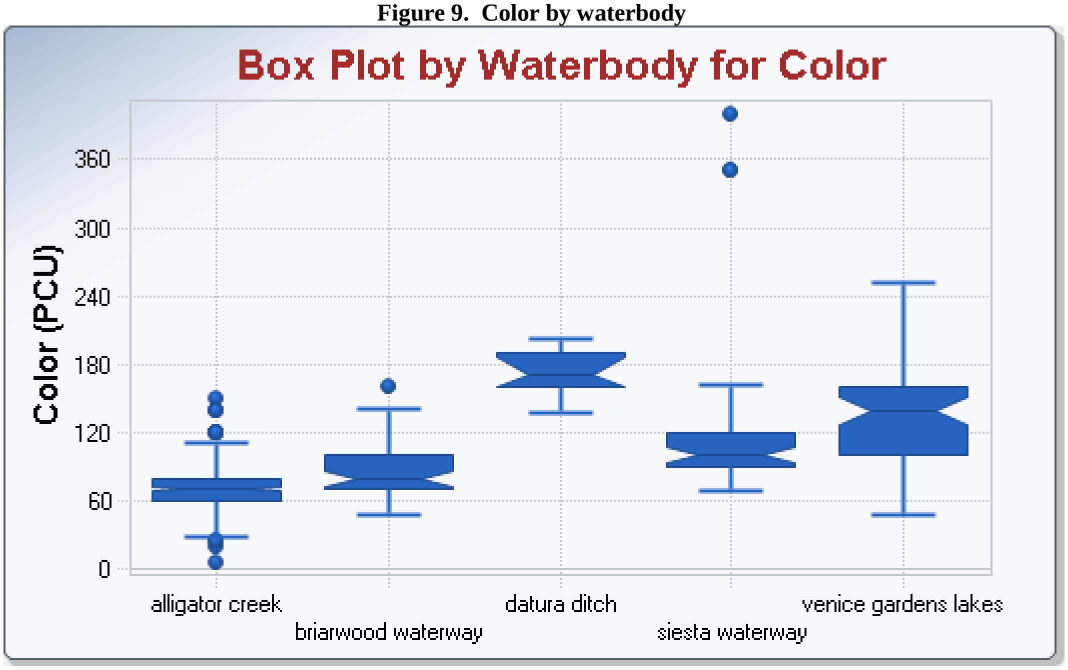


Figure 10. Fecal Coliforms by waterbody

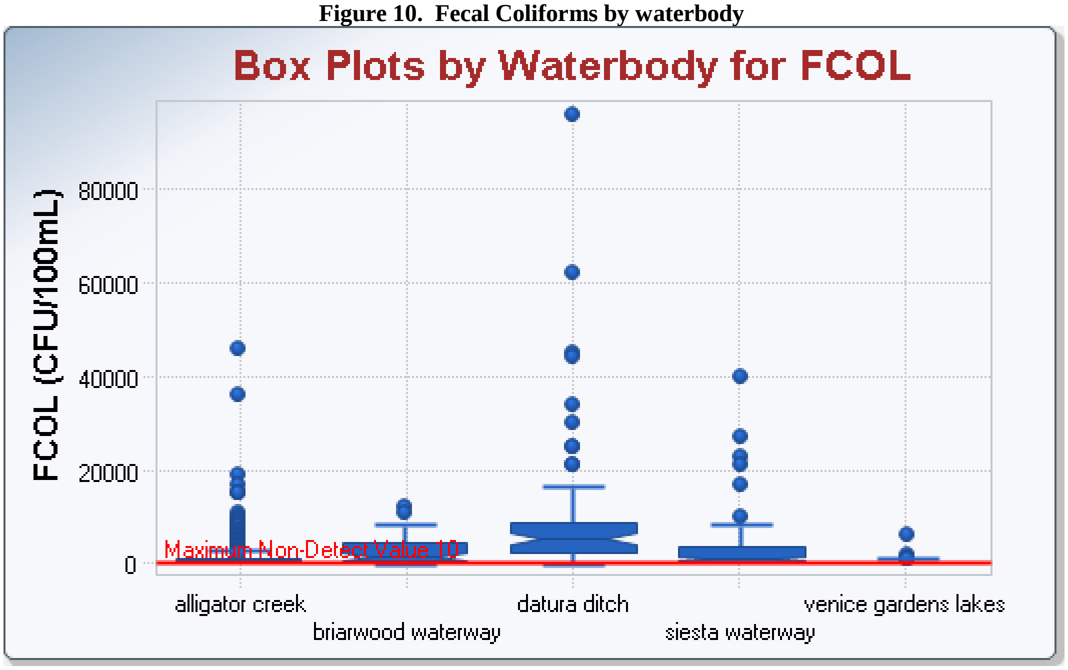


Figure 11. Ammonia by waterbody

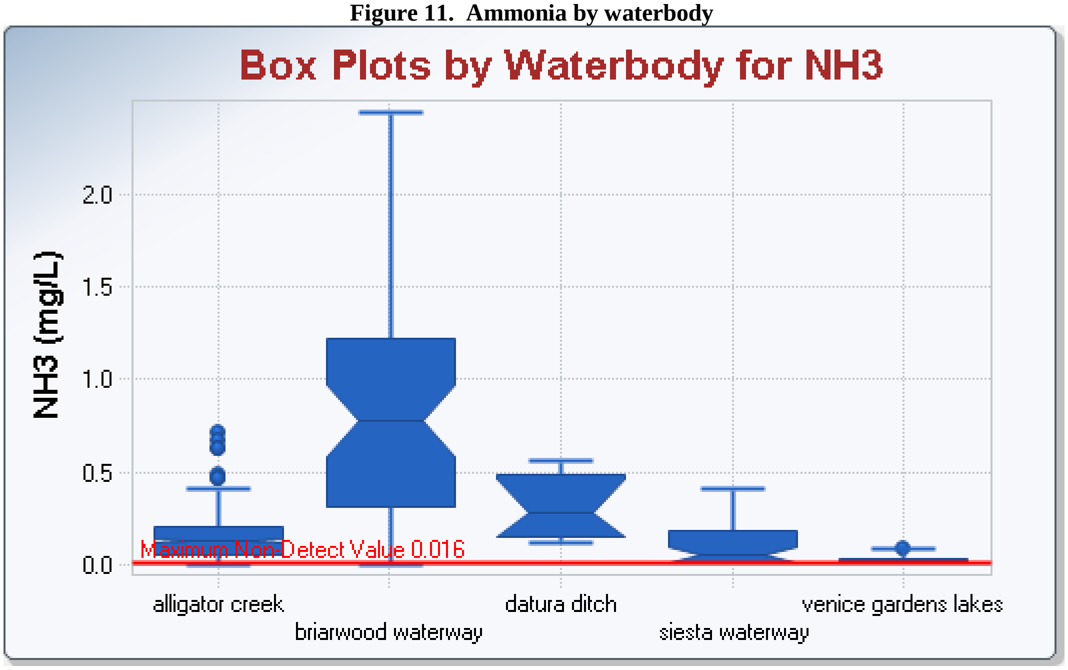


Figure 12. Nitrite + nitrate by waterbody

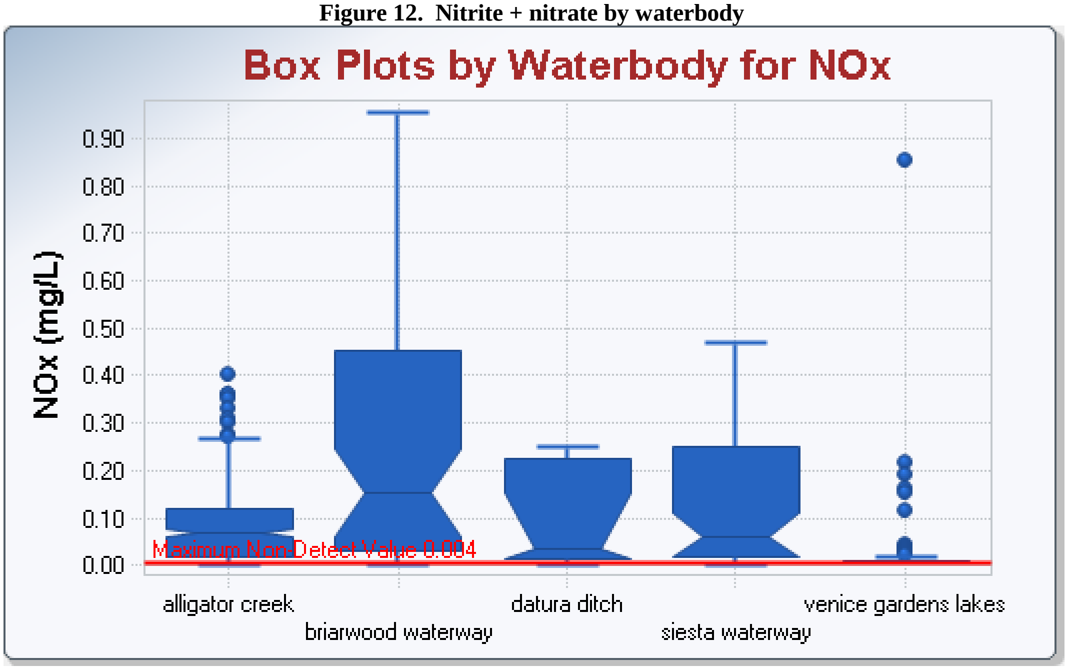


Figure 13. Orthophosphate by waterbody

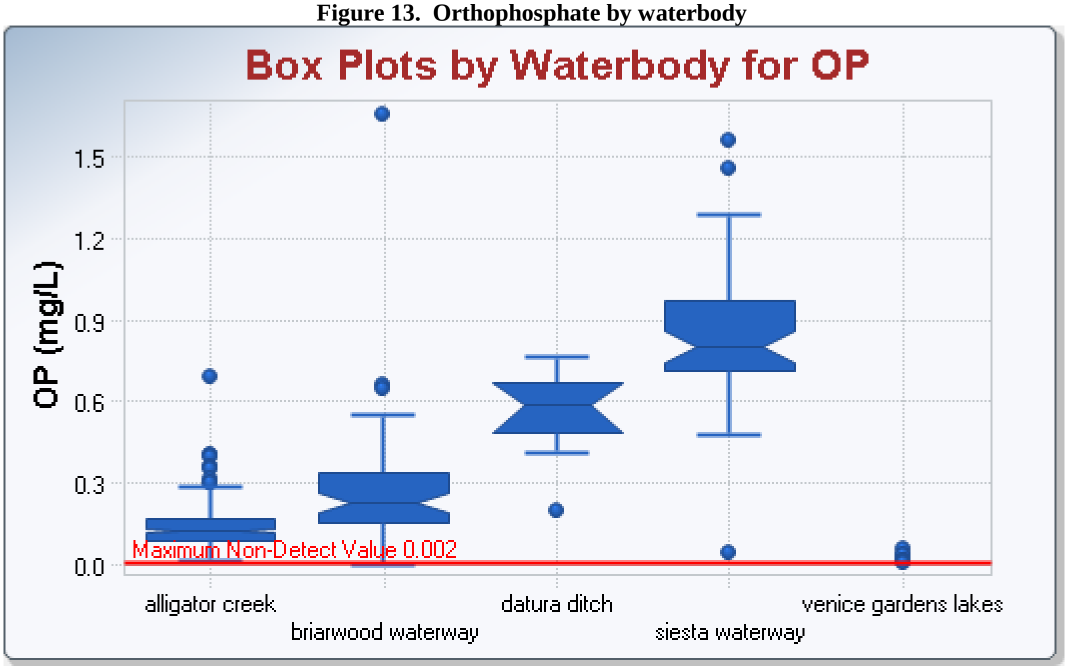


Figure 14. Total Kjeldahl nitrogen by waterbody

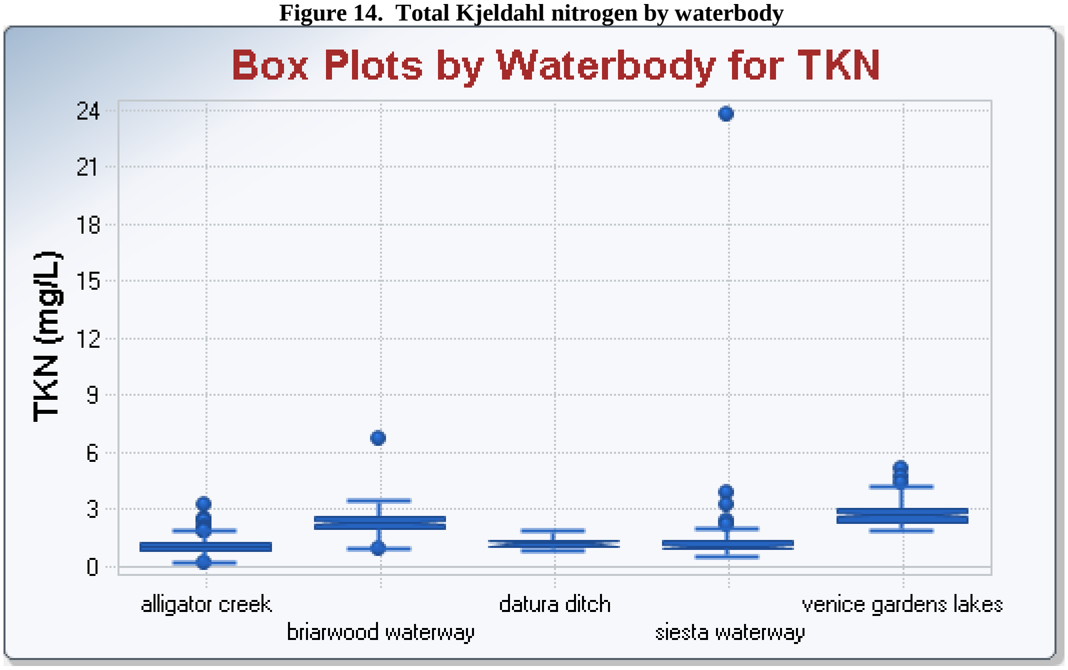


Figure 15. Total nitrogen by waterbody

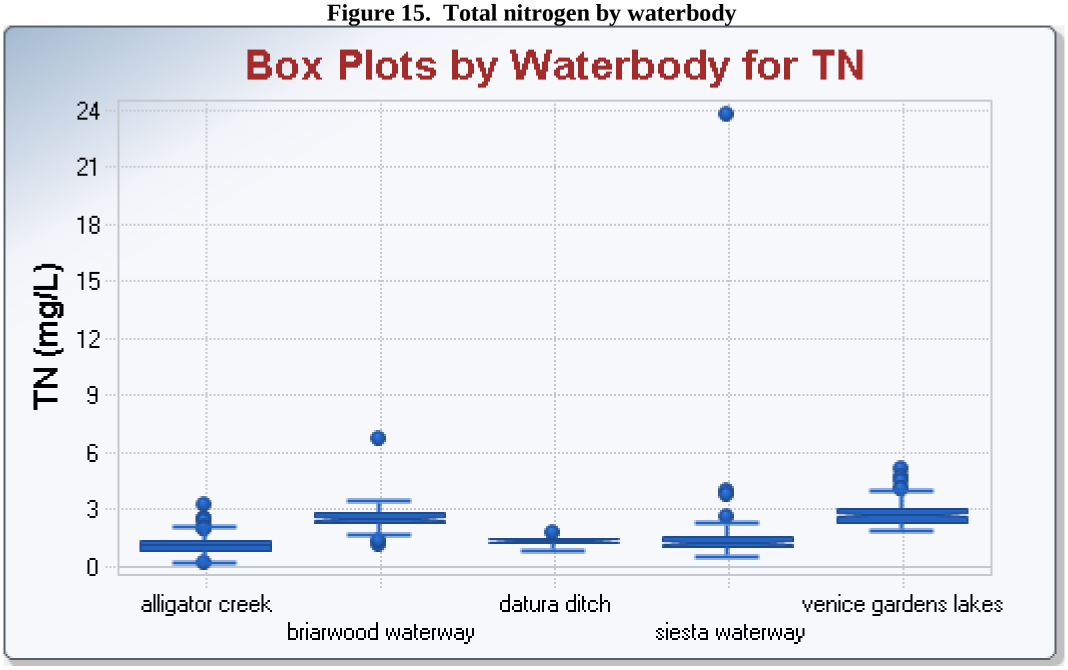


Figure 16. Total phosphorus by waterbody

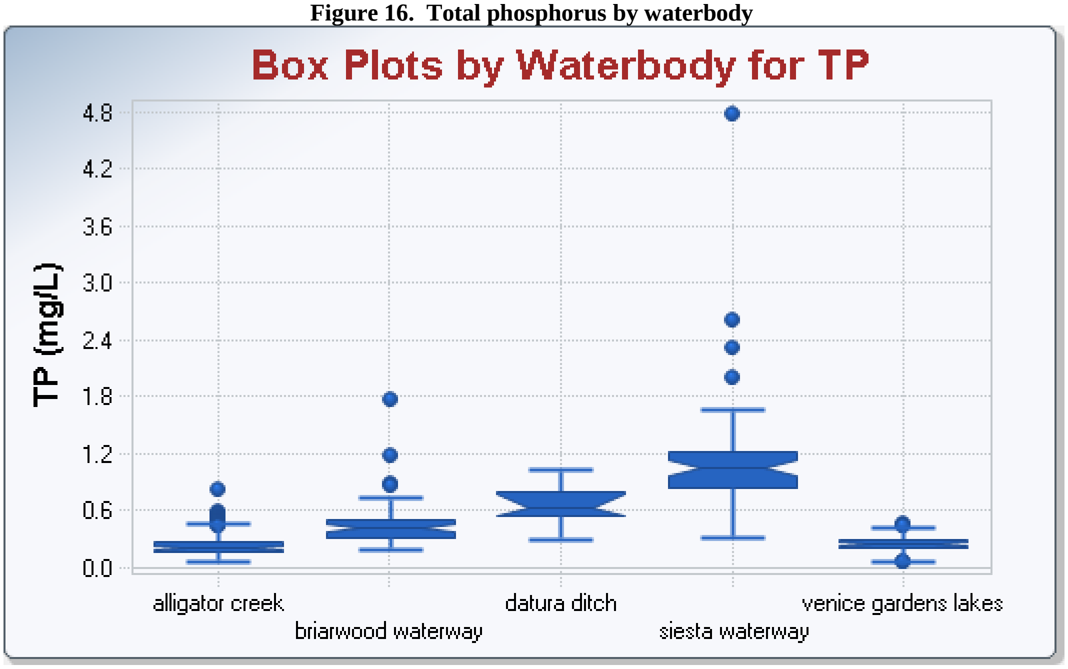


Figure 17. Total suspended solids by waterbody

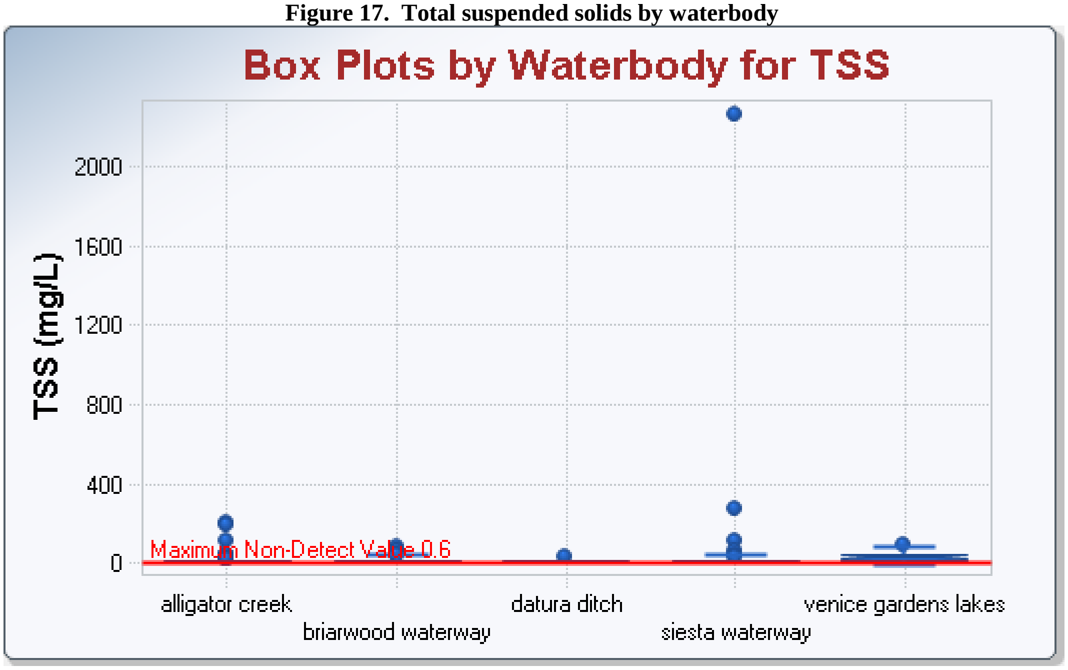
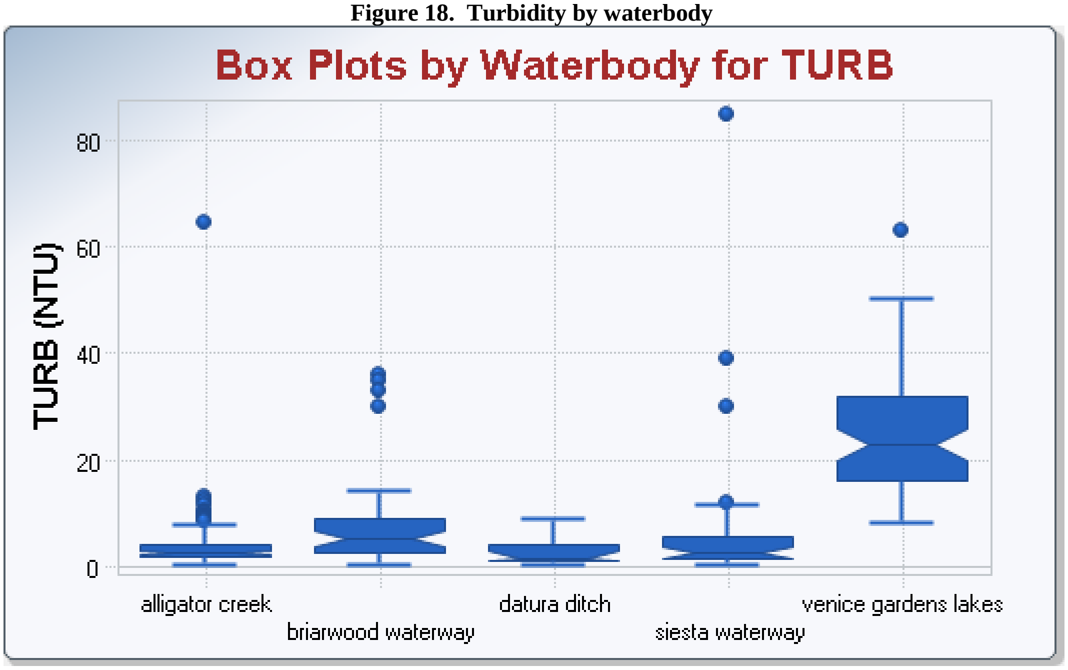


Figure 18. Turbidity by waterbody



Section 4. Summary Statistics for Individual Sampling Stations

Table 28. DO% by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	38.50	88	1.30	103.00	39.19
ALL-2	53.80	89	1.70	150.20	60.04
ALL-3	62.50	49	10.70	160.50	64.53
ALL-4	52.30	34	7.20	141.70	58.13
ALL-5	39.10	14	17.90	76.00	41.15
ALL-6	36.95	10	12.70	96.00	40.77
ALL-7	71.90	34	9.10	175.10	71.24
Briar-Head	39.75	12	0.05	98.20	44.40
Briar-Mid	43.05	14	1.20	169.50	52.17
Briar-Tail*	73.60	26	9.10	139.10	74.31
BSTF_INLET	99.60	13	56.30	140.50	98.32
BSTF_INLET_DEEP	75.70	13	50.70	140.80	86.05
Siesta-Head	26.30	14	2.90	90.90	31.67
Siesta-Mid	44.10	14	11.70	82.20	45.94
Siesta-Tail	53.10	14	26.60	104.90	57.16
VEN_GAR-1	60.20	13	25.30	197.40	69.44
VEN_GAR-2	103.80	13	52.80	135.10	101.30
VEN_GAR-3	72.40	13	8.90	126.10	66.48

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 29. Salinity by Individual Sampling Station

Station	Median	Rank	N	Minimum	Maximum	Mean	Classification
ALL	9.53	17	89	0.25	32.56	11.96	Mesohaline
ALL-2	0.57	9	90	0.24	14.18	1.48	Oligohaline
ALL-3	25.07	18	50	0.28	34.72	22.80	Polyhaline
ALL-4	0.69	10	34	0.53	4.58	0.81	Oligohaline
ALL-5	0.77	13	14	0.61	1.13	0.79	Oligohaline
ALL-6	0.89	16	10	0.68	1.07	0.89	Oligohaline
ALL-7	0.79	15	34	0.50	1.28	0.79	Oligohaline
Briar-Head	0.31	6	13	0.15	0.37	0.28	Limnetic
Briar-Mid	0.50	7	14	0.16	0.55	0.46	Oligohaline
Briar-Tail*	0.54	8	26	0.17	0.58	0.49	Oligohaline
BSTF_INLET	0.17	2	13	0.15	0.20	0.17	Limnetic
BSTF_INLET_DEEP	0.17	3	13	0.15	0.20	0.18	Limnetic
Siesta-Head	0.71	11	14	0.06	0.82	0.63	Oligohaline
Siesta-Mid	0.78	14	14	0.26	0.82	0.74	Oligohaline
Siesta-Tail	0.72	12	14	0.38	0.81	0.71	Oligohaline
VEN_GAR-1	0.19	4	13	0.16	0.24	0.19	Limnetic
VEN_GAR-2	0.15	1	13	0.13	0.18	0.15	Limnetic
VEN_GAR-3	0.20	5	13	0.16	0.36	0.21	Limnetic

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 30. BOD by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	2.21	104	0.72	20.00	3.20
ALL-2	1.48	101	0.57	17.30	2.44
ALL-3	1.94	51	0.65	19.60	2.48
ALL-4	0.65	4	0.53	1.01	0.71
ALL-5	1.50	4	1.11	4.35	2.12
ALL-6	4.67	3	3.32	6.01	3.28
ALL-7	1.23	4	0.89	1.83	1.29
Briar-Head	2.14	13	1.07	7.95	2.68
Briar-Mid	1.32	14	0.56	8.55	1.97
Briar-Tail*	2.00	26	0.59	8.40	2.61
BSTF_INLET	6.19	14	3.31	16.30	7.26
BSTF_INLET_DEEP	N/A	N/A	N/A	N/A	N/A
Siesta-Head	1.57	14	0.84	17.00	3.02
Siesta-Mid	0.75	14	0.58	5.45	1.10
Siesta-Tail	0.66	14	0.51	4.33	0.96
VEN_GAR-1	6.63	14	3.25	10.10	6.44
VEN_GAR-2	6.21	14	4.20	11.40	6.76
VEN_GAR-3	7.08	14	4.49	12.10	7.43

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 31. ChlA-C by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	17.95	104	0.50	365.00	34.11
ALL-2	11.90	101	0.34	110.00	23.80
ALL-3	10.40	51	0.38	170.00	19.22
ALL-4	1.41	4	0.28	5.76	2.22
ALL-5	14.18	4	6.62	23.90	14.72
ALL-6	10.60	3	0.82	41.50	17.64
ALL-7	7.91	4	4.74	8.93	7.37
Briar-Head	14.50	13	4.12	125.00	34.79
Briar-Mid	9.08	14	2.27	114.00	25.11
Briar-Tail*	6.77	26	1.33	68.40	15.75
BSTF_INLET	87.25	14	57.00	184.00	99.98
BSTF_INLET_DEEP	N/A	N/A	N/A	N/A	N/A
Siesta-Head	6.46	14	1.39	39.00	10.64
Siesta-Mid	4.06	14	1.21	51.90	8.49
Siesta-Tail	1.12	14	0.38	19.30	3.57
VEN_GAR-1	119.50	14	54.50	252.00	126.50
VEN_GAR-2	155.00	14	43.00	300.00	163.90
VEN_GAR-3	97.15	14	32.00	232.00	123.70

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 32. Color by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	70	104	35	150	72.6
ALL-2	70	101	40	140	75.6
ALL-3	50	51	5	140	55.5
ALL-4	160	4	140	180	160
ALL-5	190	4	160	200	185
ALL-6	350	3	350	400	366.7
ALL-7	140	4	140	160	145
Briar-Head	100	13	75	140	106.5
Briar-Mid	87.5	14	50	120	89.6
Briar-Tail*	72.5	26	55	160	77.9
BSTF_INLET	120	14	50	160	116.4
BSTF_INLET_DEEP	N/A	N/A	N/A	N/A	N/A
Siesta-Head	100	14	70	160	105
Siesta-Mid	100	14	80	160	103.9
Siesta-Tail	100	14	80	120	96.4
VEN_GAR-1	135	14	60	250	134.6
VEN_GAR-2	155	14	80	200	136.4
VEN_GAR-3	140	14	80	250	132.1

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 33. FCOL by Individual Sampling Station

Station	Median	Rank	N	Minimum	Maximum	Mean
ALL	410	7	103	60	46000	2162
ALL-2	490	8	99	10	19000	1881
ALL-3	260	4	51	20	5000	501.2
ALL-4	6600	17	44	590	96000	12697
ALL-5	3000	16	22	90	45000	5200
ALL-6	1330	12	13	110	27000	5698
ALL-7	2100	14	43	190	40000	4197
Briar-Head	1000	11	12	10	8000	2275
Briar-Mid	2650	15	14	490	12000	4145
Briar-Tail*	1600	13	25	170	11000	2357
BSTF_INLET	110	2	13	20	1700	307.7
BSTF_INLET_DEEP	N/A	N/A	N/A	N/A	N/A	N/A
Siesta-Head	640	9	13	10	4500	1092
Siesta-Mid	370	6	13	60	2100	460.8
Siesta-Tail	760	10	13	70	4500	1446
VEN_GAR-1	170	3	13	70	6200	746.2
VEN_GAR-2	100	1	13	10	630	191.5
VEN_GAR-3	320	5	13	20	1100	416.9

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 34. Ammonia by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	0.174	104	0.010	0.712	0.167
ALL-2	0.134	101	0.010	0.667	0.147
ALL-3	0.097	51	0.012	0.349	0.094
ALL-4	0.154	4	0.136	0.256	0.175
ALL-5	0.491	4	0.304	0.546	0.458
ALL-6	0.312	3	0.140	0.401	0.284
ALL-7	0.297	4	0.131	0.342	0.267
Briar-Head	1.300	13	0.038	2.430	1.174
Briar-Mid	1.140	14	0.355	2.060	1.080
Briar-Tail*	0.397	26	0.033	2.170	0.628
BSTF_INLET	0.033	14	0.013	0.055	0.025
BSTF_INLET_DEEP	0.032	14	0.019	0.073	0.027
Siesta-Head	0.173	14	0.013	0.376	0.140
Siesta-Mid	0.062	14	0.024	0.209	0.084
Siesta-Tail	0.022	14	0.009	0.059	0.014
VEN_GAR-1	0.038	14	0.012	0.085	0.032
VEN_GAR-2	0.053	14	0.026	0.080	0.035
VEN_GAR-3	0.034	14	0.015	0.065	0.028

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 35. Nitrite + Nitrate by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	0.088	104	0.004	0.359	0.091
ALL-2	0.071	101	0.004	0.403	0.091
ALL-3	0.048	51	0.004	0.227	0.055
ALL-4	0.226	4	0.032	0.244	0.182
ALL-5	0.016	4	0.013	0.035	0.017
ALL-6	N/A	3	All Non-Detects		
ALL-7	0.025	4	0.007	0.107	0.041
Briar-Head	0.025	13	0.005	0.083	0.027
Briar-Mid	0.128	14	0.004	0.350	0.142
Briar-Tail*	0.466	26	0.130	0.952	0.474
BSTF_INLET	0.017	14	0.004	0.160	0.017
BSTF_INLET_DEEP	0.024	14	0.007	0.155	0.030
Siesta-Head	0.155	14	0.007	0.465	0.137
Siesta-Mid	0.028	14	0.006	0.068	0.033
Siesta-Tail	0.282	14	0.121	0.386	0.276
VEN_GAR-1	0.012	14	0.004	0.215	0.023
VEN_GAR-2	0.011	14	0.008	0.855	0.066
VEN_GAR-3	0.017	14	0.005	0.193	0.019

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 36. Orthophosphate by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	0.130	104	0.041	0.398	0.135
ALL-2	0.112	101	0.023	0.691	0.145
ALL-3	0.122	51	0.034	0.235	0.121
ALL-4	0.562	4	0.419	0.592	0.534
ALL-5	0.666	4	0.200	0.760	0.573
ALL-6	0.974	3	0.561	1.460	0.998
ALL-7	0.762	4	0.706	0.808	0.760
Briar-Head	0.158	13	0.118	0.385	0.157
Briar-Mid	0.261	14	0.003	0.544	0.271
Briar-Tail*	0.251	26	0.002	1.660	0.328
BSTF_INLET	0.006	14	0.003	0.009	0.003
BSTF_INLET_DEEP	N/A	N/A	N/A	N/A	N/A
Siesta-Head	0.724	14	0.482	1.560	0.772
Siesta-Mid	0.942	14	0.688	1.280	0.932
Siesta-Tail	0.858	14	0.045	1.200	0.813
VEN_GAR-1	0.014	14	0.005	0.033	0.005
VEN_GAR-2	0.004	14	0.002	0.007	0.003
VEN_GAR-3	0.005	14	0.002	0.006	0.003

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 37. TKN by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	1.025	104	0.294	3.240	1.096
ALL-2	1.030	101	0.575	2.050	1.052
ALL-3	0.652	51	0.126	1.430	0.700
ALL-4	0.975	4	0.905	1.130	0.996
ALL-5	1.370	4	1.250	1.710	1.425
ALL-6	1.830	3	1.620	2.150	1.867
ALL-7	1.155	4	1.010	1.270	1.148
Briar-Head	2.430	13	1.970	6.740	2.844
Briar-Mid	2.430	14	1.880	3.030	2.477
Briar-Tail*	2.065	26	0.918	3.290	1.906
BSTF_INLET	2.500	14	1.980	3.680	2.515
BSTF_INLET_DEEP	2.625	14	2.130	4.040	2.666
Siesta-Head	1.385	14	0.598	23.800	3.234
Siesta-Mid	1.060	14	0.561	1.270	1.003
Siesta-Tail	0.918	14	0.627	1.590	0.939
VEN_GAR-1	2.700	14	1.970	5.110	2.851
VEN_GAR-2	3.010	14	2.180	4.650	3.105
VEN_GAR-3	2.765	14	1.990	4.420	2.839

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 38. TN by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	1.141	104	0.294	3.244	1.187
ALL-2	1.106	101	0.619	2.055	1.143
ALL-3	0.703	51	0.126	1.461	0.755
ALL-4	1.213	4	0.937	1.349	1.178
ALL-5	1.385	4	1.250	1.745	1.441
ALL-6	1.830	3	1.620	2.150	1.867
ALL-7	1.220	4	1.017	1.297	1.189
Briar-Head	2.493	13	1.978	6.745	2.870
Briar-Mid	2.509	14	1.880	3.085	2.619
Briar-Tail*	2.334	26	1.154	3.340	2.380
BSTF_INLET	2.505	14	1.980	3.680	2.529
BSTF_INLET_DEEP	2.684	14	2.143	4.040	2.694
Siesta-Head	1.560	14	0.636	23.810	3.371
Siesta-Mid	1.095	14	0.576	1.298	1.035
Siesta-Tail	1.211	14	0.873	1.711	1.214
VEN_GAR-1	2.708	14	1.970	5.110	2.872
VEN_GAR-2	3.016	14	2.180	4.650	3.167
VEN_GAR-3	2.775	14	1.990	4.442	2.856

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 39. TP by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	0.218	104	0.072	0.558	0.235
ALL-2	0.192	101	0.066	0.812	0.232
ALL-3	0.195	51	0.087	0.509	0.197
ALL-4	0.609	4	0.480	0.631	0.582
ALL-5	0.794	4	0.300	0.999	0.722
ALL-6	1.320	3	1.230	1.480	1.343
ALL-7	0.834	4	0.779	0.872	0.830
Briar-Head	0.411	13	0.207	0.654	0.395
Briar-Mid	0.440	14	0.258	0.705	0.473
Briar-Tail*	0.347	26	0.243	1.170	0.486
BSTF_INLET	0.203	14	0.068	0.303	0.217
BSTF_INLET_DEEP	0.219	14	0.084	0.359	0.231
Siesta-Head	0.984	14	0.678	4.780	1.396
Siesta-Mid	1.060	14	0.788	2.300	1.128
Siesta-Tail	1.020	14	0.325	1.640	0.972
VEN_GAR-1	0.251	14	0.046	0.441	0.262
VEN_GAR-2	0.232	14	0.045	0.448	0.239
VEN_GAR-3	0.278	14	0.094	0.435	0.274

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 40. TSS by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	6.2	104	0.6	192.0	9.8
ALL-2	4.0	101	0.6	112.0	7.3
ALL-3	6.0	51	0.8	204.0	11.1
ALL-4	2.6	4	1.4	3.4	2.5
ALL-5	14.2	4	2.0	36.0	16.6
ALL-6	43.6	3	15.4	119.0	59.3
ALL-7	3.7	4	2.4	13.6	5.9
Briar-Head	17.0	13	7.8	67.2	27.1
Briar-Mid	6.4	14	1.0	61.7	12.9
Briar-Tail*	5.4	26	0.8	85.0	10.1
BSTF_INLET	24.0	14	8.0	52.0	29.4
BSTF_INLET_DEEP	N/A	N/A	N/A	N/A	N/A
Siesta-Head	23.5	14	3.6	2268.0	201.8
Siesta-Mid	3.1	14	1.2	21.4	4.8
Siesta-Tail	4.6	14	1.0	8.0	3.5
VEN_GAR-1	25.3	14	7.2	77.3	30.3
VEN_GAR-2	42.0	14	8.8	95.0	44.6
VEN_GAR-3	29.0	14	5.6	56.0	30.6

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.

Table 41. Turbidity by Individual Sampling Station

Station	Median	N	Minimum	Maximum	Mean
ALL	2.90	104	0.93	13.00	3.63
ALL-2	2.30	101	0.52	64.40	3.68
ALL-3	2.50	51	0.55	7.30	2.88
ALL-4	1.17	4	0.67	1.46	1.12
ALL-5	4.20	4	1.63	8.40	4.61
ALL-6	7.20	3	5.70	39.00	17.30
ALL-7	2.02	4	1.23	4.40	2.42
Briar-Head	8.90	13	2.60	36.00	11.67
Briar-Mid	5.85	14	1.40	33.00	8.10
Briar-Tail*	2.85	26	0.62	35.00	4.95
BSTF_INLET	22.00	14	12.00	34.00	20.93
BSTF_INLET_DEEP	N/A	N/A	N/A	N/A	N/A
Siesta-Head	6.50	14	1.20	85.00	13.80
Siesta-Mid	1.35	14	0.80	6.30	2.08
Siesta-Tail	1.75	14	0.60	3.90	1.88
VEN_GAR-1	18.00	14	10.00	32.00	19.57
VEN_GAR-2	35.00	14	23.00	63.00	36.21
VEN_GAR-3	18.50	14	8.40	35.00	21.17

*This is both Briar-Tail and BSTF_Tail, since they are the same sampling location.