

**LAKEWATCH Report for Beatty Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Beatty Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.2535
Longitude	-85.6210

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	10 - 15	13 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	184 - 258	215 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 4	3 (3)
Secchi (ft)	3.5 - 6.9	5.1 (3)
Secchi (m)	1.1 -2.1	1.5 (3)
Color (Pt-Co Units)	34 - 79	57 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	13000 - 21000	15581 (3)

**LAKEWATCH Report for Burnt Mill Lower in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Burnt Mill Lower
GNIS Number	279712
Water Body Type	River/Stream
Period of Record (years, range)	20 (2003 to 2022)
Latitude	30.2960
Longitude	-85.7617

## Long-Term Data for River/Streams: Definitions

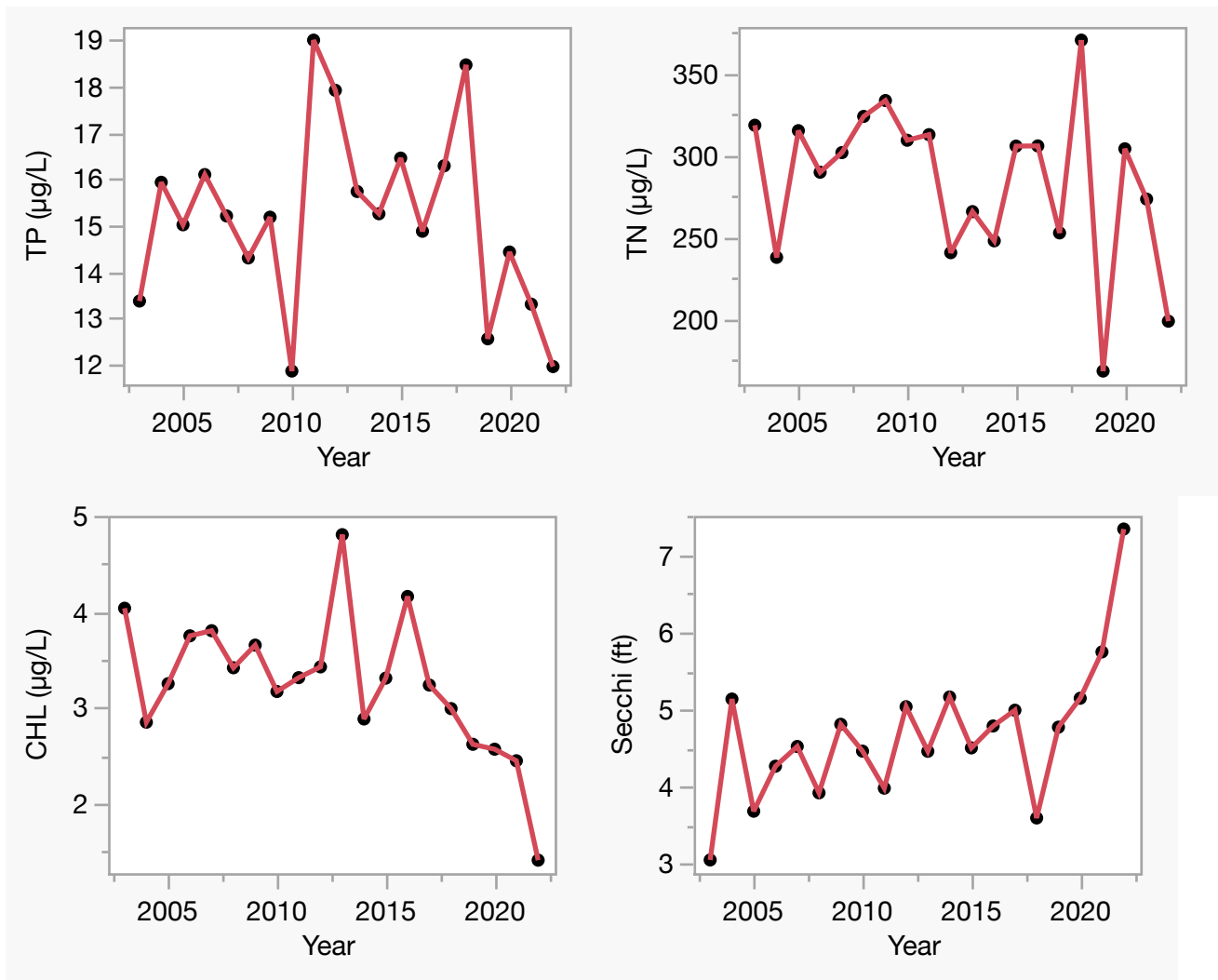
The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	12 - 19	15 (20)
Total Nitrogen ( $\mu\text{g/L}$ )	169 - 371	280 (20)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 5	3 (20)
Secchi (ft)	3.1 - 7.3	4.6 (20)
Secchi (m)	0.9 - 2.2	1.4 (20)
Color (Pt-Co Units)	10 - 56	22 (20)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	10954 - 41555	29829 (20)

**Figure 2. Burnt Mill Lower trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the p value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP No Trend,  $R^2 = 0.02$ ,  $p = 0.54$ ), total nitrogen (TN No Trend,  $R^2 = 0.12$ ,  $p = 0.14$ ), chlorophyll (CHL Decreasing,  $R^2 = 0.29$ ,  $p = 0.01$ ) and Secchi depth (Secchi Increasing,  $R^2 = 0.37$ ,  $p = 0.00$ ).**



**LAKEWATCH Report for Burnt Mill Upper in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Burnt Mill Upper
GNIS Number	279712
Water Body Type	River/Stream
Period of Record (years, range)	20 (2003 to 2022)
Latitude	30.3286
Longitude	-85.7635

## Long-Term Data for River/Streams: Definitions

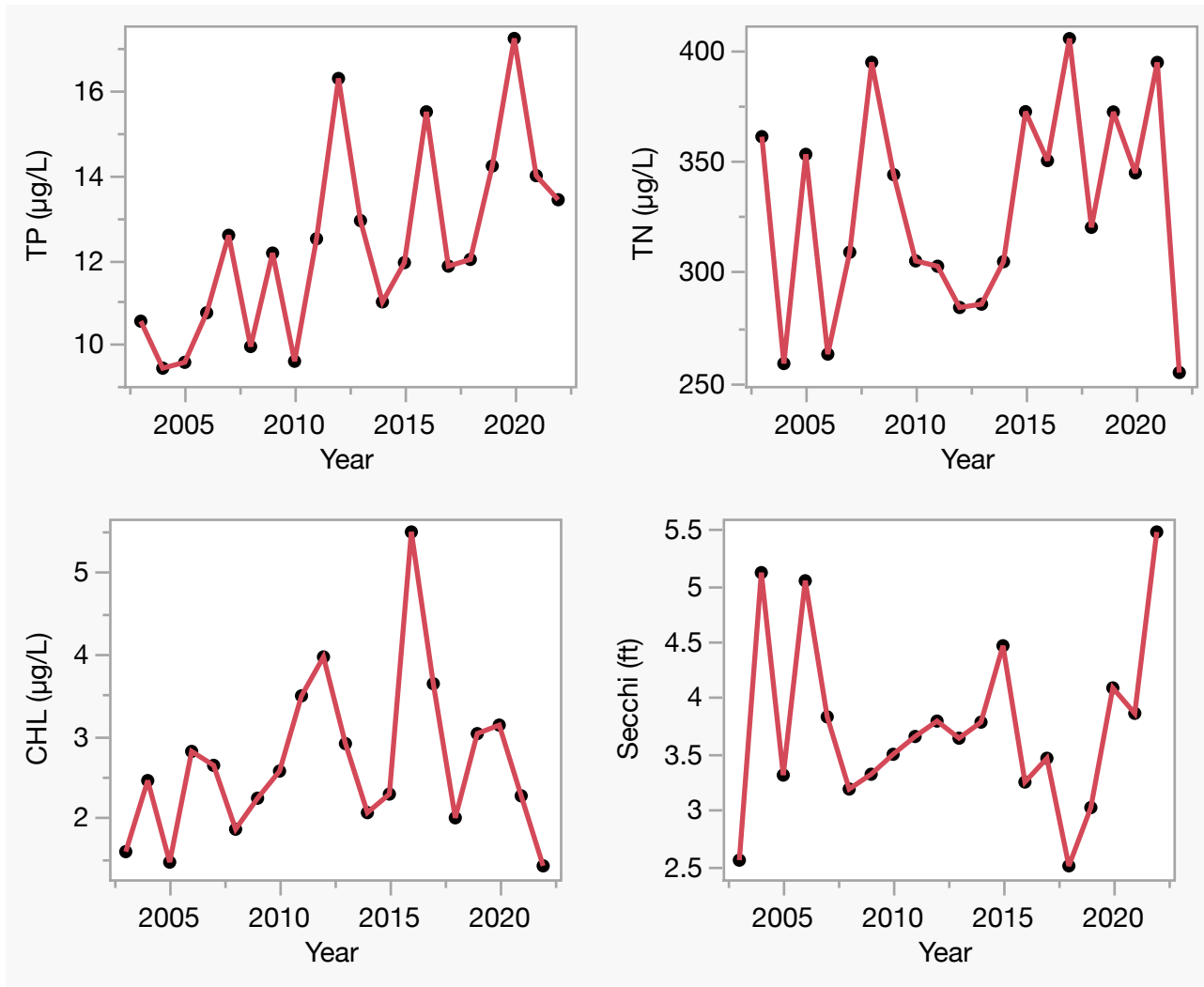
The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	9 - 17	12 (20)
Total Nitrogen ( $\mu\text{g/L}$ )	255 - 405	326 (20)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 5	3 (20)
Secchi (ft)	2.5 - 5.5	3.7 (20)
Secchi (m)	0.8 - 1.7	1.1 (20)
Color (Pt-Co Units)	14 - 126	49 (19)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	1118 - 32125	10363 (19)

**Figure 2. Burnt Mill Upper trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the p value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP Increasing,  $R^2 = 0.43$ ,  $p = 0.00$ ), total nitrogen (TN No Trend,  $R^2 = 0.04$ ,  $p = 0.38$ ), chlorophyll (CHL No Trend,  $R^2 = 0.05$ ,  $p = 0.37$ ) and Secchi depth (Secchi No Trend,  $R^2 = 0.00$ ,  $p = 0.78$ ).**





**LAKEWATCH Report for Burnt Mill Upper-2 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Burnt Mill Upper-2
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.3384
Longitude	-85.7672

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	12 - 16	14 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	270 - 377	323 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 2	2 (2)
Secchi (ft)	2.7 - 3.5	3.1 (2)
Secchi (m)	0.8 - 1.1	0.9 (2)
Color (Pt-Co Units)	69 - 122	100 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	530 - 9000	2421 (3)

**LAKEWATCH Report for Callaway Bayou in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Callaway Bayou
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2018 to 2020)
Latitude	30.1364
Longitude	-85.5704

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	12 - 21	16 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	332 - 369	348 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	4 - 6	5 (3)
Secchi (ft)	1.8 - 2.2	2.0 (2)
Secchi (m)	0.5 -0.7	0.6 (2)
Color (Pt-Co Units)	11 - 43	26 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	4014 - 18000	9535 (3)

**LAKEWATCH Report for Callaway Bayou-2 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Callaway Bayou-2
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.1250
Longitude	-85.5633

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	14 - 19	16 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	261 - 404	316 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 3	3 (3)
Secchi (ft)	3.2 - 7.3	4.9 (3)
Secchi (m)	1.0 - 2.2	1.5 (3)
Color (Pt-Co Units)	30 - 89	56 (3)
Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ )	20000 - 26000	22869 (3)

**LAKEWATCH Report for Crooked Lower in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Crooked Lower
GNIS Number	278659
Water Body Type	River/Stream
Period of Record (years, range)	20 (2003 to 2022)
Latitude	30.2918
Longitude	-85.8080

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

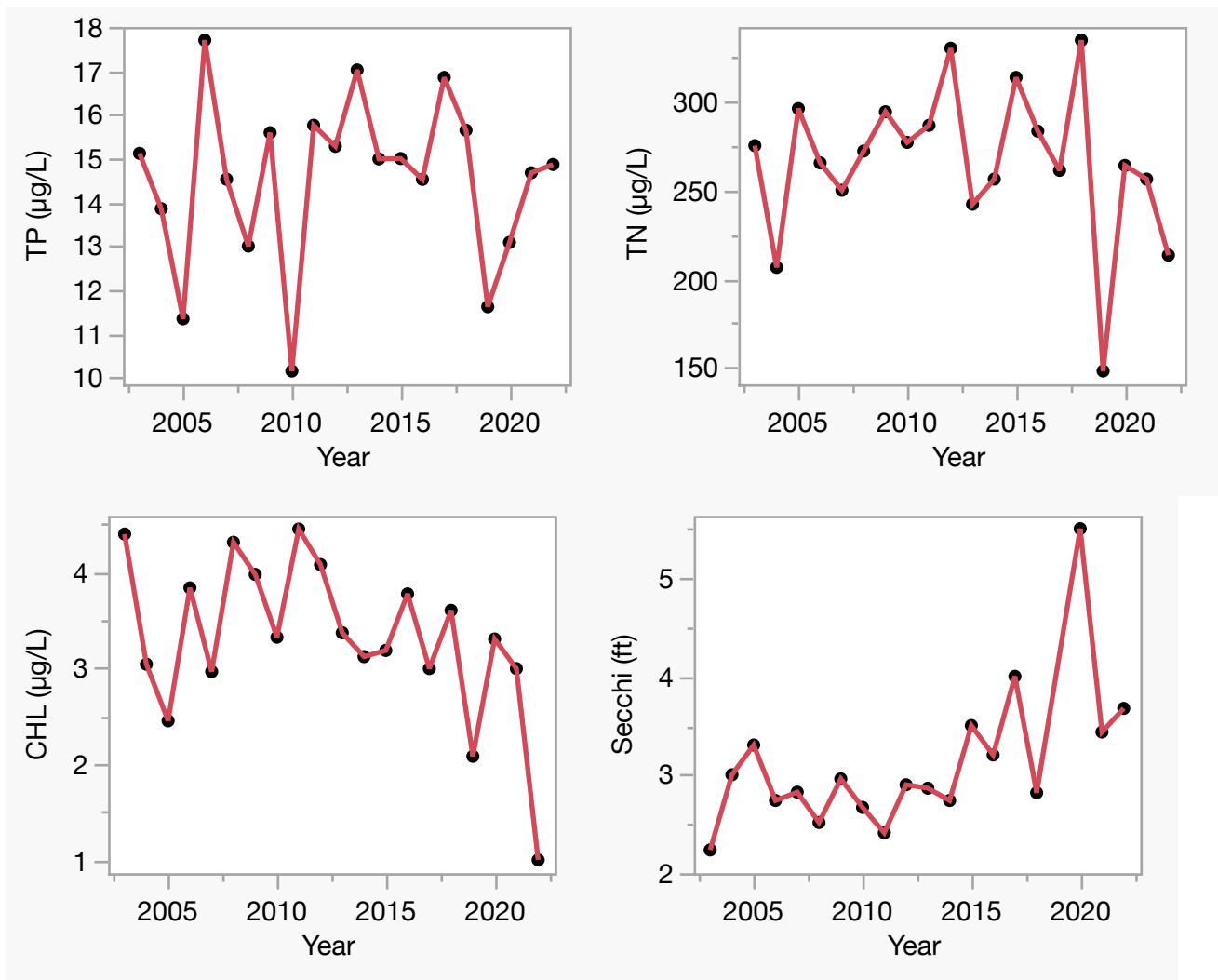
- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	10 - 18	14 (20)
Total Nitrogen ( $\mu\text{g/L}$ )	148 - 335	263 (20)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 4	3 (20)
Secchi (ft)	2.2 - 5.5	3.1 (19)
Secchi (m)	0.7 - 1.7	0.9 (19)
Color (Pt-Co Units)	9 - 51	19 (20)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	11832 - 94170	32210 (20)



**Figure 2. Crooked Lower trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the p value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP No Trend,  $R^2 = 0.00$ ,  $p = 0.85$ ), total nitrogen (TN No Trend,  $R^2 = 0.03$ ,  $p = 0.49$ ), chlorophyll (CHL Decreasing,  $R^2 = 0.22$ ,  $p = 0.04$ ) and Secchi depth (Secchi Increasing,  $R^2 = 0.36$ ,  $p = 0.01$ ).**



**LAKEWATCH Report for Crooked Upper in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Crooked Upper
GNIS Number	278659
Water Body Type	River/Stream
Period of Record (years, range)	20 (2003 to 2022)
Latitude	30.3082
Longitude	-85.8118

## Long-Term Data for River/Streams: Definitions

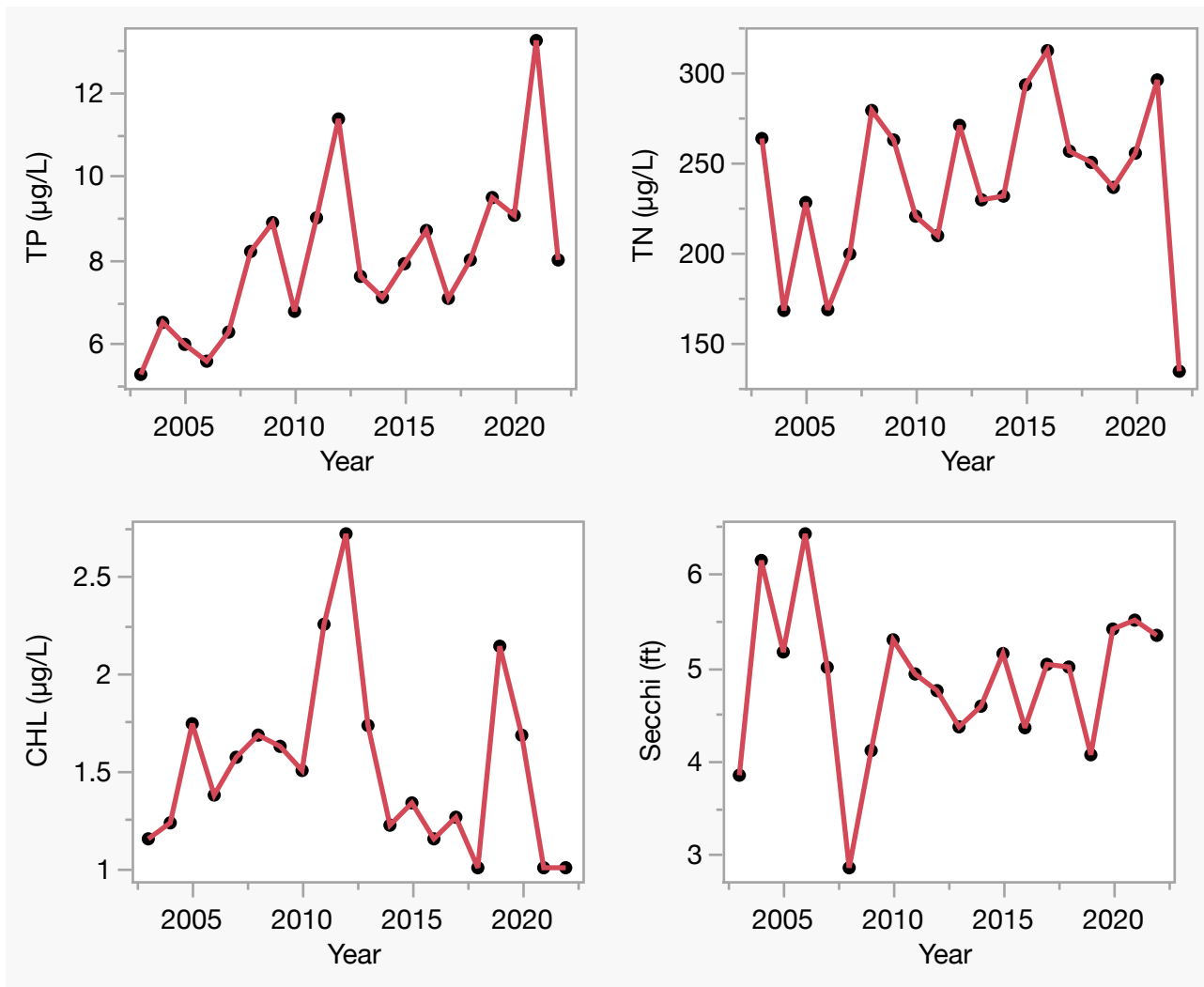
The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	5 - 13	8 (20)
Total Nitrogen ( $\mu\text{g/L}$ )	134 - 312	233 (20)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 3	1 (20)
Secchi (ft)	2.9 - 6.4	4.8 (20)
Secchi (m)	0.9 - 2.0	1.5 (20)
Color (Pt-Co Units)	13 - 77	34 (19)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	532 - 14489	4804 (19)

**Figure 2. Crooked Upper trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the p value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP Increasing,  $R^2 = 0.38$ ,  $p = 0.00$ ), total nitrogen (TN No Trend,  $R^2 = 0.04$ ,  $p = 0.39$ ), chlorophyll (CHL No Trend,  $R^2 = 0.02$ ,  $p = 0.51$ ) and Secchi depth (Secchi No Trend,  $R^2 = 0.00$ ,  $p = 0.82$ ).**



**LAKEWATCH Report for Crooked Upper-2 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Crooked Upper-2
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.3153
Longitude	-85.8132

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	8 - 10	9 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	155 - 318	228 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 2	1 (3)
Secchi (ft)	5.6 - 6.1	5.8 (3)
Secchi (m)	1.7 - 1.9	1.8 (3)
Color (Pt-Co Units)	35 - 83	51 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	676 - 5000	2567 (3)

**LAKEWATCH Report for Fox Pond in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Fox Pond
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2018 to 2020)
Latitude	30.1384
Longitude	-85.5746

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	16 - 35	25 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	336 - 451	376 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	3 - 5	4 (3)
Secchi (ft)	1.0 - 1.7	1.3 (2)
Secchi (m)	0.3 -0.5	0.4 (2)
Color (Pt-Co Units)	28 - 36	32 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	99 - 127	116 (3)



**LAKEWATCH Report for Johnson Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Johnson Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.1622
Longitude	-85.6708

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	17 - 26	22 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	245 - 378	313 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 4	3 (3)
Secchi (ft)	2.9 - 4.6	3.8 (3)
Secchi (m)	0.9 -1.4	1.1 (3)
Color (Pt-Co Units)	13 - 41	25 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	27000 - 40000	34188 (3)

**LAKEWATCH Report for Lannie Rowe in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Lannie Rowe
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2018 to 2020)
Latitude	30.1415
Longitude	-85.5844

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	31 - 67	50 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	489 - 635	550 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	6 - 7	6 (3)
Secchi (ft)	2.0 - 2.0	2.0 (1)
Secchi (m)	0.6 -0.6	0.6 (1)
Color (Pt-Co Units)	20 - 49	33 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	101 - 173	133 (3)

**LAKEWATCH Report for Martin-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Martin-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.1404
Longitude	-85.6077

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	15 - 27	19 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	440 - 561	488 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	6 - 12	9 (3)
Secchi (ft)	2.6 - 3.7	3.1 (3)
Secchi (m)	0.8 - 1.1	0.9 (3)
Color (Pt-Co Units)	28 - 85	56 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	194 - 856	398 (3)

**LAKEWATCH Report for Massalina Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Massalina Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.1517
Longitude	-85.6583

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	20 - 25	22 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	197 - 306	250 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 4	3 (3)
Secchi (ft)	4.7 - 8.9	6.6 (3)
Secchi (m)	1.4 - 2.7	2.0 (3)
Color (Pt-Co Units)	10 - 27	19 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	10583 - 33000	20591 (3)



**LAKEWATCH Report for Mill Bayou Upper in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Mill Bayou Upper
GNIS Number	286955
Water Body Type	River/Stream
Period of Record (years, range)	6 (2017 to 2022)
Latitude	30.2359
Longitude	-85.5985

## Long-Term Data for River/Streams: Definitions

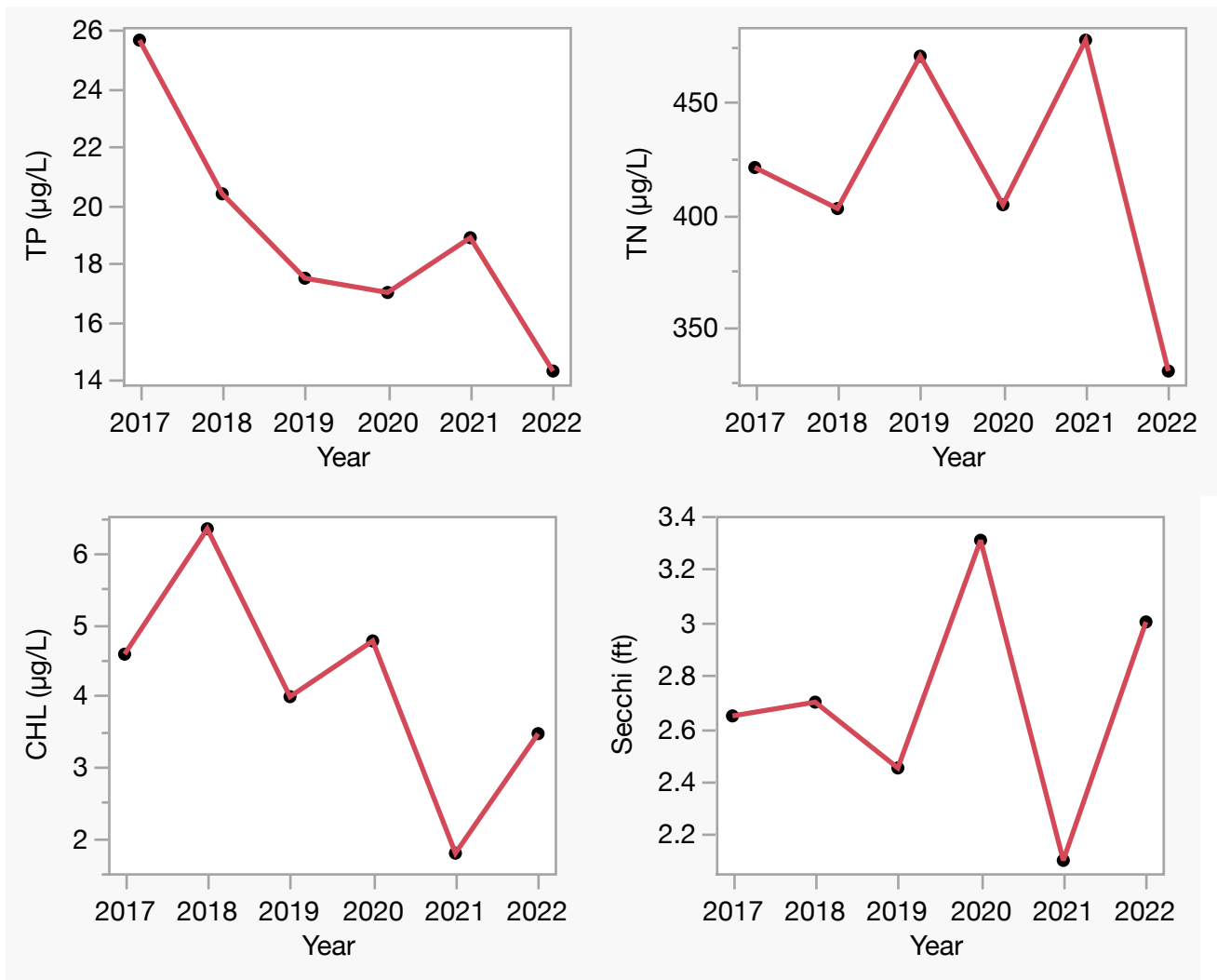
The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	14 - 26	19 (6)
Total Nitrogen ( $\mu\text{g/L}$ )	330 - 478	415 (6)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 6	4 (6)
Secchi (ft)	2.1 - 3.3	2.7 (6)
Secchi (m)	0.6 -1.0	0.8 (6)
Color (Pt-Co Units)	19 - 74	38 (6)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	2689 - 18000	7586 (6)

**Figure 2. Mill Bayou Upper trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the p value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP Decreasing,  $R^2 = 0.73$ ,  $p = 0.03$ ), total nitrogen (TN No Trend,  $R^2 = 0.09$ ,  $p = 0.57$ ), chlorophyll (CHL No Trend,  $R^2 = 0.43$ ,  $p = 0.16$ ) and Secchi depth (Secchi No Trend,  $R^2 = 0.01$ ,  $p = 0.84$ ).**



**LAKEWATCH Report for Mill Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Mill Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.2510
Longitude	-85.6096

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	13 - 18	16 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	226 - 291	260 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 5	3 (3)
Secchi (ft)	3.6 - 6.3	4.8 (2)
Secchi (m)	1.1 -1.9	1.5 (2)
Color (Pt-Co Units)	35 - 58	42 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	7000 - 18000	10945 (3)

**LAKEWATCH Report for Pitts Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Pitts Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.1213
Longitude	-85.5967

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	13 - 20	16 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	214 - 329	264 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 5	3 (3)
Secchi (ft)	3.3 - 9.6	5.4 (3)
Secchi (m)	1.0 - 2.9	1.6 (3)
Color (Pt-Co Units)	16 - 59	33 (3)
Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ )	27000 - 34000	31485 (3)

**LAKEWATCH Report for Powell Creek East-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.



## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Powell Creek East-1
GNIS Number	289278
Water Body Type	River/Stream
Period of Record (years, range)	22 (2001 to 2022)
Latitude	30.2667
Longitude	-85.9556

## Long-Term Data for River/Streams: Definitions

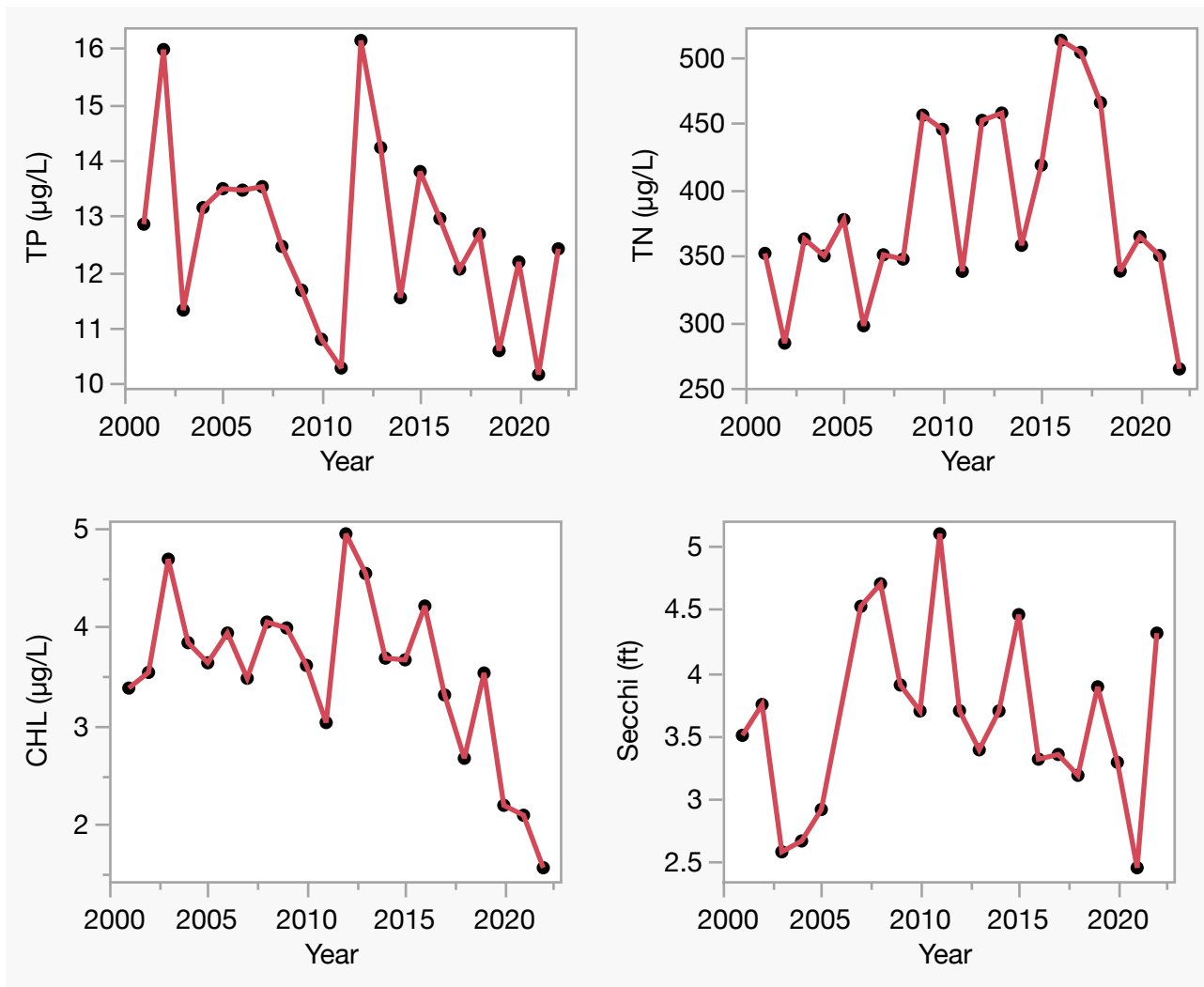
The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	10 - 16	13 (22)
Total Nitrogen ( $\mu\text{g/L}$ )	264 - 513	378 (22)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 5	3 (22)
Secchi (ft)	2.5 - 5.1	3.6 (21)
Secchi (m)	0.7 - 1.6	1.1 (21)
Color (Pt-Co Units)	15 - 140	45 (22)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	2356 - 2704000	20536 (18)

**Figure 2. Powell Creek East-1 trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the p value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP No Trend,  $R^2 = 0.12$ ,  $p = 0.12$ ), total nitrogen (TN No Trend,  $R^2 = 0.05$ ,  $p = 0.31$ ), chlorophyll (CHL Decreasing,  $R^2 = 0.31$ ,  $p = 0.01$ ) and Secchi depth (Secchi No Trend,  $R^2 = 0.00$ ,  $p = 0.87$ ).**



**LAKEWATCH Report for Powell Creek East-2 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Powell Creek East-2
GNIS Number	289278
Water Body Type	River/Stream
Period of Record (years, range)	22 (2001 to 2022)
Latitude	30.2618
Longitude	-85.9502

## Long-Term Data for River/Streams: Definitions

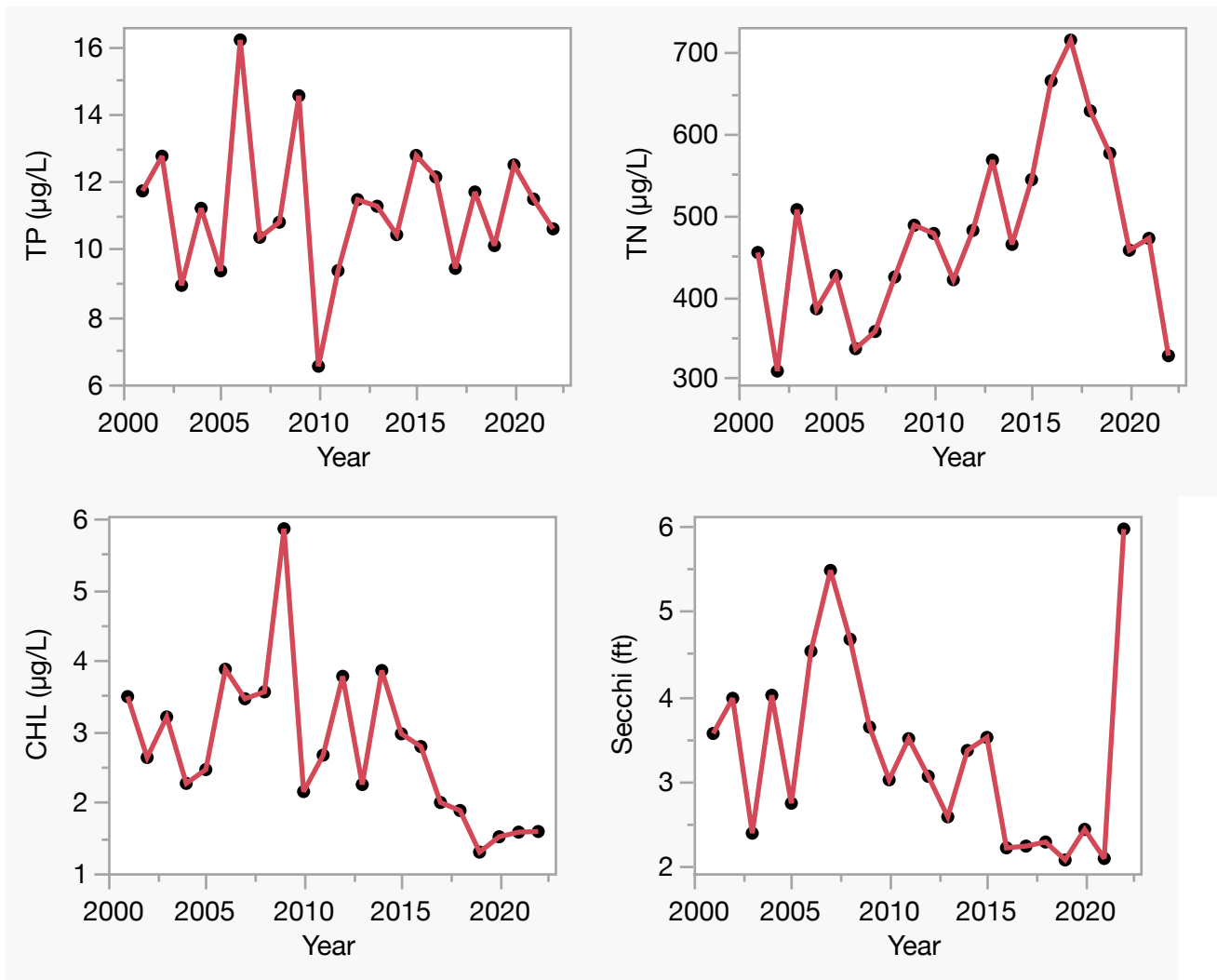
The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	7 - 16	11 (22)
Total Nitrogen ( $\mu\text{g/L}$ )	308 - 716	465 (22)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 6	3 (22)
Secchi (ft)	2.1 - 6.0	3.2 (22)
Secchi (m)	0.6 - 1.8	1.0 (22)
Color (Pt-Co Units)	21 - 243	92 (22)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	282 - 30000	3225 (18)

**Figure 2. Powell Creek East-2 trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the p value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP No Trend,  $R^2 = 0.00$ ,  $p = 0.86$ ), total nitrogen (TN Increasing,  $R^2 = 0.20$ ,  $p = 0.04$ ), chlorophyll (CHL Decreasing,  $R^2 = 0.27$ ,  $p = 0.01$ ) and Secchi depth (Secchi No Trend,  $R^2 = 0.08$ ,  $p = 0.20$ ).**



**LAKEWATCH Report for Powell Creek East-3 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Powell Creek East-3
GNIS Number	289278
Water Body Type	River/Stream
Period of Record (years, range)	16 (2001 to 2020)
Latitude	30.2618
Longitude	-85.9478

## Long-Term Data for River/Streams: Definitions

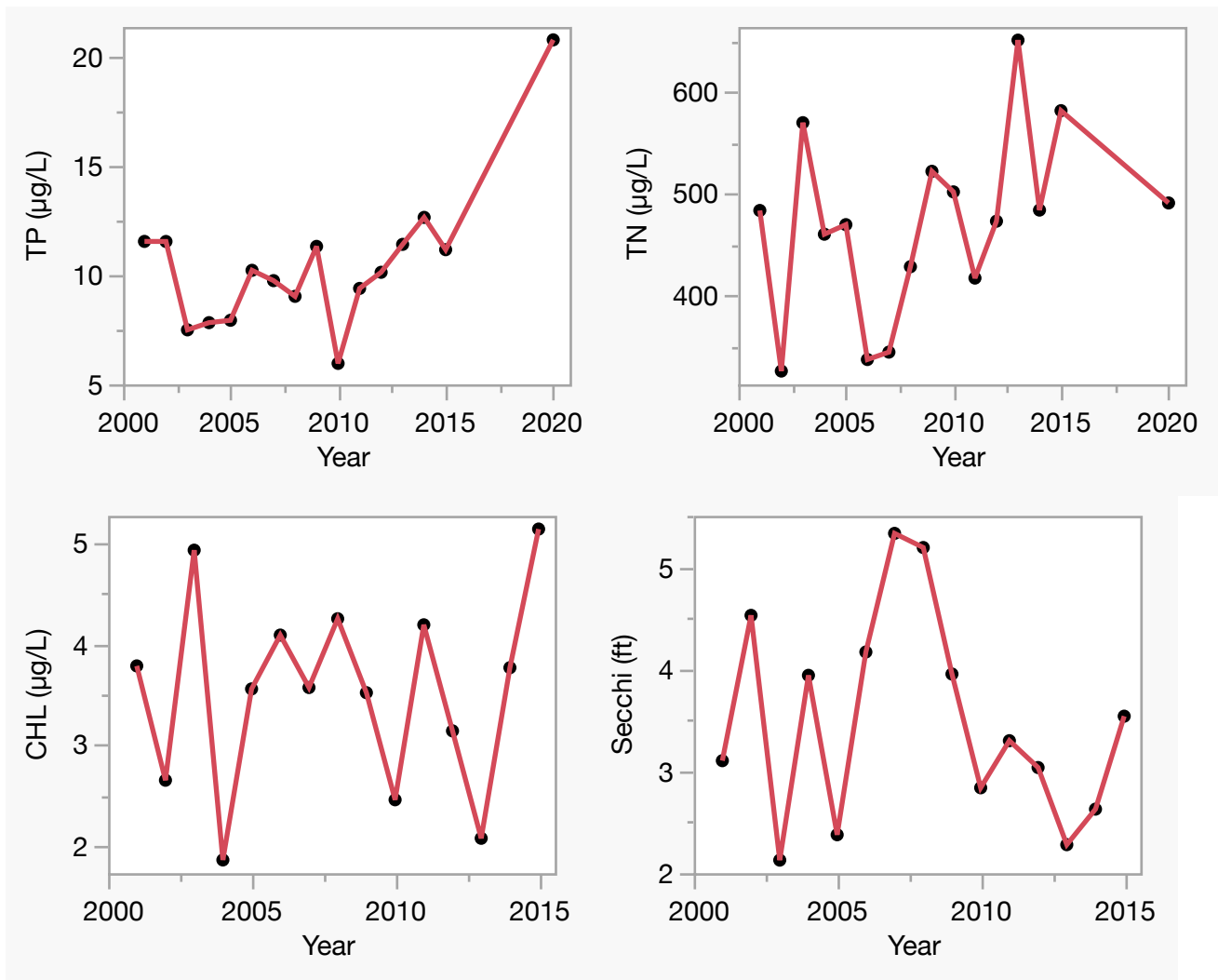
The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	6 - 21	10 (16)
Total Nitrogen ( $\mu\text{g/L}$ )	326 - 651	463 (16)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	2 - 5	3 (15)
Secchi (ft)	2.1 - 5.3	3.4 (15)
Secchi (m)	0.6 - 1.6	1.0 (15)
Color (Pt-Co Units)	25 - 183	90 (15)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	400 - 28000	2780 (11)

**Figure 2. Powell Creek East-3 trend plots of year by average. The  $R^2$  value indicates the strength of the relations (ranges from 0.0 to 1.0; higher the  $R^2$  the stronger the relation) and the  $p$  value indicates if the relation is significant ( $p < 0.05$  is significant). Total phosphorus (TP Increasing,  $R^2 = 0.35$ ,  $p = 0.02$ ), total nitrogen (TN No Trend,  $R^2 = 0.15$ ,  $p = 0.14$ ), chlorophyll (CHL No Trend,  $R^2 = 0.01$ ,  $p = 0.74$ ) and Secchi depth (Secchi No Trend,  $R^2 = 0.04$ ,  $p = 0.48$ ).**





**LAKEWATCH Report for Pretty Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Pretty Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.2017
Longitude	-85.7059

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	14 - 17	16 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	202 - 243	224 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 4	3 (3)
Secchi (ft)	5.3 - 7.9	6.1 (3)
Secchi (m)	1.6 - 2.4	1.9 (3)
Color (Pt-Co Units)	20 - 67	34 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	16432 - 32000	21909 (3)

**LAKEWATCH Report for Robinson Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Robinson Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.2110
Longitude	-85.6992

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	12 - 20	16 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	209 - 323	274 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 3	2 (3)
Secchi (ft)	4.7 - 5.5	5.0 (3)
Secchi (m)	1.4 - 1.7	1.5 (3)
Color (Pt-Co Units)	25 - 75	50 (3)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	22000 - 31000	25279 (3)

**LAKEWATCH Report for Warren Bayou-1 in Bay County**  
**Watershed Region: Panhandle West**  
**Using Data Downloaded 12/9/22**

**Introduction for River/Streams**

This report summarizes data collected on systems that have been part of the LAKEWATCH program. Data are from the period of record for individual systems. The first part of this summary lists background data for each system, the second part lists the long-term data geometric means and ranges and the final part are the trend plots for nutrients, chlorophyll and Secchi depth. **Plots were only made for systems with five or more years of data.**

For decades Florida has had a narrative nutrient water quality criterion in place to protect Florida’s waters against nutrient over-enrichment. In 2009, the Florida Department of Environmental Protection (FDEP) initiated rulemaking and, by 2011, adopted what would be the first set of statewide numeric nutrient standards for Florida’s waters. By 2015, almost all the remaining waters in Florida have numeric nutrient standards (see for FDEP Regulation Nutrient Criteria’s for: Streams, spring vents: <https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.531>).



**Figure 1. Map showing nutrient thresholds areas for streams set forth by FDEP.**

**Table 1. The nutrient thresholds for streams are listed in table below along with the map showing zones.**

Nutrient Watershed Region	Total Phosphorus Nutrient Threshold <sup>1</sup>	Total Nitrogen Nutrient Threshold <sup>1</sup>
Panhandle West	60 µg/L	670 µg/L
Panhandle East	180 µg/L	1030 µg/L
North Central	300 µg/L	1870 µg/L
Peninsular	120 µg/L	1540 µg/L
West Central	490 µg/L	1650 µg/L
South Florida	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.	No numeric nutrient threshold. The narrative criterion in paragraph 62-302.530(47)(b), F.A.C., applies.

<sup>1</sup>These values are annual geometric mean concentrations not to be exceeded more than once in any three calendar year period.

## Base File Data for River/Streams: Definitions

- **County:** Name of county in which the system resides.
- **Name:** Stream name that LAKEWATCH uses for the system.
- **GNIS Number:** Number created by USGS's Geographic Names Information System.
- **Water Body Type:** Four different types of systems; lakes, estuaries, river/streams and springs.
- **Period of Record (years):** Number of years a system has been in the LAKEWATCH program.
- **Latitude and Longitude:** Coordinates identifying the exact location of station 1 for each system.

**Table 2. Base File Data.**

County	Bay
Name	Warren Bayou-1
GNIS Number	
Water Body Type	River/Stream
Period of Record (years, range)	3 (2020 to 2022)
Latitude	30.2773
Longitude	-85.7370

## Long-Term Data for River/Streams: Definitions

The following long-term data are the primary trophic state parameters collected by LAKEWATCH volunteers and classification variables color and specific conductance (LAKEWATCH recently began analyzing samples quarterly for color and specific conductance):

- **Total Phosphorus ( $\mu\text{g/L}$ ):** The nutrient most often limiting growth of plant/algae.
- **Total Nitrogen ( $\mu\text{g/L}$ ):** Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected ( $\mu\text{g/L}$ ):** Chlorophyll concentrations are used to measure relative abundances of open water algal population.
- **Secchi (ft), Secchi (m):** Secchi measurements are estimates of water clarity.
- **Color (Pt-Co Units):** LAKEWATCH measures true color, which is the color of the water after particles have been filter out.
- **Specific Conductance ( $\mu\text{S/cm@25}^\circ\text{C}$ ):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

**Table 3. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance (collected quarterly).**

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus ( $\mu\text{g/L}$ )	13 - 18	15 (3)
Total Nitrogen ( $\mu\text{g/L}$ )	212 - 375	284 (3)
Chlorophyll- uncorrected ( $\mu\text{g/L}$ )	1 - 3	2 (3)
Secchi (ft)	1.5 - 4.9	3.3 (3)
Secchi (m)	0.5 - 1.5	1.0 (3)
Color (Pt-Co Units)	30 - 57	41 (2)
Specific Conductance ( $\mu\text{S/cm@25 C}$ )	25981 - 39000	31832 (2)