LAKEWATCH Report for St. Mark's-1 in Wakulla County
Estuary and Estuary Segment: Big Bend and Apalachee Bay St. Marks Offshore (includes Oyster and Dickerson Bays)
Using Data Downloaded 1/17/2020

Introduction for Estuaries

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 averages and ranges and the final part are trend plots for nutrients, chlorophyll and Secchi depth. Plots were only made for systems with five or more years of data.

The near shore Florida coastline is separated into estuary and estuary segments within the estuary. Deeper coastal waters are separated into coastal nutrient regions and coastal nutrient segments within the regions. Numeric nutrient criteria are established for all estuary segments, including criteria for total nitrogen, total phosphorus, and chlorophyll *a*. For open ocean coastal waters, numeric criteria are established for chlorophyll *a*, that is derived from satellite remote sensing techniques. For those locations without defined segments there are narrative nutrient criteria (e.g., Florida Keys Halo Zone).

The maps defining individual estuaries and coastal segments can be found at the following link: https://www.flrules.org/Gateway/reference.asp?No=Ref-05420

The individual nutrient criteria can be found at the following link: https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.532

Base File Data for Estuaries: Definitions:

- **County**: Name of county adjacent to the system.
- **Name**: System name that LAKEWATCH uses for the station.
- **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 1. Base File Data.

County	Wakulla
Name	St. Mark's-1
GNIS Number	290295
Water Body Type	Estuary
Period of Record (years, range)	2 (2017 to 2018)
Latitude	30.0759

Longitude	-84.1871

Long-Term Data for Estuaries: 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 (µg/L)**: The nutrient most often limiting growth of plant/algae in Florida's fresh and saltwater environments.
- **Total Nitrogen (µg/L)**: Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected (µg/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 (how far one can see into the water) and are listed with English and metric units.
- **Color (Pt-Co Units)**: LAKEWATCH measures true color, which is the color of the water after particles have been filtered out.
- **Specific Conductance (µS/cm@25°C), Salinity (ppt):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

Table 2. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance/salinity (collected quarterly).

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus (µg/L)	19 - 27	23 (2)
Total Nitrogen (µg/L)	289 - 322	305 (2)
Chlorophyll- uncorrected (µg/L)	3 - 6	5 (2)
Secchi (ft)	5.2 - 7.8	6.4 (2)
Secchi (m)	1.6 - 2.4	1.9 (2)
Color (Pt-Co Units)	11 - 11	11 (1)
Specific Conductance (µS/cm@25 C)	35000 - 35000	35000 (1)
Salinity (ppt)	22 - 22	22 (1)

LAKEWATCH Report for St. Mark's-2 in Wakulla County
Estuary and Estuary Segment: Big Bend and Apalachee Bay St. Marks Offshore (includes Oyster and Dickerson Bays)
Using Data Downloaded 1/17/2020

Introduction for Estuaries

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 averages and ranges and the final part are trend plots for nutrients, chlorophyll and Secchi depth. Plots were only made for systems with five or more years of data.

The near shore Florida coastline is separated into estuary and estuary segments within the estuary. Deeper coastal waters are separated into coastal nutrient regions and coastal nutrient segments within the regions. Numeric nutrient criteria are established for all estuary segments, including criteria for total nitrogen, total phosphorus, and chlorophyll *a*. For open ocean coastal waters, numeric criteria are established for chlorophyll *a*, that is derived from satellite remote sensing techniques. For those locations without defined segments there are narrative nutrient criteria (e.g., Florida Keys Halo Zone).

The maps defining individual estuaries and coastal segments can be found at the following link: https://www.flrules.org/Gateway/reference.asp?No=Ref-05420

The individual nutrient criteria can be found at the following link: https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.532

Base File Data for Estuaries: Definitions:

- **County**: Name of county adjacent to the system.
- **Name**: System name that LAKEWATCH uses for the station.
- **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 1. Base File Data.

County	Wakulla
Name	St. Mark's-2
GNIS Number	290295
Water Body Type	Estuary
Period of Record (years, range)	2 (2017 to 2018)
Latitude	30.0633

Longitude	-84.1904

Long-Term Data for Estuaries: 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 (µg/L)**: The nutrient most often limiting growth of plant/algae in Florida's fresh and saltwater environments.
- **Total Nitrogen (µg/L)**: Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected (µg/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 (how far one can see into the water) and are listed with English and metric units.
- **Color (Pt-Co Units)**: LAKEWATCH measures true color, which is the color of the water after particles have been filtered out.
- **Specific Conductance (µS/cm@25°C), Salinity (ppt):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

Table 2. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance/salinity (collected quarterly).

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus (µg/L)	24 - 30	27 (2)
Total Nitrogen (µg/L)	229 - 358	286 (2)
Chlorophyll- uncorrected (µg/L)	3 - 5	3 (2)
Secchi (ft)	7.8 - 8.2	8.0 (2)
Secchi (m)	2.4 - 2.5	2.4 (2)
Color (Pt-Co Units)	11 - 11	11 (1)
Specific Conductance (µS/cm@25 C)	34000 - 34000	34000 (1)
Salinity (ppt)	21 - 21	21 (1)

LAKEWATCH Report for St. Mark's-3 in Wakulla County
Estuary and Estuary Segment: Big Bend and Apalachee Bay St. Marks Offshore (includes Oyster and Dickerson Bays)
Using Data Downloaded 1/17/2020

Introduction for Estuaries

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 averages and ranges and the final part are trend plots for nutrients, chlorophyll and Secchi depth. Plots were only made for systems with five or more years of data.

The near shore Florida coastline is separated into estuary and estuary segments within the estuary. Deeper coastal waters are separated into coastal nutrient regions and coastal nutrient segments within the regions. Numeric nutrient criteria are established for all estuary segments, including criteria for total nitrogen, total phosphorus, and chlorophyll *a*. For open ocean coastal waters, numeric criteria are established for chlorophyll *a*, that is derived from satellite remote sensing techniques. For those locations without defined segments there are narrative nutrient criteria (e.g., Florida Keys Halo Zone).

The maps defining individual estuaries and coastal segments can be found at the following link: https://www.flrules.org/Gateway/reference.asp?No=Ref-05420

The individual nutrient criteria can be found at the following link: https://www.flrules.org/gateway/RuleNo.asp?title=SURFACE%20WATER%20QUALITY%20STANDARDS&ID=62-302.532

Base File Data for Estuaries: Definitions:

- **County**: Name of county adjacent to the system.
- **Name**: System name that LAKEWATCH uses for the station.
- **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 1. Base File Data.

County	Wakulla
Name	St. Mark's-3
GNIS Number	290295
Water Body Type	Estuary
Period of Record (years, range)	2 (2017 to 2018)
Latitude	30.0624

Longitude	-84.2094

Long-Term Data for Estuaries: 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 (µg/L)**: The nutrient most often limiting growth of plant/algae in Florida's fresh and saltwater environments.
- **Total Nitrogen (µg/L)**: Another nutrient needed for aquatic plant/algae growth but only limiting when nitrogen to phosphorus ratios are generally less than 10.
- **Chlorophyll-uncorrected (µg/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 (how far one can see into the water) and are listed with English and metric units.
- **Color (Pt-Co Units)**: LAKEWATCH measures true color, which is the color of the water after particles have been filtered out.
- **Specific Conductance (µS/cm@25°C), Salinity (ppt):** Measurement of the ability of water to conduct electricity and can be used to estimate the amount of dissolved materials in water.

Table 2. Long-term trophic state data collected monthly by LAKEWATCH volunteers and color and specific conductance/salinity (collected quarterly).

Parameter	Minimum and Maximum Annual Geometric Means	Grand Geometric Mean (Sampling years)
Total Phosphorus (µg/L)	17 - 19	18 (2)
Total Nitrogen (µg/L)	226 - 308	264 (2)
Chlorophyll- uncorrected (µg/L)	2 - 5	3 (2)
Secchi (ft)	-	(0)
Secchi (m)	-	(0)
Color (Pt-Co Units)	11 - 11	11 (1)
Specific Conductance (µS/cm@25 C)	37000 - 37000	37000 (1)
Salinity (ppt)	23 - 23	23 (1)