

Ichetucknee River-1 (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 29°57'9", Longitude 82°47'10"

Period of record: 2 sampling dates; July 3, 2001 to December 17, 2001

Geologic formation (Brooks 1981a):

The geology is dominated by undifferentiated sand, shell, clay, marl, and peat of the Holocene

Physiographic region (Brooks 1981b):

The station lies in the Bell Sand Hills and Williford Flats subdivision of the Flats and Swamps division of the Ocala Uplift District

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 2 months sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 50 | 52 | 54 |
| Long-term total nitrogen concentrations (µg/L) | 410 | 450 | 490 |
| Long-term total chlorophyll concentrations (µg/L) | 1.0 | 1.5 | 2.0 |
| Long-term Secchi depth (ft) | . | . | . |

2001 Florida LAKEWATCH Data

Numbers reported below are monthly averages calculated from 1 station for total phosphorus (TP, µg/L), total nitrogen (TN, µg/L), chlorophyll (CHL, µg/L) and Secchi depth (SECCHI, ft) during 2001:

| <u>Date</u> | <u>TP (µg/L)</u> | <u>TN (µg/L)</u> | <u>CHL (µg/L)</u> | <u>SECCHI (ft)</u> |
|--------------|------------------|------------------|-------------------|--------------------|
| Jul-03 | 54 | 490 | 2.0 | . |
| Dec-17 | 50 | 410 | 1.0 | . |
| 2001 Average | 52 | 450 | 1.5 | . |

Ichetucknee River-2 (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 29°56'14", Longitude 82°47'51"

Period of record: 1 sampling date; July 3, 2001

Geologic formation (Brooks 1981a):

The geology is dominated by undifferentiated sand, shell, clay, marl, and peat of the Holocene

Physiographic region (Brooks 1981b):

The station lies in the Bell Sand Hills and Williford Flats subdivision of the Flats and Swamps division of the Ocala Uplift District

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 1 month sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 47 | 47 | 47 |
| Long-term total nitrogen concentrations (µg/L) | 520 | 520 | 520 |
| Long-term total chlorophyll concentrations (µg/L) | 1.0 | 1.0 | 1.0 |
| Long-term Secchi depth (ft) | . | . | . |

2001 Florida LAKEWATCH Data

Numbers reported below are monthly averages calculated from 1 station for total phosphorus (TP, µg/L), total nitrogen (TN, µg/L), chlorophyll (CHL, µg/L) and Secchi depth (SECCHI, ft) during 2001:

| <u>Date</u> | <u>TP (µg/L)</u> | <u>TN (µg/L)</u> | <u>CHL (µg/L)</u> | <u>SECCHI (ft)</u> |
|--------------|------------------|------------------|-------------------|--------------------|
| Jul-03 | 47 | 520 | 1.0 | . |
| 2001 Average | 47 | 520 | 1.0 | . |

Ichetucknee River-3 (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 29°55'58", Longitude 82°48'0"

Period of record: 2 sampling dates; July 3, 2001 to December 17, 2001

Geologic formation (Brooks 1981a):

The geology is dominated by undifferentiated sand, shell, clay, marl, and peat of the Holocene

Physiographic region (Brooks 1981b):

The station lies in the Bell Sand Hills and Williford Flats subdivision of the Flats and Swamps division of the Ocala Uplift District

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 2 months sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 46 | 52 | 57 |
| Long-term total nitrogen concentrations (µg/L) | 450 | 455 | 460 |
| Long-term total chlorophyll concentrations (µg/L) | 1.0 | 1.0 | 1.0 |
| Long-term Secchi depth (ft) | . | . | . |

2001 Florida LAKEWATCH Data

Numbers reported below are monthly averages calculated from 1 station for total phosphorus (TP, µg/L), total nitrogen (TN, µg/L), chlorophyll (CHL, µg/L) and Secchi depth (SECCHI, ft) during 2001:

| <u>Date</u> | <u>TP (µg/L)</u> | <u>TN (µg/L)</u> | <u>CHL (µg/L)</u> | <u>SECCHI (ft)</u> |
|--------------|------------------|------------------|-------------------|--------------------|
| Jul-03 | 46 | 450 | 1.0 | . |
| Dec-17 | 57 | 460 | 1.0 | . |
| 2001 Average | 52 | 455 | 1.0 | . |

Jeffery (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 30°12'34", Longitude 82°41'34"

Period of record: 22 sampling dates; October 23, 1992 to December 7, 2001

Surface Area (Shafer et al. 1986): 114 acres

Lake Region (Griffith et al. 1997): Northern Peninsula Karst Plains (65-06)

Geologic formation (Brooks 1981a):

The geology is dominated by phosphatic sand, silty sand, and clay of the Hawthorne Formation

Physiographic region (Brooks 1981b):

The lake lies in the Lake City Karst subdivision of the Northern Peninsular Slopes division of the Ocala Uplift District

Supplemental water chemistry data

Data reported are means from 2 sampling dates:

| | | | |
|-----------------------------|------|---|-----|
| pH | 5.8 | Total alkalinity (mg/L as CaCO ₃) | 1.0 |
| Conductance (µS/cm @ 25 °C) | 46 | Color (Pt-Co units) | 47 |
| Chloride (mg/L) | 12.6 | Silicon (mg/L) | 0.2 |
| Sulfate (mg/L) | 0.1 | Calcium (mg/L) | 2.0 |
| Magnesium (mg/L) | 0.6 | Sodium (mg/L) | 4.8 |
| Potassium (mg/L) | 0.4 | Iron (mg/L) | 0.1 |

Periodic water chemistry data

Numbers reported below are the minimum, average, and maximum value for the 1 sampling date:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|--|----------------|----------------|----------------|
| Long-term color concentrations (Pt-Co units) | 62 | 62 | 62 |

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 22 months sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 10 | 14 | 23 |
| Long-term total nitrogen concentrations (µg/L) | 537 | 634 | 837 |
| Long-term total chlorophyll concentrations (µg/L) | 2.7 | 7.4 | 28.0 |
| Long-term Secchi depth (ft) | 3.0 | 5.2 | 8.3 |

2001 Florida LAKEWATCH Data

Numbers reported below are monthly averages calculated from 3 stations for total phosphorus (TP, µg/L), total nitrogen (TN, µg/L), chlorophyll (CHL, µg/L) and Secchi depth (SECCHI, ft) during 2001:

| <u>Date</u> | <u>TP (µg/L)</u> | <u>TN (µg/L)</u> | <u>CHL (µg/L)</u> | <u>SECCHI (ft)</u> |
|--------------|------------------|------------------|-------------------|--------------------|
| Sep-06 | 15 | 645 | 9.5 | . |
| Sep-27 | 23 | 810 | 28.0 | 3.0 |
| Oct-09 | 16 | 637 | 13.0 | 3.8 |
| Nov-09 | 17 | 650 | 8.7 | 3.5 |
| Dec-07 | 18 | 837 | 6.3 | 4.4 |
| 2001 Average | 18 | 716 | 13.1 | 3.7 |

Mills Creek (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 30°10'15", Longitude 82°36'52"

Period of record: 7 sampling dates; January 14, 1996 to July 11, 1996

Lake Region (Griffith et al. 1997): Northern Peninsula Karst Plains (65-06)

Geologic formation (Brooks 1981a):

The geology is dominated by phosphatic sand, silty sand, and clay of the Hawthorne Formation

Physiographic region (Brooks 1981b):

The lake lies in the Lake City Karst subdivision of the Northern Peninsular Slopes division of the Ocala Uplift District

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 7 months sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 184 | 331 | 688 |
| Long-term total nitrogen concentrations (µg/L) | 380 | 529 | 800 |
| Long-term total chlorophyll concentrations (µg/L) | . | . | . |
| Long-term Secchi depth (ft) | . | . | . |

2001 Florida LAKEWATCH Data

No samples collected in 2001

Montgomery (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 30°11'1", Longitude 82°38'40"

Period of record: 5 sampling dates; January 24, 1996 to September 23, 2000

Surface Area (Shafer et al. 1986): 36 acres

Lake Region (Griffith et al. 1997): Northern Peninsula Karst Plains (65-06)

Geologic formation (Brooks 1981a):

The geology is dominated by phosphatic sand, silty sand, and clay of the Hawthorne Formation

Physiographic region (Brooks 1981b):

The lake lies in the Lake City Karst subdivision of the Northern Peninsular Slopes division of the Ocala Uplift District

Supplemental water chemistry data

Data reported are means from 2 sampling dates:

| | | | |
|-----------------------------|------|---|------|
| pH | 7.5 | Total alkalinity (mg/L as CaCO ₃) | 48.0 |
| Conductance (µS/cm @ 25 °C) | 140 | Color (Pt-Co units) | 25 |
| Chloride (mg/L) | 12.4 | Silicon (mg/L) | 0.2 |
| Sulfate (mg/L) | 5.5 | Calcium (mg/L) | 17.0 |
| Magnesium (mg/L) | 1.6 | Sodium (mg/L) | 5.9 |
| Potassium (mg/L) | 2.0 | Iron (mg/L) | 0.0 |

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 5 months sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 32 | 45 | 69 |
| Long-term total nitrogen concentrations (µg/L) | 450 | 656 | 1370 |
| Long-term total chlorophyll concentrations (µg/L) | 1.0 | 25.6 | 83.3 |
| Long-term Secchi depth (ft) | 2.0 | 4.2 | 6.5 |

2001 Florida LAKEWATCH Data

No samples collected in 2001

Montgomery (Columbia County)
Florida LAKEWATCH Bacteria Summary

The following table lists bacteria concentrations found in Montgomery (Columbia County). These data are part of a statewide survey that Florida LAKEWATCH is conducting to determine patterns in the abundance of total coliforms and fecal coliforms among Florida water bodies. This is a one-time sample and can be used to describe the bacteria concentrations for that day and not throughout a year. It is important to remember that results could differ over the course of one year or several years based on varying environmental factors such as changes in water temperature, rainfall, aquatic plant abundance, algae blooms and others.

September 23, 2000

| Lake | County | Station | Station Location | Total Coliforms (MPN) | Fecal Coliforms (MPN) |
|------------|----------|---------|------------------|-----------------------|-----------------------|
| Montgomery | Columbia | 1 | Off vegetation | 3900 | 0 |
| Montgomery | Columbia | 2 | Off vegetation | 3900 | 100 |
| Montgomery | Columbia | 3 | Off vegetation | 3600 | 100 |
| Montgomery | Columbia | 4 | Off vegetation | 7300 | 100 |
| Montgomery | Columbia | 5 | Off vegetation | 2500 | 0 |
| Montgomery | Columbia | 6 | Off vegetation | 2100 | 100 |
| Montgomery | Columbia | 7 | Off vegetation | 2300 | 100 |
| Montgomery | Columbia | 8 | Off vegetation | 1800 | 100 |
| Montgomery | Columbia | 9 | Off vegetation | 2600 | 0 |
| Montgomery | Columbia | 10 | Open water | 1900 | 0 |
| Montgomery | Columbia | 11 | Open water | 1800 | 0 |
| Montgomery | Columbia | 12 | Open water | 2300 | 0 |

The Florida Administrative Code (FAC), Section 62-302.530 defines criteria for both total and fecal coliform bacteria for Class III waters. The FAC states that total coliform bacteria shall not exceed a count or Most Probable Number (MPN) of 1,000 bacteria per 100 milliliters of water in 20% or more of the samples examined during any month, nor exceed a MPN of 2,400 at any individual station. The FAC also states that fecal coliform bacteria shall not exceed a MPN of 400 in 10% or more of the samples, nor exceed a MPN of 800 at any individual station.

Total coliform bacteria counts for Montgomery on September 23, 2000 ranged from 1800 to 7300 MPN. Total coliform bacteria exceeded 1,000 MPN in 100% of the samples. Total coliform bacteria did exceed 2,400 at six stations. Total coliform bacteria were not within the acceptable range as defined by the Florida Administrative Code (FAC), Section 62-302.530.

Fecal coliform bacteria counts for Montgomery on September 23, 2000 ranged from 0 to 100 MPN. Fecal coliform bacteria exceeded 400 MPN in 0% of the samples. Fecal coliform bacteria did not exceed 800 at any station. Fecal coliform bacteria were within the acceptable range as defined by the Florida Administrative Code (FAC), Section 62-302.530.

Santa Fe River-1 (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 29°55'41", Longitude 82°46'11"

Period of record: 1 sampling date; July 2, 2001

Geologic formation (Brooks 1981a):

The geology is dominated by undifferentiated sand, shell, clay, marl, and peat of the Holocene

Physiographic region (Brooks 1981b):

The station lies in the Bell Sand Hills and Williford Flats subdivision of the Flats and Swamps division of the Ocala Uplift District

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 1 month sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 40 | 40 | 40 |
| Long-term total nitrogen concentrations (µg/L) | 290 | 290 | 290 |
| Long-term total chlorophyll concentrations (µg/L) | 1.0 | 1.0 | 1.0 |
| Long-term Secchi depth (ft) | . | . | . |

2001 Florida LAKEWATCH Data

Numbers reported below are monthly averages calculated from 1 station for total phosphorus (TP, µg/L), total nitrogen (TN, µg/L), chlorophyll (CHL, µg/L) and Secchi depth (SECCHI, ft) during 2001:

| <u>Date</u> | <u>TP (µg/L)</u> | <u>TN (µg/L)</u> | <u>CHL (µg/L)</u> | <u>SECCHI (ft)</u> |
|--------------|------------------|------------------|-------------------|--------------------|
| Jul-02 | 40 | 290 | 1.0 | . |
| 2001 Average | 40 | 290 | 1.0 | . |

Santa Fe River-2 (Columbia County)

Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 29°55'34", Longitude 82°46'49"

Period of record: 1 sampling date; July 2, 2001

Geologic formation (Brooks 1981a):

The geology is dominated by undifferentiated sand, shell, clay, marl, and peat of the Holocene

Physiographic region (Brooks 1981b):

The station lies in the Bell Sand Hills and Williford Flats subdivision of the Flats and Swamps division of the Ocala Uplift District

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 1 month sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 55 | 55 | 55 |
| Long-term total nitrogen concentrations (µg/L) | 650 | 650 | 650 |
| Long-term total chlorophyll concentrations (µg/L) | 1.0 | 1.0 | 1.0 |
| Long-term Secchi depth (ft) | . | . | . |

2001 Florida LAKEWATCH Data

Numbers reported below are monthly averages calculated from 1 station for total phosphorus (TP, µg/L), total nitrogen (TN, µg/L), chlorophyll (CHL, µg/L) and Secchi depth (SECCHI, ft) during 2001:

| <u>Date</u> | <u>TP (µg/L)</u> | <u>TN (µg/L)</u> | <u>CHL (µg/L)</u> | <u>SECCHI (ft)</u> |
|--------------|------------------|------------------|-------------------|--------------------|
| Jul-02 | 55 | 650 | 1.0 | . |
| 2001 Average | 55 | 650 | 1.0 | . |

Santa Fe River-3 (Columbia County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 29°55'59", Longitude 82°47'51"

Period of record: 2 sampling dates; July 2, 2001 to December 17, 2001

Geologic formation (Brooks 1981a):

The geology is dominated by undifferentiated sand, shell, clay, marl, and peat of the Holocene

Physiographic region (Brooks 1981b):

The station lies in the Bell Sand Hills and Williford Flats subdivision of the Flats and Swamps division of the Ocala Uplift District

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 2 months sampled:

| | <u>Minimum</u> | <u>Average</u> | <u>Maximum</u> |
|---|----------------|----------------|----------------|
| Long-term total phosphorus concentrations (µg/L) | 54 | 56 | 58 |
| Long-term total nitrogen concentrations (µg/L) | 610 | 635 | 660 |
| Long-term total chlorophyll concentrations (µg/L) | 1.0 | 1.5 | 2.0 |
| Long-term Secchi depth (ft) | . | . | . |

2001 Florida LAKEWATCH Data

Numbers reported below are monthly averages calculated from 1 station for total phosphorus (TP, µg/L), total nitrogen (TN, µg/L), chlorophyll (CHL, µg/L) and Secchi depth (SECCHI, ft) during 2001:

| <u>Date</u> | <u>TP (µg/L)</u> | <u>TN (µg/L)</u> | <u>CHL (µg/L)</u> | <u>SECCHI (ft)</u> |
|--------------|------------------|------------------|-------------------|--------------------|
| Jul-02 | 54 | 660 | 2.0 | . |
| Dec-17 | 58 | 610 | 1.0 | . |
| 2001 Average | 56 | 635 | 1.5 | . |