



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End

of Day CCV

Yes / No

WIN Station Name: Kings Lake

Date: 10/14/2021

WIN/Field ID: G4NW0537

WBID: 266A

ENR:

Latitude: 30.783556

County: Walton

Org ID: 21flpns

Longitude: -86.18958

Receiving Body of Water: Yellow River

RQ- 2021-08-09-28

| Sampling Team Members                                         | WQ Measurements                     | Sample Collection                   | Documentation                       | Preservation                        | Preservation Check                  |
|---------------------------------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> Frank Butera              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |                                     |                                     |
| <input checked="" type="checkbox"/> Christopher Stopher Slade |                                     | <input checked="" type="checkbox"/> |                                     | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/>                                      |                                     |                                     |                                     |                                     |                                     |
| <input type="checkbox"/>                                      |                                     |                                     |                                     |                                     |                                     |

| Sampling Equipment                                   |                                                 |
|------------------------------------------------------|-------------------------------------------------|
| <input checked="" type="checkbox"/> Sample Container | <input type="checkbox"/> Carboy                 |
| <input type="checkbox"/> Dipper                      | <input type="checkbox"/> Van Dorn               |
| <input checked="" type="checkbox"/> Syringe          | <input type="checkbox"/> Pole                   |
| Depth measured with: Meter                           |                                                 |
| Secchi Equipment ID:                                 |                                                 |
| Collection Method                                    |                                                 |
| <input type="checkbox"/> Wading                      | <input checked="" type="checkbox"/> Canoe/Kayak |
| <input type="checkbox"/> From Shore                  | <input type="checkbox"/> Electric Motor         |
| <input type="checkbox"/> Other                       | <input type="checkbox"/> Gasoline Motor         |

|                                                                                                                                                                                                                                                                            |          |                           |                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------------------------|------------------------|
| Water Level: <input type="checkbox"/> Normal <input type="checkbox"/> Low <input checked="" type="checkbox"/> High <input type="checkbox"/> Dry <input type="checkbox"/> Pooled <input type="checkbox"/> Flooded                                                           |          | Meter ID# 155077 (PRODSS) |                        |
| Photos: NO                                                                                                                                                                                                                                                                 | Flow: NA | Tide:                     | Tide Times: High: Low: |
| Biological Samples Collected: <input type="checkbox"/> None <input checked="" type="checkbox"/> HA <input type="checkbox"/> SCI <input type="checkbox"/> RPS <input type="checkbox"/> Algae ID <input type="checkbox"/> LVS <input checked="" type="checkbox"/> LVI Other: |          |                           |                        |
| SBIO ID Numbers:                                                                                                                                                                                                                                                           |          |                           |                        |
| Notes: Lots of stumps. Canoe with trolling motor required. Sunny, Hot mid-80's                                                                                                                                                                                             |          |                           |                        |

## Duplicate Sample

|                      |       |           |              |
|----------------------|-------|-----------|--------------|
| Time Zone: CEN       | Time: | Field ID: | (WIN ID_DUP) |
| WIN DMT Activity ID: |       |           |              |

## Blank

|                         |               |                    |                      |
|-------------------------|---------------|--------------------|----------------------|
| Time Zone:              | Time:         | Field ID:          | (Blank Type_DDDMMYY) |
| DI Source:              | Location:     |                    |                      |
| DI Type:                | Equipment ID: |                    |                      |
| DI Container (Name/ID): |               | DI Container Type: |                      |

LIMS EVENT ID: WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets FB / 10-14-2021 Migrate Data to WIN: Verify Data In WIN:



RQ-2021-08-09-28

Customer: WQAP

Project ID: SMP

Collected By: Frank Butera, Christopher Stopher Slade

Field Report Prepared By: Frank Butera

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G4NW0537

Location: Kings Lake

Comments:

This station replaced Storet 33040046

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

| Date                                            | Time        | DO (mg/L)                                                                                                                                  | DO (%SAT)                                   | Temp. (C°) | pH         | Sample Depth (m)                                                                   | Secchi Disk (m)                         | Total Depth (m)                        | Sp COND (µmhos/cm)    | Salinity (PPT) |  |  |
|-------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------|------------|------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------|-----------------------|----------------|--|--|
|                                                 | 1300<br>CEN | 7.92                                                                                                                                       | 101.6                                       | 28.1       | 6.17       | 0.3                                                                                | 2.7<br><input type="checkbox"/> VOB (S) | 3                                      | 18.5                  | 0.01           |  |  |
| 10/14/2021                                      | 1305        | 8.05                                                                                                                                       | 101.4                                       | 26.9       | 5.99       | 2.0                                                                                |                                         |                                        | 18.5                  | 0.01           |  |  |
|                                                 | 1310<br>CEN | 8.06                                                                                                                                       | 101.6                                       | 26.9       | 5.99       | 2.5                                                                                |                                         |                                        | 18.5                  | 0.01           |  |  |
| Parameter Suite                                 |             | Parameter Methods                                                                                                                          |                                             |            |            | Preservation                                                                       |                                         | pH Check                               | # Bottles sent to Lab | Bottle Group   |  |  |
| Preserved Nutrients (P-500ML)                   |             | <input checked="" type="checkbox"/> W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP                                                            |                                             |            |            | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H2SO4* |                                         | <input checked="" type="checkbox"/> <2 | 1                     | A              |  |  |
|                                                 |             | Lot #                                                                                                                                      | SA0353110                                   |            | Exp:       | 1112022                                                                            |                                         |                                        |                       |                |  |  |
| Metals (P-500ML)                                |             | <input checked="" type="checkbox"/> W-ICPMS <input checked="" type="checkbox"/> W-ICP <input checked="" type="checkbox"/> W-HARD           |                                             |            |            | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> HNO3*  |                                         | <input checked="" type="checkbox"/> <2 | 1                     | A              |  |  |
|                                                 |             | Lot #                                                                                                                                      | NA1105100                                   |            | Exp:       | 06072022                                                                           |                                         |                                        |                       |                |  |  |
| Filtered Nutrients (P125ML)                     |             | <input checked="" type="checkbox"/> W-PO4-F <input checked="" type="checkbox"/> Field Filtered 0.45 µm Filter                              |                                             |            |            | <input checked="" type="checkbox"/> Ice                                            |                                         |                                        | 1                     | A              |  |  |
|                                                 |             | Filter Lot #                                                                                                                               | 17236199                                    |            |            |                                                                                    |                                         |                                        |                       |                |  |  |
|                                                 |             | Syringe Lot #                                                                                                                              | 1005533                                     |            |            |                                                                                    |                                         |                                        |                       |                |  |  |
| Chlorophyll (BP-1L)                             |             | <input checked="" type="checkbox"/> CHLSUITE-W                                                                                             |                                             |            |            | <input checked="" type="checkbox"/> Ice                                            |                                         |                                        | 1                     | A              |  |  |
| Physical/Aggregate (Fresh) (P-1L)               |             | <input checked="" type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS                            |                                             |            |            | <input checked="" type="checkbox"/> Ice                                            |                                         |                                        | 1                     | A              |  |  |
| Physical/Aggregate (Marine) (P-1L)              |             | <input type="checkbox"/> Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY                                                                    |                                             |            |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
| Macroinvertebrates (PJ-2L)                      |             | <input type="checkbox"/> MI-FW-QLDC                                                                                                        | Formalin Lot #                              |            |            | <input type="checkbox"/> Formalin                                                  |                                         |                                        |                       |                |  |  |
| Periphyton (PT-50ML)                            |             | <input type="checkbox"/> ALGAE-ID                                                                                                          |                                             |            |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
| Microbiology (Contract Lab Bottle)              |             | <input type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enterococci <input type="checkbox"/> Contract Lab |                                             |            |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
| Molecular (QPCR-P-500ML)                        |             | <input type="checkbox"/> PCR-HF183 <input type="checkbox"/> PCR-BacR <input type="checkbox"/> PCR-DG3                                      |                                             |            |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
|                                                 |             | <input type="checkbox"/> PCR-GULL2 <input type="checkbox"/> PCR-GFD <input type="checkbox"/>                                               |                                             |            |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
| Tracers (BG-500ML)                              |             | <input type="checkbox"/> W-E8321-DI <input type="checkbox"/> W-E8321-MS                                                                    |                                             |            |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
| Pesticides (BG-500ML) (BG-1L)                   |             | W-E8321-DI                                                                                                                                 | WE8321-MS                                   | W-PSNP-TQ  | W-CT-CL-R  | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
| Phytoplankton/Periphyton                        |             | W-PCL-TQ-R                                                                                                                                 | W-CARB-AA ( 5 ml of MCAA** Buffer Solution) |            |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
|                                                 |             |                                                                                                                                            |                                             | DTY-QN-C   |            | <input type="checkbox"/> Ice                                                       |                                         |                                        |                       |                |  |  |
|                                                 |             |                                                                                                                                            |                                             | PKD-QN-BV  |            |                                                                                    |                                         |                                        |                       |                |  |  |
| Name: Frank Butera<br>Christopher Stopher Slade |             |                                                                                                                                            |                                             |            | Signature: |                                                                                    |                                         |                                        | Date: 10/14/2021      |                |  |  |

\*2.0 ml of Preservative used unless noted otherwise.

\*\*MCAA: Monochloroacetic acid buffer solution

Site Name Kings Lake

Date: 10/14/2021

Storet G4NW0537

Field ID G4NW0537

Project: SMP/ TMDL Studies

Visit ID 83379

RQ: 2021-08-09-28

Macro ID 11985

LIMS ID: 2283801

HA ID 17052

WBID: 266A

☒ LVI

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial FB, 10/27/21

☒ Date and Initial QA: 10/28/21 SS HA Score 61

☒ LVI entered in SBIO Initial FB, 10/27/21

☒ Date and Initial QA: 01/20/22 MK

☒ Plants getting verified

☒ Date submitted: In House

☐ Plants verified

☐ Date returned: \_\_\_\_\_

☒ Macro ID authorized in SBIO

☒ Date and Initial: 01/20/22 MK

☒ Macro ID score: 56

☒ If SMP, scanned into database

Notes:

Private property. Access via Twin Lakes Resort Campground.

Kirsten O'Neill. Oneillkirstan@gmail.com

# DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: 83379 MACROPHYTE ID: 11985 LATITUDE: N 30.783556  
 COUNTY: Walton (Defuniak Springs) STORET #: G4NW0537 LONGITUDE: W -86.18958  
 DATE: 10/14/2021 TIME: 13:00 CT SAMPLING AGENCY: FL DEP - NWROC  
 SITE NAME: Kings Lake WBID: 266A  
 FIELD ID/NAME: G4NW0537 LAKE SIZE: 190 RQ: 2021-08-09-28  
LIMS 2283901

## WATERSHED / LAKESIDE FEATURES

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                           |    |                                                                                                    |    |                                                                                                            |    |                                                                                                                   |    |    |    |    |   |   |   |   |   |   |   |   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----|----------------------------------------------------------------------------------------------------|----|------------------------------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------------------------------------|----|----|----|----|---|---|---|---|---|---|---|---|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category – from GIS) :<br>Forest/Natural <input type="checkbox"/> Silviculture <input checked="" type="checkbox"/> Field/Pasture <input checked="" type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Other (Specify) <u>SAND MINE</u> <u>RJ Park</u> |                                                                                                           |    |                                                                                                    |    | <b>LANDSCAPE DEVELOPMENT INTENSITY</b> (100 m buffer)<br>LDI: <u>5.26</u>                                  |    |                                                                                                                   |    |    |    |    |   |   |   |   |   |   |   |   |
| Local Watershed Erosion (select one) : <input type="checkbox"/> None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy                                                                                                                                                                                                                                                                                                    |                                                                                                           |    |                                                                                                    |    | Artificially Impounded <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                 |    |                                                                                                                   |    |    |    |    |   |   |   |   |   |   |   |   |
| Local Watershed NPS Pollution : <input type="checkbox"/> No evidence <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Heavy                                                                                                                                                                                                                                                                                                    |                                                                                                           |    |                                                                                                    |    | Land Use Source & Year: <u>33040046</u> <u>SBIO, 2012</u>                                                  |    |                                                                                                                   |    |    |    |    |   |   |   |   |   |   |   |   |
| <b>STORMWATER INPUTS</b><br><u>6</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation                     |    | Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place |    | Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place |    | Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place |    |    |    |    |   |   |   |   |   |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20                                                                                                        | 19 | 18                                                                                                 | 17 | 16                                                                                                         | 15 | 14                                                                                                                | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
| <b>LAKESIDE ALTERATIONS</b><br><u>7</u>                                                                                                                                                                                                                                                                                                                                                                                                                                             | Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)       |    | Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)              |    | Many structures, roads or other human disturbance visible (50%-70% lakeside affected)                      |    | Highly developed or disturbed (>70% of lakeside affected)                                                         |    |    |    |    |   |   |   |   |   |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20                                                                                                        | 19 | 18                                                                                                 | 17 | 16                                                                                                         | 15 | 14                                                                                                                | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |
| <b>BUFFER ZONE</b><br><u>5</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer |    | 89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer                               |    | 50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer                                    |    | < 29% of shoreline with >18m buffer                                                                               |    |    |    |    |   |   |   |   |   |   |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 20                                                                                                        | 19 | 18                                                                                                 | 17 | 16                                                                                                         | 15 | 14                                                                                                                | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 |

## WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| <b>Water:</b><br>Nutrient Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Preserved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No pH<2 <input type="checkbox"/> No<br>Color Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Lot # _____ Exp. Date: _____<br>Alkalinity Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Water Level <input type="checkbox"/> Low <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High           |  |  |  |  |  | <b>Water Odors:</b> <input checked="" type="checkbox"/> Normal<br><input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum <input type="checkbox"/> Other _____                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |
| <b>Meter Readings:</b><br>Top: <u>1.3</u> <u>28.1</u> <u>6.12</u> <u>7.92</u> <u>101.6</u> <u>18.5</u> <u>0.01</u><br>Mid-Depth: <u>2.0</u> <u>26.9</u> <u>6.15</u> <u>8.05</u> <u>101.4</u> <u>18.5</u> <u>0.01</u><br>Bottom: <u>2.5</u> <u>26.9</u> <u>5.99</u> <u>8.06</u> <u>101.6</u> <u>18.5</u> <u>0.01</u>                                                                                                                                                                                                                                                                |  |  |  |  |  | <b>Water Surface Oils:</b> <input checked="" type="checkbox"/> None<br><input checked="" type="checkbox"/> Sheen/Slick <input type="checkbox"/> Glob <input type="checkbox"/> Other _____                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |
| Meter ID: <u>155077</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  |  | <b>Clarity:</b> <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Slightly Turbid<br><b>Color:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Tannic <input checked="" type="checkbox"/> Green                                                                                                                                                                                                                                                                                                                                        |  |  |  |  |  |
| <b>Sediment Type:</b> (may check more than one)<br><input type="checkbox"/> Sandy <input type="checkbox"/> Organic fibrous (peaty, CPOM) <input checked="" type="checkbox"/> Vegetated<br><input checked="" type="checkbox"/> Sand/Silt <input checked="" type="checkbox"/> Organic smooth (muck) <input type="checkbox"/> Other (Specify): _____                                                                                                                                                                                                                                  |  |  |  |  |  | <b>SECCHI (M)</b> <u>2.7</u> <b>Total Station Depth (M)</b> <u>3.01</u><br><b>VOB</b> <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  |
| <b>Biological Communities:</b><br>LVI Conducted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Phytoplankton Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot #: _____ Exp Date: _____<br>Algal Bloom/Algal ID Sample Taken? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/><br>Active Vegetation Mgmt? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know |  |  |  |  |  | <b>Abundance:</b><br>Absent Rare Common Abundant<br>Periphyton <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/><br>Nuisance Plants <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Submersed Plants <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/><br>Exotic Apple Snails <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |  |  |  |  |  |
| <b>Weather Conditions:</b> <u>Sunny, Hot.</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |  |  | <b>Additional Notes:</b><br>Replaces Storet 33040046.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |
| <b>SAMPLING TEAM:</b> <u>Frank Butler, Stoper Slate</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  |  |  |  | <b>SIGNATURE:</b> <u>For [Signature]</u> <b>DATE:</b> <u>10/14/2021</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |  |  |  |

DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

|                                                     |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                              |                                                                                                                                                 |                                                                                                                                                         |  |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| STORET STATION NUMBER:<br>G4NW0357                  | DATE (M/D/Y) <u>4/14/21</u>                                                                                                                                                                                                                                                                                                                     | LAKE NAME<br><b>Kings Lake</b>                                                                                                                               |                                                                                                                                                 | FIELD ID / NAME<br>G4NW0357                                                                                                                             |  |
| WBID: 266A                                          | COUNTY: <b>Walton</b>                                                                                                                                                                                                                                                                                                                           | SAMPLING LOCATION/DESCRIPTION:<br>Twin Lakes Camp, Defuniak Springs                                                                                          |                                                                                                                                                 | LAKE SIZE:<br>190 Acres                                                                                                                                 |  |
| <b>PARAMETER</b>                                    | No surface inflow or outflow present, very long water residence time, groundwater seepage dominates<br><input type="checkbox"/>                                                                                                                                                                                                                 | Surface water inflow present, but flow is rare, moderate to long water residence time<br><input type="checkbox"/>                                            | Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time<br><input type="checkbox"/> | Impounded, hydrology of system artificially controlled<br><input checked="" type="checkbox"/>                                                           |  |
| <b>HYDROLOGY</b>                                    |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                              |                                                                                                                                                 |                                                                                                                                                         |  |
| <b>Color</b>                                        | Very clear, uncolored water (benthic sampling appropriate) <input type="checkbox"/>                                                                                                                                                                                                                                                             | Water somewhat tannin stained (benthic sampling appropriate) <input checked="" type="checkbox"/>                                                             | Dark, discolored water (water color 20 PCU or higher) <input type="checkbox"/>                                                                  | Visibility extremely reduced due to high color <input type="checkbox"/>                                                                                 |  |
|                                                     | <b>Optimal</b>                                                                                                                                                                                                                                                                                                                                  | <b>Suboptimal</b>                                                                                                                                            | <b>Marginal</b>                                                                                                                                 | <b>Poor</b>                                                                                                                                             |  |
| <b>Secchi</b> <u>14</u>                             | Secchi >3 m<br>Or VOB 20 19 18 17 16                                                                                                                                                                                                                                                                                                            | 3 2.6 2.2 1.8 1.4<br>15 14 13 12 11                                                                                                                          | 1.0 0.9 0.8 0.7 0.6<br>10 9 8 7 6                                                                                                               | 0.5 0.4 0.3 0.2 0.1<br>5 4 3 2 1                                                                                                                        |  |
| <b>Vegetation Quality</b> <u>11</u>                 | Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa<br>20 19 18 17 16                                                                                                                                                                                                                                       | Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants<br>15 14 13 12 11 | Large masses (21%- 40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats<br>10 9 8 7 6                           | Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)<br>5 4 3 2 1 |  |
| <b>Stormwater Inputs</b> <u>6</u>                   | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation<br>20 19 18 17 16                                                                                                                                                                                                                                         | Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place<br>15 14 13 12 11                                         | Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place<br>10 9 8 7 6                        | Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place<br>5 4 3 2 1                          |  |
| <b>Bottom Substrate Quality</b> <u>8</u>            | Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present<br>20 19 18 17 16                                                                                                                                                                                                                                    | Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present<br>15 14 13 12 11                                               | Moderate layer of CPOM/ mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom<br>10 9 8 7 6                     | Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom<br>5 4 3 2 1           |  |
| <b>Lakeside Adverse Human Alternations</b> <u>7</u> | Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)<br>20 19 18 17 16                                                                                                                                                                                                                                             | Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected<br>15 14 13 12 11                                                       | Many structures, roads or other human disturbance visible (50%-70%) lakeside affected<br>10 9 8 7 6                                             | Highly developed or disturbed (>70% of lakeside affected)<br>5 4 3 2 1                                                                                  |  |
| <b>Upland Buffer Zone</b> <u>5</u>                  | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer<br>20 19 18 17 16                                                                                                                                                                                                                     | 89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer<br>15 14 13 12 11                                                                       | 50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer<br>10 9 8 7 6                                                           | < 29% of shoreline with >18m buffer<br>5 4 3 2 1                                                                                                        |  |
| <b>Adverse Watershed Land Use</b> <u>10</u>         | Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial<br>20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 |                                                                                                                                                              |                                                                                                                                                 |                                                                                                                                                         |  |

|             |           |           |
|-------------|-----------|-----------|
| TOTAL SCORE | <b>61</b> | COMMENTS: |
|-------------|-----------|-----------|

|                                |                              |                               |
|--------------------------------|------------------------------|-------------------------------|
| ANALYSIS DATE: <u>10/14/21</u> | ANALYST: <u>Frank Butera</u> | SIGNATURE: <u>[Signature]</u> |
|--------------------------------|------------------------------|-------------------------------|

SBIO Sample ID: 03379 HA ID: 17052 QC✓: 10/28/21 SS  
83379

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

14 FB

|                                                                                                                                                            |   |   |   |    |                                   |                                      |   |   |   |                                                                                         |                 |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|----|-----------------------------------|--------------------------------------|---|---|---|-----------------------------------------------------------------------------------------|-----------------|--|--|--|
| Waterbody: Kings Lake                                                                                                                                      |   |   |   |    | County: Walton (Defuniak Springs) |                                      |   |   |   | Date: 10/13/2021                                                                        |                 |  |  |  |
| Analyst: F. Ruter                                                                                                                                          |   |   |   |    | Signature: [Signature]            |                                      |   |   |   | STORET: G4NW0537                                                                        |                 |  |  |  |
| Except where noted as "sp." species level identification required. *Genera that may require lab verification*<br>Plants in bold= FLEPPC invasive exotic.   |   |   |   |    |                                   |                                      |   |   |   | Lake units sampled (circle one group):<br>1, 4, 7, 10 <b>2, 5, 8, 11</b><br>3, 6, 9, 12 |                 |  |  |  |
| It is important to note dominant or co-dominant taxa (by areal extent) for each unit. Use "D" to denote dominant taxon, or "C" for the 2 co-dominant taxa. |   |   |   |    |                                   |                                      |   |   |   |                                                                                         |                 |  |  |  |
| SBIO ID <u>83379</u>                                                                                                                                       | 2 | 5 | 8 | 11 | Collect ed? (✓)                   | Macro ID <u>11985</u>                | 2 | 5 | 8 | 11                                                                                      | Collect ed? (✓) |  |  |  |
| SPECIES                                                                                                                                                    |   |   |   |    |                                   | SPECIES                              |   |   |   |                                                                                         |                 |  |  |  |
| Acer rubrum                                                                                                                                                |   |   |   |    |                                   | Habenaria repens                     |   |   |   |                                                                                         |                 |  |  |  |
| Alternanthera philoxeroides                                                                                                                                |   |   |   |    |                                   | Hydrilla verticillata                |   |   |   |                                                                                         |                 |  |  |  |
| Andropogon sp.                                                                                                                                             |   |   |   |    |                                   | Hydrocotyle sp.                      |   |   |   |                                                                                         |                 |  |  |  |
| Azolla filiculoides (A. caroliniana)                                                                                                                       |   |   |   |    |                                   | Hygrophila polysperma                |   |   |   |                                                                                         |                 |  |  |  |
| Baccharis sp.                                                                                                                                              |   |   |   |    |                                   | *Hypericum fasciculatum              |   |   |   |                                                                                         |                 |  |  |  |
| Bacopa caroliniana                                                                                                                                         |   |   |   |    |                                   | *Hypericum hypericoides              |   |   |   |                                                                                         |                 |  |  |  |
| Bacopa monnieri                                                                                                                                            |   |   |   |    |                                   | *Hypericum myrtifolium               |   |   |   |                                                                                         |                 |  |  |  |
| Bidens laevis- <u>alba</u>                                                                                                                                 |   |   |   |    |                                   | Ilex cassine                         |   |   |   |                                                                                         |                 |  |  |  |
| Bidens mitis                                                                                                                                               |   |   |   |    |                                   | Ipomoea aquatica                     |   |   |   |                                                                                         |                 |  |  |  |
| Blechnum serrulatum                                                                                                                                        |   |   |   |    |                                   | Ipomoea sagittata                    |   |   |   |                                                                                         |                 |  |  |  |
| Boehmeria cylindrica                                                                                                                                       |   |   |   |    |                                   | Itea virginica                       |   |   |   |                                                                                         |                 |  |  |  |
| Brasenia schreberi                                                                                                                                         |   |   |   |    |                                   | Juncus effusus                       |   |   |   |                                                                                         |                 |  |  |  |
| Cabomba caroliniana                                                                                                                                        |   |   |   |    |                                   | *Juncus marginatus                   |   |   |   |                                                                                         |                 |  |  |  |
| Casuarina equisetifolia                                                                                                                                    |   |   |   |    |                                   | *Juncus megacephalus                 |   |   |   |                                                                                         |                 |  |  |  |
| Centella asiatica                                                                                                                                          |   |   |   |    |                                   | Juncus repens                        |   |   |   |                                                                                         |                 |  |  |  |
| Cephalanthus occidentalis                                                                                                                                  |   |   |   |    |                                   | *Juncus scirpoides                   |   |   |   |                                                                                         |                 |  |  |  |
| Ceratophyllum demersum                                                                                                                                     |   |   |   |    |                                   | Lachnanthes caroliniana              |   |   |   |                                                                                         |                 |  |  |  |
| Chara sp.                                                                                                                                                  |   |   |   |    |                                   | Leersia hexandra                     |   |   |   |                                                                                         |                 |  |  |  |
| Cladium jamaicense                                                                                                                                         |   |   |   |    |                                   | Landoltia punctata (Spiro. punctata) |   |   |   |                                                                                         |                 |  |  |  |
| Cliftonia monophylla                                                                                                                                       |   |   |   |    |                                   | Lemna sp.                            |   |   |   |                                                                                         |                 |  |  |  |
| Colocasia esculenta                                                                                                                                        |   |   |   |    |                                   | Leucothoe racemosa (E. racemosa)     |   |   |   |                                                                                         |                 |  |  |  |
| *Commelina                                                                                                                                                 |   |   |   |    |                                   | Limnobia spongia                     |   |   |   |                                                                                         |                 |  |  |  |
| Crinum americanum                                                                                                                                          |   |   |   |    |                                   | Limnophila sessiliflora              |   |   |   |                                                                                         |                 |  |  |  |
| *Cyperus alternifolius (C. involucratus)                                                                                                                   |   |   |   |    |                                   | Liquidambar styraciflua              |   |   |   |                                                                                         |                 |  |  |  |
| Cyperus articulatus                                                                                                                                        |   |   |   |    |                                   | *Ludwigia arcuata                    |   |   |   |                                                                                         |                 |  |  |  |
| Cyperus haspan                                                                                                                                             |   |   |   |    |                                   | *Ludwigia leptocarpa                 |   |   |   |                                                                                         |                 |  |  |  |
| *Cyperus lecontei                                                                                                                                          |   |   |   |    |                                   | *Ludwigia linearis                   |   |   |   |                                                                                         |                 |  |  |  |
| *Cyperus polystachyos                                                                                                                                      |   |   |   |    |                                   | *Ludwigia octovalvis                 |   |   |   |                                                                                         |                 |  |  |  |
| *Cyperus odoratus                                                                                                                                          |   |   |   |    |                                   | *Ludwigia peruviana                  |   |   |   |                                                                                         |                 |  |  |  |
| *Cyperus surinamensis                                                                                                                                      |   |   |   |    |                                   | *Ludwigia repens                     |   |   |   |                                                                                         |                 |  |  |  |
| Cyrilla racemiflora                                                                                                                                        |   |   |   |    |                                   | *Ludwigia <u>suffrutescens</u>       |   |   |   |                                                                                         |                 |  |  |  |
| Decodon verticillatus                                                                                                                                      |   |   |   |    |                                   | Luziola fluitans (H. carolinensis)   |   |   |   |                                                                                         |                 |  |  |  |
| Diodia virginiana                                                                                                                                          |   |   |   |    |                                   | Lyonia lucida                        |   |   |   |                                                                                         |                 |  |  |  |
| *Echinochloa <del>crus-galli</del> <u>walteri</u>                                                                                                          |   |   |   |    |                                   | Magnolia virginiana                  |   |   |   |                                                                                         |                 |  |  |  |
| *Echinochloa muricatum                                                                                                                                     |   |   |   |    |                                   | Mayaca fluviatilis                   |   |   |   |                                                                                         |                 |  |  |  |
| Echinochloa walteri                                                                                                                                        |   |   |   |    |                                   | Melaleuca quinquenervia              |   |   |   |                                                                                         |                 |  |  |  |
| Eclipta prostrata (E. alba)                                                                                                                                |   |   |   |    |                                   | Micranthemum glomeratum              |   |   |   |                                                                                         |                 |  |  |  |
| Egeria densa                                                                                                                                               |   |   |   |    |                                   | Micranthemum umbrosum                |   |   |   |                                                                                         |                 |  |  |  |
| Eichhornia crassipes                                                                                                                                       |   |   |   |    |                                   | Mikania scandens                     |   |   |   |                                                                                         |                 |  |  |  |
| *Eleocharis baldwinii                                                                                                                                      |   |   |   |    |                                   | Mimosa pigra                         |   |   |   |                                                                                         |                 |  |  |  |
| *Eleocharis <u>lineare</u>                                                                                                                                 |   |   |   |    |                                   | Myrica cerifera                      |   |   |   |                                                                                         |                 |  |  |  |
| Eleocharis cellulosa                                                                                                                                       |   |   |   |    |                                   | <u>Lycopodium</u>                    |   |   |   |                                                                                         |                 |  |  |  |
| Eleocharis equisetoides                                                                                                                                    |   |   |   |    |                                   | <u>Trapa polycephala</u>             |   |   |   |                                                                                         |                 |  |  |  |
| Eleocharis interstincta                                                                                                                                    |   |   |   |    |                                   | <u>Hypericum brachy</u>              |   |   |   |                                                                                         |                 |  |  |  |
| *Eriocaulon compressum                                                                                                                                     |   |   |   |    |                                   | <u>Unk. Briza</u>                    |   |   |   |                                                                                         |                 |  |  |  |
| *Eriocaulon decangulare                                                                                                                                    |   |   |   |    |                                   | <u>Hypoxis glabra</u>                |   |   |   |                                                                                         |                 |  |  |  |
| Eupatorium capillifolium                                                                                                                                   |   |   |   |    |                                   | <u>Iris foetidissima</u> sp.         |   |   |   |                                                                                         |                 |  |  |  |
| *Fuirena                                                                                                                                                   |   |   |   |    |                                   | <u>Carex glaucescens</u>             |   |   |   |                                                                                         |                 |  |  |  |
| Fuirena scirpoidea                                                                                                                                         |   |   |   |    |                                   |                                      |   |   |   |                                                                                         |                 |  |  |  |
| Gordonia lasianthus                                                                                                                                        |   |   |   |    |                                   |                                      |   |   |   |                                                                                         |                 |  |  |  |
| LIMS ID: <u>2283901</u>                                                                                                                                    |   |   |   |    |                                   |                                      |   |   |   |                                                                                         |                 |  |  |  |

## FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

| Waterbody: Kings Lake                       |   | Storet: G4NW0537 |   | Date: 10/21/2021 |                 | SBIO ID 03379                                     |   | Macro ID 11985 |   |    |                 |
|---------------------------------------------|---|------------------|---|------------------|-----------------|---------------------------------------------------|---|----------------|---|----|-----------------|
| SPECIES                                     | 2 | 5                | 8 | 11               | Collect ed? (✓) | SPECIES                                           | 2 | 5              | 8 | 11 | Collect ed? (✓) |
| Myriophyllum aquaticum                      |   |                  |   |                  |                 | Salix caroliniana                                 |   |                |   |    |                 |
| *Myriophyllum heterophyllum                 |   |                  |   |                  |                 | Salvinia minima                                   |   |                |   |    |                 |
| *Myriophyllum laxum                         |   |                  |   |                  |                 | Sambucus canadensis                               |   |                |   |    |                 |
| *Myriophyllum pinnatum                      |   |                  |   |                  |                 | Sapium sebiferum                                  | 1 | 1              | 1 | 1  |                 |
| Myriophyllum spicatum                       |   |                  |   |                  |                 | Saururus cernuus                                  |   |                |   |    |                 |
| *Najas filifolia                            |   |                  |   |                  |                 | Schinus terebinthifolius                          |   |                |   |    |                 |
| *Najas guadalupensis                        |   |                  |   |                  |                 | *Schoenoplectus californicus                      |   |                |   |    |                 |
| *Najas minor                                |   |                  |   |                  |                 | *Schoenoplectus pungens                           |   |                |   |    |                 |
| Nelumbo lutea                               |   |                  |   |                  |                 | *Schoenoplectus tabernaemontani                   |   |                |   |    |                 |
| Nitella spp.                                |   |                  |   |                  |                 | Scirpus cubensis (Oxycaryon cubense)              |   |                |   |    |                 |
| Nuphar sp.                                  |   |                  |   |                  |                 | Scirpus cyperinus                                 | 1 | 1              | 1 | 1  |                 |
| Nymphaea odorata                            | 1 | 1                |   |                  |                 | *Sesbania                                         |   |                |   |    |                 |
| Nymphoides aquatica cordata                 | 1 | 1                | 1 | 1                |                 | Solidago sp.                                      | 1 | 1              | 1 | 1  |                 |
| Nyssa sylvatica var. biflora                |   |                  |   |                  |                 | Sparganium americanum                             |   |                |   |    |                 |
| Orontium aquaticum                          |   |                  |   |                  |                 | Spartina bakeri                                   |   |                |   |    |                 |
| Osmunda cinnamomea                          |   |                  |   |                  |                 | Spirodela polyrhiza                               |   |                |   |    |                 |
| Osmunda regalis                             |   |                  |   |                  |                 | Taxodium sp.                                      |   |                |   |    |                 |
| Panicum hemitomon                           | 1 | 1                | 1 | 1                |                 | Thalia geniculata                                 |   |                |   |    |                 |
| Panicum repens                              | 1 | 1                | 1 | 1                |                 | Thelypteris palustris                             |   |                |   |    |                 |
| Paspalidium geminatum                       |   |                  |   |                  |                 | Triadenum virginicum                              | 1 | 1              | 1 |    |                 |
| *Paspalum repens                            |   |                  |   |                  |                 | Typha sp.                                         |   |                |   |    |                 |
| Paspalum urvillei                           |   |                  |   |                  |                 | Urochloa mutica (Brachiaria mutica)               |   |                |   |    |                 |
| Peltandra sp.                               |   |                  |   |                  |                 | *Utricularia gibba (U. biflora)                   |   |                |   |    |                 |
| Persea sp.                                  |   |                  |   |                  |                 | *Utricularia floridana                            |   |                |   |    |                 |
| Pennisetum purpureum                        |   |                  |   |                  |                 | *Utricularia foliosa                              |   |                |   |    |                 |
| Phragmites australis                        |   |                  |   |                  |                 | *Utricularia inflata                              |   |                |   |    |                 |
| Pinus elliotii                              |   |                  |   |                  |                 | *Utricularia purpurea                             |   |                |   |    |                 |
| Pistia stratioides                          |   |                  |   |                  |                 | *Utricularia cornuta                              |   |                |   |    |                 |
| Pluchea sp.                                 |   |                  |   |                  |                 | *Utricularia radiata                              |   |                |   |    |                 |
| *Polygonum glabrum (densiflorum)            |   |                  |   |                  |                 | Vallisneria americana                             |   |                |   |    |                 |
| *Polygonum hydropiperoides                  |   |                  |   |                  |                 | *Websteria confervoides                           |   |                |   |    |                 |
| *Polygonum punctatum                        |   |                  |   |                  |                 | Wedelia trilobata (Sphag. trilobata)              |   |                |   |    |                 |
| *Polygonum                                  |   |                  |   |                  |                 | Wolffiella spp.                                   |   |                |   |    |                 |
| Pontederia cordata                          |   |                  |   |                  |                 | Woodwardia virginica areolate                     |   |                |   |    |                 |
| *Potamogeton diversifolius                  |   |                  |   |                  |                 | Xyris sp.                                         |   |                |   |    |                 |
| *Potamogeton illinoensis                    |   |                  |   |                  |                 | Zizania aquatica                                  |   |                |   |    |                 |
| *Potamogeton pusillus                       |   |                  |   |                  |                 | Zizaniopsis milacea                               |   |                |   |    |                 |
| *Potamogeton pectinatus (Stuck. pectinatus) |   |                  |   |                  |                 | Vytrix                                            | 1 |                |   |    |                 |
| Proserpinaca pectinata                      |   |                  |   |                  |                 | Satsuma Persimmon                                 |   |                |   |    |                 |
| *Rhexia mariana                             | 1 | 1                | 1 |                  |                 | Parrot                                            |   |                |   |    |                 |
| *Rhynchospora corniculata                   |   |                  |   |                  |                 | Pampas grass                                      |   |                |   |    |                 |
| *Rhynchospora inundata                      |   |                  |   |                  |                 | Osteperm ecklonis                                 |   |                |   |    |                 |
| Rhynchospora tracyi                         |   |                  |   |                  |                 | Cape Daisy                                        |   |                |   |    |                 |
| Ricciocarpus natans                         |   |                  |   |                  |                 | Eclipta prostrata                                 |   |                |   |    |                 |
| Sabal palmetto                              |   |                  |   |                  |                 | Utricularia                                       |   |                |   |    |                 |
| Sacciolepis striata                         | 1 | 1                | 1 | 1                |                 | Vaccinium cory                                    |   |                |   |    |                 |
| *Sagittaria filiformis                      |   |                  |   |                  |                 | Utricularia                                       |   |                |   |    |                 |
| *Sagittaria graminea                        |   |                  |   |                  |                 | Saccharum coelestem                               |   |                |   |    |                 |
| *Sagittaria isoetiformis                    |   |                  |   |                  |                 | Dielsia                                           |   |                |   |    |                 |
| Sagittaria lancifolia                       |   |                  |   |                  |                 | *Schoenoplectus tabernaemontani = Scirpus validus |   |                |   |    |                 |
| Sagittaria latifolia                        |   |                  |   |                  |                 |                                                   |   |                |   |    |                 |
| White Flower Ginger                         |   |                  |   |                  |                 |                                                   |   |                |   |    |                 |

[illegible]

DEP-SOP-001/01  
FS 7000 General Biological Community Sampling

Form FD 9000-2: COMPOSITE LAKE SAMPLING SHEET (< 1000 ACRES)

|                       |            |                                         |  |                         |            |                                         |  |                                              |  |
|-----------------------|------------|-----------------------------------------|--|-------------------------|------------|-----------------------------------------|--|----------------------------------------------|--|
| Date: <u>10/14/21</u> |            | Name of Lake: Kings Lake                |  | Gear used: <u>PONAR</u> |            | EKMANN                                  |  | OTHER                                        |  |
| Comments:             |            |                                         |  |                         |            |                                         |  |                                              |  |
| Drop #                | Depth (m)  | Sediment Type (circle all that apply)   |  | Drop #                  | Depth (m)  | Sediment Type (circle all that apply)   |  |                                              |  |
| 1                     |            | sand, silt/clay, CPOM, muck, SAV        |  | 7                       |            | sand, silt/clay, CPOM, muck, SAV        |  |                                              |  |
| 2                     | <u>3.0</u> | <u>sand, silt/clay, CPOM, muck, SAV</u> |  | 8                       |            | sand, silt/clay, CPOM, muck, SAV        |  | <u>1.2m</u>                                  |  |
| 3                     |            | sand, silt/clay, CPOM, muck, SAV        |  | 9                       |            | sand, silt/clay, CPOM, muck, SAV        |  |                                              |  |
| 4                     |            | sand, silt/clay, CPOM, muck, SAV        |  | 10                      |            | sand, silt/clay, CPOM, muck, SAV        |  |                                              |  |
| 5                     |            | <u>sand, silt/clay, CPOM, muck, SAV</u> |  | 11                      | <u>2.5</u> | <u>sand, silt/clay, CPOM, muck, SAV</u> |  | <u>Buffer</u><br><u>1m</u><br><u>See end</u> |  |
| 6                     |            | sand, silt/clay, CPOM, muck, SAV        |  | 12                      |            | sand, silt/clay, CPOM, muck, SAV        |  |                                              |  |

CPOM = coarse particulate organic matter; SAV = submerged aquatic vegetation

Storet G4NW0537 Field ID G4NW0537  
WBID 266A

Project: SMP / TMDL Studies

SBIO ID: 83379

Paste map here and show location of each dredge drop and where water chemistry parameters were collected.

Revision Date: February 1, 2004

Station: Kings Lake  
 GPS Dec. 30.783556 x -86.18958  
 Storet: G4NW0537 WBID 266A  
 Sample ID: 83379 Macro ID: 11985  
 RQ-2021-08-09-28

Sampled : 09/30/2021  
 Sampled By: F. Butera, S. Slade  
 Location: Defuniak Springs, Walton  
 Receiving Waters: Narrow's Creek. Basin: Yellow River  
 LIMS ID: 2283901

|    | Taxa                                            | 2 | 5 | 8 | 11 | Coll. | Verified |
|----|-------------------------------------------------|---|---|---|----|-------|----------|
| 1  | <i>Acer rubrum</i>                              | 1 | 1 | 1 | 1  |       |          |
| 2  | <i>Alternanthera philoxeroides</i>              |   |   | 1 | 1  |       |          |
| 3  | <i>Andropogon</i> sp.                           | 1 | 1 |   | 1  |       |          |
| 4  | <i>Bacopa caroliniana</i>                       | D | D | D | D  |       |          |
| 5  | <i>Bidens mitis</i>                             | 1 | 1 | 1 | 1  |       |          |
| 6  | <i>Brasenia schreberi</i>                       | 1 | 1 |   |    |       |          |
| 7  | <i>Carex glaucescens</i>                        |   |   | 1 |    |       |          |
| 8  | <i>Colocasia esculenta</i>                      |   | 1 | 1 | 1  |       |          |
| 9  | <i>Cyperus odoratus</i>                         | 1 |   |   | 1  |       |          |
| 10 | <i>Cyrilla racemiflora</i>                      | 1 | 1 | 1 | 1  |       |          |
| 11 | <i>Dichanthelium scabriusculum</i>              | 1 |   |   |    |       |          |
| 12 | <i>Diospyros virginiana</i>                     |   | 1 |   |    |       |          |
| 13 | <i>Echinochloa walteri</i>                      | 1 |   |   |    |       |          |
| 14 | <i>Eclipta prostrata</i> ( <i>E. alba</i> syn.) |   | 1 | 1 |    | Y     | Pressed  |
| 15 | <i>Eleocharis baldwinii</i>                     | 1 | 1 | 1 | 1  |       |          |
| 16 | Ericaceae (Undetermined)                        |   | 1 |   |    | Y     | Pressed  |
| 17 | <i>Eriocaulon lineare</i>                       |   | 1 |   |    |       |          |
| 18 | <i>Eupatorium capillifolium</i>                 | 1 | 1 | 1 | 1  |       |          |
| 19 | <i>Hedychium coronarium</i>                     |   |   |   | 1  |       |          |
| 20 | <i>Hydrocotyle</i> sp.                          |   | 1 | 1 | 1  |       |          |
| 21 | <i>Hypericum brachyphyllum</i>                  | 1 | 1 | 1 | 1  |       |          |
| 22 | <i>Hypericum hypercoides</i>                    | 1 | 1 | 1 | 1  |       |          |
| 23 | <i>Ilex glabra</i>                              |   | 1 |   |    |       |          |
| 24 | <i>Ilex vomitoria</i>                           |   |   | 1 |    |       |          |
| 25 | <i>Iris</i> sp.                                 |   | 1 |   |    | Y     | Pressed  |
| 26 | <i>Juncus effusus</i>                           | 1 | 1 | 1 | 1  |       |          |
| 27 | <i>Juncus polycephalus</i>                      | 1 | 1 |   | 1  |       |          |
| 28 | <i>Juncus repens</i>                            |   | 1 | 1 | 1  |       |          |
| 29 | <i>Lachnanthes caroliniana</i>                  |   | 1 | 1 |    |       |          |
| 30 | <i>Leersia hexandra</i>                         |   | 1 |   |    |       |          |
| 31 | <i>Ludwigia leptocarpa</i>                      |   | 1 | 1 | 1  |       |          |
| 32 | <i>Ludwigia suffruticosa</i>                    | 1 | 1 | 1 | 1  |       |          |
| 33 | <i>Lycopus</i> sp.                              | 1 | 1 | 1 | 1  |       |          |
| 34 | <i>Magnolia virginiana</i>                      |   | 1 |   |    |       |          |
| 35 | <i>Mayaca fluviatilis</i>                       | 1 | 1 |   |    |       |          |
| 36 | <i>Myrica cerifera</i>                          | 1 | 1 | 1 | 1  |       |          |
| 37 | <i>Nymphaea odorata</i>                         | 1 | 1 |   |    |       |          |
| 38 | <i>Nymphoides cordata</i>                       | 1 | 1 | 1 | 1  |       |          |
| 39 | <i>Nyssa sylvatica</i> var. <i>biflora</i>      |   |   | 1 |    |       |          |
| 40 | <i>Osmunda cinnamomoea</i>                      |   |   | 1 |    |       |          |
| 41 | <i>Panicum hemitomon</i>                        | 1 | 1 | 1 | 1  |       |          |
| 42 | <i>Panicum repens</i>                           | 1 | 1 | 1 | 1  |       |          |
| 43 | <i>Paspalum urvillei</i>                        |   | 1 | 1 | 1  |       |          |
| 44 | <i>Rhexia mariana</i>                           | 1 | 1 | 1 |    | Y     | FB Lab   |
| 45 | <i>Saccharum coarctatum</i>                     |   | 1 |   | 1  |       |          |
| 46 | <i>Sacciolepis striata</i>                      | 1 | 1 | 1 | 1  |       |          |
| 47 | <i>Sapium sebiferum</i>                         | 1 | 1 | 1 | 1  |       |          |
| 48 | <i>Scirpus cyperinus</i>                        | 1 | 1 | 1 | 1  |       |          |

Station: Kings Lake  
 GPS Dec. 30.783556 x -86.18958  
 Storet: G4NW0537 WBID 266A  
 Sample ID: 83379 Macro ID: 11985  
 RQ-2021-08-09-28

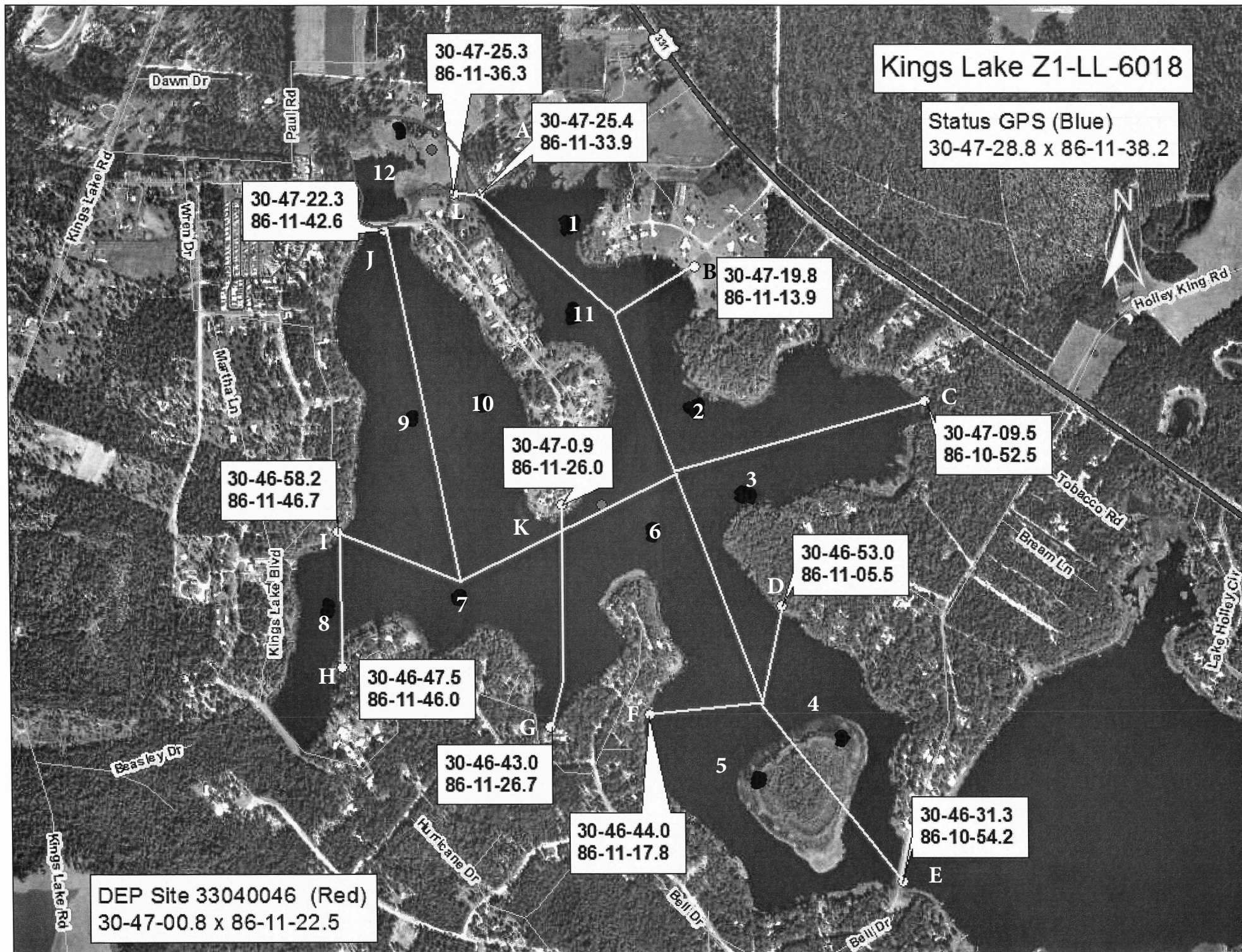
Sampled : 09/30/2021  
 Sampled By. F.Butera, S. Slade  
 Location. Defuniak Springs, Walton  
 Receiving Waters: Narrow's Creek. Basin: Yellow River  
 LIMS ID: 2283901

|    | Taxa                        | 2  | 5                         | 8  | 11 | Coll.       | Verified |
|----|-----------------------------|----|---------------------------|----|----|-------------|----------|
| 49 | <i>Solidago</i> sp.         | 1  | 1                         | 1  | 1  |             |          |
| 50 | <i>Taxodium</i> sp.         |    |                           | 1  |    |             |          |
| 51 | <i>Triadenum virginicum</i> | 1  | 1                         | 1  |    |             |          |
| 52 | <i>Vaccinium corymbosum</i> |    |                           | 1  |    |             |          |
| 53 | <i>Vitis</i> sp.            | 1  |                           |    |    |             |          |
| 54 | <i>Woodwardia areolata</i>  |    |                           | 1  |    |             |          |
| 55 | <i>Xyris</i> sp.            |    |                           | 1  |    |             |          |
|    | Taxa per section            | 29 | 41                        | 37 | 29 | Herb. Taxa  | 41       |
|    | Exotic Present              | 30 | 42                        | 38 | 30 | Woody Taxa  | 12       |
|    | Avg. taxa per section       | 34 |                           |    |    | Ferns       | 2        |
|    | sections with exotics       | 4  |                           |    |    | Macro Algae | 0        |
|    | Exotic Taxa                 | 6  | Exotics per Section: 4.25 |    |    | Total Taxa  | 55       |

Seen but not counted (Not approp. For LVI or Not in surveyed segment)

| Taxon                                     | 2 | 5 | 8 | 11 |
|-------------------------------------------|---|---|---|----|
| Filamentous green algae                   | 1 | 1 | 1 | 1  |
| <i>Cortaderia selloana</i> (Pampas Grass) |   | 1 | 1 |    |
| <i>Cabomba caroliniana</i> fragment       | 1 |   |   |    |

| Metric              | Rep. 1             | Rep. 2             | Rep. 3             | Rep. 4             | LVI Average        |
|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| LVI 2012            | 62                 | 58                 | 56                 | 47                 | 56                 |
| Native Percentage   | 93.33              | 86.84              | 86.49              | 82.14              | 87.2               |
| FLEPPC Pct (Exotic) | 6.67               | 7.89               | 8.11               | 10.71              | 8.3                |
| Total Taxa          | 30                 | 38                 | 37                 | 28                 | 33                 |
| C of C over 7.0     | 10                 | 10.53              | 8.11               | 3.57               | 8                  |
| Dominant Taxa       | Bacopa caroliniana | Bacopa caroliniana | Bacopa caroliniana | Bacopa caroliniana | Bacopa caroliniana |
| C of C Dominant     | 4.5                | 4.5                | 4.5                | 4.5                | 4.5                |



**Kings Lake**

|                   |                     |
|-------------------|---------------------|
| WIN ID            | G4NW0537            |
| Receiving Water   | Narrows Creek       |
| Basin / WBID      | Yellow River / 266A |
| City, County      | Westville, Holmes   |
| Lake Acreage      | 190                 |
| Circumference (M) | 6713.5              |
| Seg. Length (M)   | 559                 |

| Quadrant | Location          | Dec. Latt. | Dec. Long. |
|----------|-------------------|------------|------------|
| 11       | Storet (G4NW0537) | 30.783556  | 86.18958   |
|          | A                 | 30.79039   | 86.19275   |
| 2        | B                 | 30.78883   | 86.18719   |
|          | C                 | 30.78597   | 86.18125   |
|          | D                 | 30.78139   | 86.18486   |
| 5        | E                 | 30.77536   | 86.18172   |
|          | F                 | 30.77889   | 86.18828   |
|          | G                 | 30.77861   | 86.19075   |
| 8        | H                 | 30.77986   | 86.19611   |
|          | I                 | 30.78283   | 86.19631   |
|          | J                 | 30.78953   | 86.19517   |
| 11       | K                 | 30.78358   | 86.19056   |
|          | L                 | 30.79036   | 86.19342   |