

SBIO processing

Z1-LL-11002

Spring Lake # 1.

Storet TBD

☒ LVI

☐ RPS/LVS Only

☐ Sample Site Created in SBIO

☐ Phys/Chem entered in SBIO

☐ HA entered in SBIO Initial \_\_\_\_\_

☐ Date and Initial QA: \_\_\_\_\_

☐ RPS entered in SBIO Initial \_\_\_\_\_

☐ Date and Initial QA: \_\_\_\_\_

☐ LVS entered in SBIO Initial \_\_\_\_\_

☐ Date and Initial QA: \_\_\_\_\_

☐ < 2 m<sup>2</sup> vegetation

☐ Plants getting verified

Date submitted: \_\_\_\_\_

☐ Plants verified

Date returned: \_\_\_\_\_

Sample Date: 05/12/2017

WBID 302

SBIO ID: \_\_\_\_\_

HA ID: \_\_\_\_\_

Macro ID: \_\_\_\_\_

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

SAMPLE ID: \_\_\_\_\_ MACROPHYTE ID: \_\_\_\_\_ LATITUDE: N 30.753235  
 COUNTY: Walton STORET #: \_\_\_\_\_ LONGITUDE: W 86.05771  
 DATE: 5-12-17 TIME: 11:30 AM SAMPLING AGENCY: FL DEP - NWROC  
 SITE NAME: Spring Lake No. 1 WBID: 302  
 FIELD ID/NAME: Z1-LL-11002 LAKE SIZE: 152 RQ: \_\_\_\_\_

## WATERSHED / LAKESIDE FEATURES

|                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                           |  |                                                                                                    |                                                                                            |                                                                                                            |  |                                                                                                                   |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------|--|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category – from GIS):<br>Forest/Natural <input checked="" type="checkbox"/> Silviculture <input type="checkbox"/> Field/Pasture <input checked="" type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Other (Specify) <input type="checkbox"/> |  |                                                                                                           |  |                                                                                                    | <b>LANDSCAPE DEVELOPMENT INTENSITY</b> (100 m buffer)<br><br>LDI: <input type="text"/>     |                                                                                                            |  |                                                                                                                   |  |
| Local Watershed Erosion (select one): <input type="checkbox"/> None <input checked="" type="checkbox"/> Slight <input 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 checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy                                                                                                                                                                                                                                                                       |  |                                                                                                           |  |                                                                                                    | Land Use Source & Year:                                                                    |                                                                                                            |  |                                                                                                                   |  |
| <b>STORMWATER INPUTS</b><br>15                                                                                                                                                                                                                                                                                                                                                                                                                        |  | 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 1                                                                                                  |  |                                                                                                                   |  |
| <b>LAKESIDE ALTERATIONS</b><br>16                                                                                                                                                                                                                                                                                                                                                                                                                     |  | 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 1                                                                                                  |  |                                                                                                                   |  |
| <b>BUFFER ZONE</b><br>11                                                                                                                                                                                                                                                                                                                                                                                                                              |  | 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 1                                                                                                  |  |                                                                                                                   |  |

## WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |                                                                                                                                                                                                      |  |                        |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|--|
| <b>Water:</b><br>Nutrient Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Preserved? <input type="checkbox"/> Yes <input type="checkbox"/> pH<2 <input type="checkbox"/> No<br>Color Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Lot # _____ Exp. Date: _____<br>Alkalinity Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Water Level <input type="checkbox"/> Low <input checked="" type="checkbox"/> Normal <input 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>Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT)<br>Top: 1.3 26.4 6.9 6.7 103 19 0.0<br>Mid-Depth: 1.2 26.4 6.9 8.7 108 19 0.0<br>Bottom: 2.1 26.4 6.5 7.2 90 19 0.0                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  | <b>Water Surface Oils:</b> <input checked="" type="checkbox"/> None<br><input type="checkbox"/> Sheen/Slick <input type="checkbox"/> Glob <input type="checkbox"/> Other _____                       |  |                        |  |  |
| Meter ID: 132237                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  | <b>Clarity:</b> <input type="checkbox"/> Clear <input checked="" type="checkbox"/> Slightly Turbid<br><input type="checkbox"/> Opaque <input type="checkbox"/> Turbid                                |  |                        |  |  |
| <b>Sediment Type:</b> (may check more than one)<br><input type="checkbox"/> Sandy <input checked="" type="checkbox"/> Organic fibrous (peaty, CPOM) <input type="checkbox"/> Vegetated<br><input checked="" type="checkbox"/> Sand/Silt <input checked="" type="checkbox"/> Organic smooth (muck) <input type="checkbox"/> Other (Specify): _____                                                                                                                                                                                                                                                                |  |  |  |  | <b>Color:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Tannic <input checked="" type="checkbox"/> Green<br>SECCHI (M) 1.9 Total Station Depth (M) 2.6<br>VOB <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 checked="" type="checkbox"/> No<br>Active Vegetation Mgmt? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know                                                        |  |  |  |  | <b>Sediment Odors:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Other (Specify): _____<br><input type="checkbox"/> Anaerobic                                              |  |                        |  |  |
| <b>Abundance:</b> <del>NOT OBSERVED</del><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 type="checkbox"/> <input checked="" type="checkbox"/><br>Submersed Plants <input 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>Additional Notes:</b><br>note 2 13:54                                                                                                                                                             |  |                        |  |  |
| <b>Weather Conditions:</b> Overcast, low 80's                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                                                                                                                                                                                                      |  |                        |  |  |
| <b>SAMPLING TEAM:</b> Frank Butera, Mike King, <u>Steph Slade</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |  | <b>SIGNATURE:</b> <u>Frank Butera</u>                                                                                                                                                                |  | <b>DATE:</b> 5/12/2017 |  |  |

**STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**Lake Habitat Assessment Field Sheet**

|                                                     |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                              |                                                                                                                                                 |                                                                                                                                                         |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| STORET STATION NUMBER:                              | DATE (M/D/Y)<br><b>5/12/2017</b>                                                                                                                                                                                                                                                                                                                | LAKE NAME: Spring Lake No. 1 (Z1-LL-11002)                                                                                                                   |                                                                                                                                                 | FIELD ID / NAME: Z1-LL-11002                                                                                                                            |
| ECO-REGION: <b>302</b>                              | COUNTY: Walton                                                                                                                                                                                                                                                                                                                                  | SAMPLING LOCATION/DESCRIPTION: Defuniak Springs                                                                                                              |                                                                                                                                                 | LAKE SIZE: 152 ACRES                                                                                                                                    |
| <b>PARAMETER</b><br><b>HYDROLOGY</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>Color</b>                                        | Very clear, uncolored water (benthic sampling appropriate)<br><input type="checkbox"/>                                                                                                                                                                                                                                                          | Water somewhat tannin stained (benthic sampling appropriate)<br><input type="checkbox"/>                                                                     | Dark, discolored water (water color 20 PCU or higher)<br><input checked="" type="checkbox"/>                                                    | Visibility extremely reduced due to high color<br><input type="checkbox"/>                                                                              |
|                                                     | <b>Optimal</b>                                                                                                                                                                                                                                                                                                                                  | <b>Suboptimal</b>                                                                                                                                            | <b>Marginal</b>                                                                                                                                 | <b>Poor</b>                                                                                                                                             |
| <b>Secchi</b> <b>12</b>                             | Secchi >3 m<br>Or VOB<br>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> <b>14</b>                 | 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> <b>15</b>                  | 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> <b>13</b>           | 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 Alterations</b> <b>16</b> | 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> <b>11</b> <b>13</b>       | 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> <b>17</b>         | 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

**103**

COMMENTS:

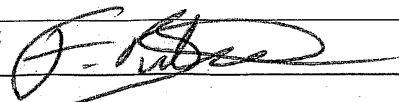
ANALYSIS DATE:

**5/12/17**

ANALYST: Frank Butera, Mike King

**Stepher Slake**

SIGNATURE:



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

| Waterbody: Spring Lake No. 1. (Z1-LL-11002)                                                                                                                                                                                                                                                                             |   |   |   | County: Walton                |            |                                             |  | Date: 5/12/2017                                                                  |   |   |            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|-------------------------------|------------|---------------------------------------------|--|----------------------------------------------------------------------------------|---|---|------------|
| Analyst: F. Butera                                                                                                                                                                                                                                                                                                      |   |   |   | Signature: <i>[Signature]</i> |            |                                             |  | STORET:                                                                          |   |   |            |
| Except where noted as "sp." species level identification required. *Genera that may require lab verification*<br>Plants in bold = FLEPPC invasive exotic.<br>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. |   |   |   |                               |            |                                             |  | Lake units sampled (circle one group):<br>4, 7, 10    2, 5, 8, 11<br>3, 6, 9, 12 |   |   |            |
| SBIO ID                                                                                                                                                                                                                                                                                                                 |   |   |   |                               | Collected? | Macro ID                                    |  |                                                                                  |   |   | Collected? |
| SPECIES                                                                                                                                                                                                                                                                                                                 |   |   |   |                               | (✓)        | SPECIES                                     |  |                                                                                  |   |   | (✓)        |
| Acer rubrum                                                                                                                                                                                                                                                                                                             | 1 | 4 | 7 | 10                            |            | Habenaria repens                            |  |                                                                                  |   |   |            |
| <b>Alternanthera philoxeroides</b>                                                                                                                                                                                                                                                                                      |   |   |   |                               |            | <b>Hydrilla verticillata</b>                |  |                                                                                  |   |   |            |
| Andropogon sp.                                                                                                                                                                                                                                                                                                          |   |   |   |                               |            | Hydrocotyle sp.                             |  | 1                                                                                | 1 | 1 |            |
| Azolla filiculoides (A. caroliniana)                                                                                                                                                                                                                                                                                    |   |   |   |                               |            | <b>Hygrophila polysperma</b>                |  |                                                                                  |   |   |            |
| Baccharis sp.                                                                                                                                                                                                                                                                                                           |   |   |   |                               |            | *Hypericum fasciculatum                     |  |                                                                                  | 1 |   | ✓          |
| Bacopa caroliniana                                                                                                                                                                                                                                                                                                      |   |   |   |                               |            | *Hypericum hypericoides                     |  |                                                                                  |   |   |            |
| Bacopa monnieri                                                                                                                                                                                                                                                                                                         |   |   |   |                               |            | *Hypericum myrtifolium                      |  |                                                                                  |   |   |            |
| Bidens laevis                                                                                                                                                                                                                                                                                                           |   |   |   |                               |            | Ilex cassine                                |  |                                                                                  |   |   |            |
| Bidens mitis                                                                                                                                                                                                                                                                                                            |   |   | 1 | 1                             |            | <b>Ipomoea aquatica</b>                     |  |                                                                                  |   |   |            |
| Blechnum serrulatum                                                                                                                                                                                                                                                                                                     |   |   |   |                               |            | Ipomoea sagittata                           |  |                                                                                  |   |   |            |
| Boehmeria cylindrica                                                                                                                                                                                                                                                                                                    |   |   |   |                               |            | Itea virginica                              |  |                                                                                  |   |   |            |
| Brasenia schreberi                                                                                                                                                                                                                                                                                                      | 1 | 1 | 1 | 1                             |            | Juncus effusus                              |  |                                                                                  |   |   |            |
| Cabomba caroliniana                                                                                                                                                                                                                                                                                                     |   |   |   |                               |            | *Juncus marginatus                          |  |                                                                                  | 1 |   |            |
| <b>Casuarina equisetifolia</b>                                                                                                                                                                                                                                                                                          |   |   |   |                               |            | *Juncus megacephalus                        |  |                                                                                  |   |   |            |
| Centella asiatica                                                                                                                                                                                                                                                                                                       |   |   |   |                               |            | Juncus repens                               |  |                                                                                  |   |   |            |
| Cephalanthus occidentalis                                                                                                                                                                                                                                                                                               |   |   |   | 1                             |            | *Juncus scirpoides                          |  |                                                                                  |   |   |            |
| Ceratophyllum demersum                                                                                                                                                                                                                                                                                                  |   |   |   |                               |            | Lachnanthes caroliniana                     |  |                                                                                  |   |   |            |
| Chara sp.                                                                                                                                                                                                                                                                                                               |   |   |   |                               |            | Leersia hexandra                            |  | 1                                                                                | 1 | 1 |            |
| Cladium jamaicense                                                                                                                                                                                                                                                                                                      | 1 | 1 |   | 1                             |            | <b>Landoltia punctata (Spiro. punctata)</b> |  |                                                                                  |   |   |            |
| Cliftonia monophylla                                                                                                                                                                                                                                                                                                    | 1 |   |   |                               |            | Lemna sp.                                   |  |                                                                                  |   |   |            |
| <b>Colocasia esculenta</b>                                                                                                                                                                                                                                                                                              | 1 |   |   |                               |            | Leucothoe racemosa (Eubotrys racemosa)      |  |                                                                                  |   |   |            |
| *Commelina                                                                                                                                                                                                                                                                                                              |   |   |   |                               |            | Limnium spongia                             |  |                                                                                  |   |   |            |
| Crinum americanum                                                                                                                                                                                                                                                                                                       |   |   |   |                               |            | <b>Limnophila sessiliflora</b>              |  |                                                                                  |   |   |            |
| *Cyperus alternifolius (C. involucratus)                                                                                                                                                                                                                                                                                |   |   |   |                               |            | Liquidambar styraciflua                     |  |                                                                                  |   |   |            |
| Cyperus articulatus                                                                                                                                                                                                                                                                                                     |   |   |   |                               |            | *Ludwigia arcuata                           |  |                                                                                  |   |   |            |
| Cyperus haspan                                                                                                                                                                                                                                                                                                          |   |   |   |                               |            | *Ludwigia leptocarpa                        |  | 1                                                                                | 1 | 1 |            |
| *Cyperus lecontei                                                                                                                                                                                                                                                                                                       |   |   |   |                               |            | *Ludwigia linearis                          |  |                                                                                  |   |   |            |
| *Cyperus polystachyos                                                                                                                                                                                                                                                                                                   |   |   |   |                               |            | *Ludwigia octovalvis                        |  |                                                                                  |   |   |            |
| *Cyperus odoratus                                                                                                                                                                                                                                                                                                       |   |   |   |                               |            | <b>*Ludwigia peruviana</b>                  |  |                                                                                  |   |   |            |
| *Cyperus surinamensis                                                                                                                                                                                                                                                                                                   |   |   |   |                               |            | *Ludwigia repens                            |  |                                                                                  |   |   |            |
| Cyrilla racemiflora                                                                                                                                                                                                                                                                                                     | 1 | 1 | 1 | 1                             |            | *Ludwigia                                   |  |                                                                                  |   |   |            |
| Decodon verticillatus                                                                                                                                                                                                                                                                                                   |   |   |   |                               |            | Luziola fluitans (Hydrochloa carolinensis)  |  |                                                                                  |   |   |            |
| Diodia virginiana                                                                                                                                                                                                                                                                                                       |   |   |   |                               |            | Lyonia lucida                               |  |                                                                                  |   |   |            |
| *Echinochloa crus-galli                                                                                                                                                                                                                                                                                                 |   |   |   |                               |            | Magnolia virginiana                         |  | 1                                                                                |   | 1 |            |
| *Echinochloa muricatum                                                                                                                                                                                                                                                                                                  |   |   |   |                               |            | Mayaca fluviatilis                          |  | 1                                                                                | 1 |   |            |
| Echinochloa walteri                                                                                                                                                                                                                                                                                                     |   |   |   |                               |            | <b>Melaleuca quinquenervia</b>              |  |                                                                                  |   |   |            |
| Eclipta prostrata (E. alba)                                                                                                                                                                                                                                                                                             |   |   |   |                               |            | Micranthemum glomeratum                     |  |                                                                                  |   |   |            |
| <b>Egeria densa</b>                                                                                                                                                                                                                                                                                                     |   |   |   |                               |            | Micranthemum umbrosum                       |  |                                                                                  |   |   |            |
| <b>Eichhornia crassipes</b>                                                                                                                                                                                                                                                                                             |   |   |   |                               |            | Mikania scandens                            |  |                                                                                  |   |   |            |
| *Eleocharis baldwinii                                                                                                                                                                                                                                                                                                   | 1 |   | 1 |                               | ✓          | <b>Mimosa pigra</b>                         |  |                                                                                  |   |   |            |
| *Eleocharis <i>showana</i>                                                                                                                                                                                                                                                                                              | 1 |   | 1 |                               | ✓          | Myrica cerifera                             |  |                                                                                  | 1 | 1 |            |
| Eleocharis cellulosa                                                                                                                                                                                                                                                                                                    |   |   |   |                               |            | <b>Fireweed</b>                             |  |                                                                                  | 1 | 1 | ✓          |
| Eleocharis equisetoides                                                                                                                                                                                                                                                                                                 |   |   |   | 1                             |            | <b>Tung-oil Tree</b>                        |  |                                                                                  |   | 1 |            |
| Eleocharis interstincta                                                                                                                                                                                                                                                                                                 |   |   |   |                               |            | <b>Poison-ivy</b>                           |  |                                                                                  |   | 1 |            |
| *Eriocaulon compressum                                                                                                                                                                                                                                                                                                  |   |   |   |                               |            | <b>Arundinaria</b>                          |  |                                                                                  |   | 1 |            |
| *Eriocaulon decangulare                                                                                                                                                                                                                                                                                                 |   |   |   |                               |            | <b>Cyperus</b>                              |  | 1                                                                                | 1 | 1 |            |
| Eupatorium capillifolium                                                                                                                                                                                                                                                                                                |   |   |   |                               |            |                                             |  |                                                                                  |   |   |            |
| *Fuirena                                                                                                                                                                                                                                                                                                                |   |   |   |                               |            |                                             |  |                                                                                  |   |   |            |
| Fuirena scirpoidea                                                                                                                                                                                                                                                                                                      |   |   |   |                               |            |                                             |  |                                                                                  |   |   |            |
| Gordonia lasianthus                                                                                                                                                                                                                                                                                                     |   |   |   |                               |            |                                             |  |                                                                                  |   |   |            |

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

Site: Spring Lake No.1. (Z1-LL-11002). Storet.

Date: 5-12-2017

SBIO ID

Macro ID

| SPECIES                                     | 1 | 4 | 7 | 10 | Collected? (v) | SPECIES                                           | 1 | 4 | 7 | 10 | Collected? (v) |
|---------------------------------------------|---|---|---|----|----------------|---------------------------------------------------|---|---|---|----|----------------|
| Myriophyllum aquaticum                      |   |   |   |    |                | Salix caroliniana                                 |   |   |   |    |                |
| *Myriophyllum heterophyllum                 | 1 |   | 1 |    |                | Salvinia minima                                   |   |   |   |    |                |
| *Myriophyllum laxum                         |   |   |   |    |                | Sambucus canadensis                               |   |   |   |    |                |
| *Myriophyllum pinnatum                      |   |   |   |    |                | Sapium sebiferum                                  |   |   | 1 | 1  |                |
| Myriophyllum spicatum                       |   |   |   |    |                | Saururus cernuus                                  |   |   |   |    |                |
| *Najas filifolia                            |   |   |   |    |                | Schinus terebinthifolius                          |   |   |   |    |                |
| *Najas guadalupensis                        |   |   |   |    |                | *Schoenoplectus californicus                      |   |   |   |    |                |
| *Najas minor                                |   |   |   |    |                | *Schoenoplectus pungens                           |   |   |   |    |                |
| Nelumbo lutea                               |   |   |   |    |                | *Schoenoplectus tabernaemontani (Scirpus validus) |   |   |   |    |                |
| Nitella spp.                                |   |   | 1 | 1  |                | Scirpus cubensis (Oxycaryon cubense)              |   |   |   |    |                |
| Nuphar sp.                                  |   |   |   |    |                | Scirpus cyperinus                                 |   |   |   |    |                |
| Nymphaea odorata                            | 1 | 1 | 1 | 1  |                | *Sesbania                                         |   |   |   |    |                |
| Nymphoides aquatica                         | 1 | 1 | 1 | 1  |                | Solidago sp.                                      |   |   | 1 |    | ✓              |
| Nyssa sylvatica var. biflora                | 1 |   | 1 | 1  |                | Sparganium americanum                             |   |   |   |    |                |
| Orontium aquaticum                          |   |   |   |    |                | Spartina bakeri                                   |   |   |   |    |                |
| Osmunda cinnamomea                          |   |   |   | 1  |                | Spirodela polyrhiza                               |   |   |   | 1  |                |
| Osmunda regalis                             |   |   |   |    |                | Taxodium sp.                                      |   | 1 |   | 1  |                |
| Panicum hemitomon                           |   |   |   | 1  |                | Thalia geniculata                                 |   |   |   |    |                |
| Panicum repens                              | 1 | 1 | 1 | 1  |                | Thelypteris palustris                             |   |   |   |    |                |
| Paspalidium geminatum                       |   |   |   |    |                | Triadenum virginicum                              |   | 1 | 1 | 1  |                |
| *Paspalum repens                            |   |   |   |    |                | Typha sp.                                         |   | 1 | 1 | 1  |                |
| Paspalum urvillei                           | 1 | 1 |   |    | ✓              | Urochloa mutica (Brachiaria mutica)               |   |   |   |    |                |
| Peltandra sp.                               |   |   |   |    |                | *Utricularia gibba (U. biflora)                   |   |   |   |    |                |
| Persea sp.                                  |   |   |   |    |                | *Utricularia floridana                            |   | 1 | 1 | 1  |                |
| Pennisetum purpureum                        |   |   |   |    |                | *Utricularia foliosa                              |   |   |   |    |                |
| Phragmites australis                        |   |   |   |    |                | *Utricularia inflata                              |   |   |   |    |                |
| Pinus elliotii                              |   |   |   |    |                | *Utricularia purpurea                             |   |   |   |    |                |
| Pistia stratioides                          |   |   |   |    |                | *Utricularia cornuta                              |   | 1 |   |    | ✓              |
| Pluchea sp.                                 |   |   |   |    |                | *Utricularia radiata                              |   |   |   |    |                |
| *Polygonum glabrum (densiflorum)            |   |   |   |    |                | Vallisneria americana                             |   |   |   |    |                |
| *Polygonum hydropiperoides                  |   |   |   |    |                | *Websteria confervoides                           |   |   |   |    |                |
| *Polygonum punctatum                        |   |   |   |    |                | Wedelia trilobata (Sphag. trilobata)              |   |   |   |    |                |
| *Polygonum                                  |   |   |   |    |                | Wolffiella spp.                                   |   |   |   |    |                |
| Pontederia cordata                          | 1 |   | 1 | 1  |                | Woodwardia virginica                              |   |   |   |    |                |
| *Potamogeton diversifolius                  |   |   |   |    |                | Xyris sp.                                         |   | 1 | 1 | 1  |                |
| *Potamogeton illinoensis                    |   |   |   |    |                | Zizania aquatica                                  |   |   |   |    |                |
| *Potamogeton pusillus                       |   |   |   |    |                | Zizaniopsis milacea                               |   |   |   |    |                |
| *Potamogeton pectinatus (Stuck. pectinatus) |   |   |   |    |                | Hypericum brachyphyllum                           |   |   |   | 1  |                |
| Proserpinaca pectinata                      |   |   |   |    |                | Green Algae CF. Lemnaceae                         |   |   |   | 1  |                |
| *Rhexia                                     |   |   |   |    |                | Carex lupulina                                    |   |   |   | 1  | ✓              |
| *Rhynchospora corniculata                   |   |   |   |    |                | Long Leaf Pine                                    |   |   |   | 1  |                |
| *Rhynchospora inundata                      |   |   |   |    |                | Campfire Tree (C. aurea)                          |   |   |   |    |                |
| Rhynchospora tracyi                         |   |   |   |    |                | Leucodermis tylosis                               |   | 1 |   |    |                |
| Ricciocarpus natans                         |   |   |   |    |                |                                                   |   |   |   |    |                |
| Sabal palmetto                              |   |   |   |    |                |                                                   |   |   |   |    |                |
| Sacciolepis striata                         | 1 |   |   |    |                |                                                   |   |   |   |    |                |
| *Sagittaria filiformis                      |   |   |   |    |                |                                                   |   |   |   |    |                |
| *Sagittaria graminea                        |   |   |   |    |                |                                                   |   |   |   |    |                |
| *Sagittaria isoetiformis                    |   |   |   |    |                |                                                   |   |   |   |    |                |
| Sagittaria lancifolia                       | 1 | 1 | 1 | 1  |                |                                                   |   |   |   |    |                |
| Sagittaria latifolia                        |   |   |   |    |                |                                                   |   |   |   |    |                |
| Pinguicula                                  | 1 |   |   |    |                |                                                   |   |   |   |    |                |
| Woodsia arctica                             |   | 1 |   |    |                |                                                   |   |   |   |    |                |

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

| Date:     |           | Name of Lake: Spring Lake 1.<br>Z1-LL-11002 |        | Gear used: <u>PONAR</u> |                                       | EKMAM |  | OTHER |  |
|-----------|-----------|---------------------------------------------|--------|-------------------------|---------------------------------------|-------|--|-------|--|
| Comments: |           |                                             |        |                         |                                       |       |  |       |  |
| Drop #    | Depth (m) | Sediment Type (circle all that apply)       | Drop # | Depth (m)               | Sediment Type (circle all that apply) |       |  |       |  |
| 1         | 2.1.9     | sand, silt/clay, CPOM, muck, SAV            | 7      | 3.2                     | sand, silt/clay, CPOM, muck, SAV      |       |  |       |  |
| 2         |           | sand, silt/clay, CPOM, muck, SAV            | 8      |                         | sand, silt/clay, CPOM, muck, SAV      |       |  |       |  |
| 3         | 2.6       | sand, silt/clay, CPOM, muck, SAV            | 9      |                         | sand, silt/clay, CPOM, muck, SAV      |       |  |       |  |
| 4         |           | sand, silt/clay, CPOM, muck, SAV            | 10     | 1.5                     | sand, silt/clay, CPOM, muck, SAV      |       |  |       |  |
| 5         |           | sand, silt/clay, CPOM, muck, SAV            | 11     |                         | sand, silt/clay, CPOM, muck, SAV      |       |  |       |  |
| 6         |           | sand, silt/clay, CPOM, muck, SAV            | 12     |                         | sand, silt/clay, CPOM, muck, SAV      |       |  |       |  |

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

Storet  
WBID 302

Field ID Z1LL11002 Project. Status Large 2017

SBIO ID:

Map Sect 1  $\approx$  5m  
4  $\approx$  10m  
7 - Buffer  $\approx$  22m.  
10 Buffer  $\approx$  718 mostly.

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

Revision Date: February 1, 2004

Photo Log

Storet

Station Name: Z1-LL-11002. Spring Lake No. 1

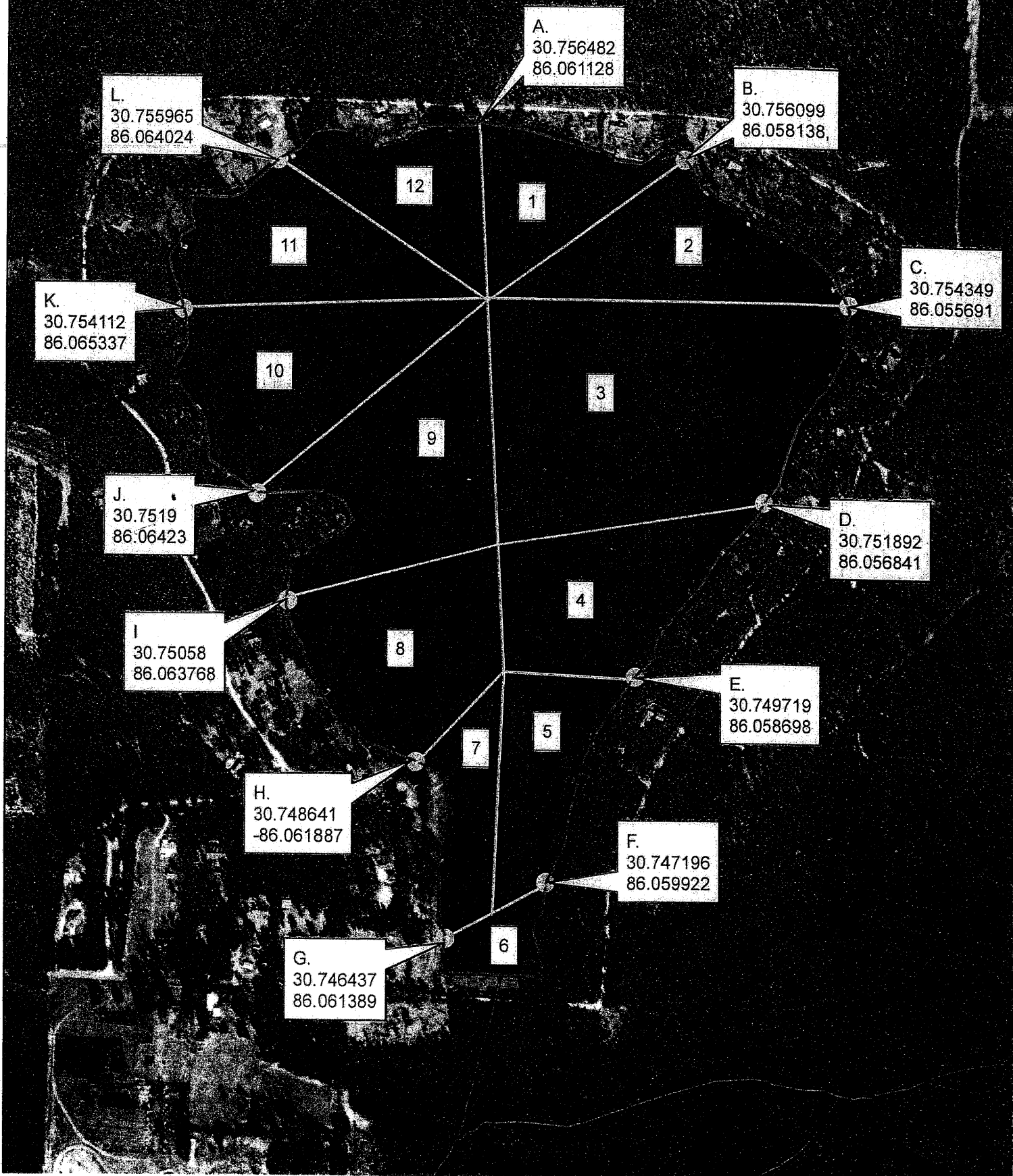
Date: ~~4/13/2016~~

Samplers. F. Butera, M. King

- 1 P-Chem
  - 2 Seef. & Leaky S-DPM
  - 3 \_\_\_\_\_
  - 4 \_\_\_\_\_
  - 5 N
  - 6 E
  - 7 S
  - 8 W
  - 9 \_\_\_\_\_
  - 10 \_\_\_\_\_
  - 11 \_\_\_\_\_
  - 12 \_\_\_\_\_
  - 13 \_\_\_\_\_
  - 14 \_\_\_\_\_
  - 15 \_\_\_\_\_
  - 16 \_\_\_\_\_
  - 17 \_\_\_\_\_
- Station

Notes.

Z1-LL-11002.  
30.753235 x -86.05771  
152 Acres





# Z1-LL-11002 (Spring Lake)

Status Storet: TBD  
 Receiving Water: Bridge Ck -> Sandy Ck  
 Basin, WBID: Choctawhatchee R., 302  
 City, County: Defuniak Spring  
 Lake Acreage: 152  
 Circumference (M): 3669  
 Seg. Length (M): 305.75

| Location | Dec Deg.               | DMS                                     |
|----------|------------------------|-----------------------------------------|
| Storet   | 30.753235 x -86.05771  | N 30°45' 11.64708" X W 86°03' 27.75492" |
| A        | 30.756482 x -86.061128 | N 30°45' 23.335" X W 86°03' 40.059"     |
| B        | 30.756099 x -86.058138 | N 30°45' 21.957" X W 86°03' 29.296"     |
| C        | 30.754349 x -86.055691 | N 30°45' 15.656" X W 86°03' 20.489"     |
| D        | 30.751892 x -86.056841 | N 30°45' 06.81" X W 86°03' 24.626"      |
| E        | 30.749719 x -86.058698 | N 30°45' 59.048" X W 86°03' 31.314"     |
| F        | 30.747196 x -86.059922 | N 30°44' 49.904" X W 86°03' 35.719"     |
| G        | 30.746437 x -86.061389 | N 30°44' 47.174" X W 86°03' 40.999"     |
| H        | 30.748641 x -86.061887 | N 30°44' 55.109" X W 86°03' 42.794"     |
| I        | 30.750580 x -86.063768 | N 30°45' 02.087" X W 86°03' 49.563"     |
| J        | 30.751900 x -86.064230 | N 30°45' 06.839" X W 86°03' 51.228"     |
| K        | 30.754112 x -86.065337 | N 30°45' 14.742" X W 86°03' 55.279"     |
| L        | 30.755965 x -86.064024 | N 30°44' 58.989" X W 86°03' 31.313"     |