

LVI

Site Name Lake Kathryn Sample Date 10/08/2019  
 WBID 2994 B WIN ID G2CE0217 RQ 2019-09-09-389<sup>END</sup>

|                                    | Initial/Date | QC Initial/Date |
|------------------------------------|--------------|-----------------|
| Water chemistry data to LIMS       | LMD 11/7/19  | MKL 11/13/19    |
| Create SBIO station visit 80457    | LMD 11/8/19  | n/a             |
| Vascular Entry (add LIMS ID) 11534 | LMD 11/8/19  | MKL 11/13/19    |
| Lake Observation Sheet Entry       | LMD 11/8/19  | MKL 11/13/19    |
| Authorize SBIO data                | MKL 11/13/19 | n/a             |
| Scan all sheets to 21FLCEN folder  |              | n/a             |
| LIMS/WIN migration                 |              | n/a             |
| File in cabinet                    |              | n/a             |

Comments/notes:



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Lake Kathryn @ Center

Date: 10/08/2019

(mm/dd/yyyy)

WIN/ Field ID: G2CE0217

WBID: 2994B

Latitude: 28.682500

(Decimal Degrees)

County: Seminole

ORG ID: 21FLCEN

Longitude: -81.329300

(Decimal Degrees)

Receiving Body of Water: \_\_\_\_\_

RQ-2019- 09-09-39

| Sampling Team Members                                                                                                      |                                                                                                                 |                 |                  | WQ Measurements                                | Sample Collection                                                                 | Documentation                       | Preservation                        | Preservation Check                      | Sampling Equipment                                                 |                                                    |                               |  |
|----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------|------------------|------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------------|--------------------------------------------------------------------|----------------------------------------------------|-------------------------------|--|
| Mike Linger                                                                                                                |                                                                                                                 |                 |                  | <input checked="" type="checkbox"/>            | <input checked="" type="checkbox"/>                                               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>     | <input checked="" type="checkbox"/> Sample Container               | <input type="checkbox"/> Van Dorn                  | <input type="checkbox"/> Pole |  |
| Mike Drennan                                                                                                               |                                                                                                                 |                 |                  | <input checked="" type="checkbox"/>            | <input checked="" type="checkbox"/>                                               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>     | <input type="checkbox"/> Carboy                                    | <input checked="" type="checkbox"/> Syringe        |                               |  |
|                                                                                                                            |                                                                                                                 |                 |                  | <input checked="" type="checkbox"/>            | <input checked="" type="checkbox"/>                                               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>     | <input type="checkbox"/> Dipper                                    | <input type="checkbox"/> Other                     |                               |  |
|                                                                                                                            |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         | Depth Measured with <u>Secchi-Disk Line / Meter</u>                |                                                    |                               |  |
|                                                                                                                            |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         | Equipment ID <u>Leadfoot, Knothead, Crusty/ Bucket, Mucky/Trap</u> |                                                    |                               |  |
|                                                                                                                            |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         | Collection Method                                                  |                                                    |                               |  |
|                                                                                                                            |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         | <input type="checkbox"/> Wading                                    | <input checked="" type="checkbox"/> Canoe/Kayak    |                               |  |
|                                                                                                                            |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         | <input type="checkbox"/> From Shore                                | <input checked="" type="checkbox"/> Electric Motor |                               |  |
|                                                                                                                            |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         | <input type="checkbox"/> Other                                     | <input type="checkbox"/> Gasoline Motor            |                               |  |
| Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded                                                             |                                                                                                                 |                 |                  | Meter ID# <u>Crow Daddy</u>                    |                                                                                   |                                     |                                     | Matrix: <u>Fresh</u> / Marine / DI      |                                                                    |                                                    |                               |  |
| Photos: <u>Yes</u> / No                                                                                                    |                                                                                                                 |                 |                  | Flow: No Flow / Intestinal / Flowing <u>NA</u> |                                                                                   |                                     |                                     | Tide: Rising/ Falling/ Slack/ <u>NA</u> |                                                                    |                                                    |                               |  |
| Tide Times: High _____ Low _____                                                                                           |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Time Zone                                                                                                                  | Time                                                                                                            | Total Depth (m) | Sample Depth (m) | Secchi Disk (m)                                | DO (mg/L)                                                                         | DO (%SAT)                           | pH                                  | Salinity (PPT)                          | Sp COND (umhos/cm)                                                 | Temp. (C°)                                         |                               |  |
| <u>EST</u>                                                                                                                 | <u>1158</u>                                                                                                     | <u>3.3</u>      | <u>0.3</u>       | <u>1.4</u>                                     | <u>7.03</u>                                                                       | <u>90.7</u>                         | <u>7.56</u>                         | <u>0.07</u>                             | <u>154.8</u>                                                       | <u>28.6</u>                                        |                               |  |
| <u>CEN</u>                                                                                                                 |                                                                                                                 |                 | <u>2.8</u>       |                                                | <u>5.60</u>                                                                       | <u>69.7</u>                         | <u>7.29</u>                         | <u>0.07</u>                             | <u>155.1</u>                                                       | <u>28.0</u>                                        |                               |  |
| Biological Samples Collected: None <u>HA</u> SCI RPS Algae ID LVS <u>LVI</u> Other:                                        |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| SBIO ID Numbers: SBIO-ID: <u>80457</u> HA-ID: <u>16368</u> RPS-ID: _____ Macrophyte-ID: <u>11534</u> LIMS#: <u>2126280</u> |                                                                                                                 |                 |                  |                                                |                                                                                   |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Parameter Suite                                                                                                            | Parameter Methods                                                                                               |                 |                  |                                                | Preservation                                                                      |                                     | Lot#                                | Expiration                              | pH Check                                                           |                                                    |                               |  |
| Preserved Nutrients                                                                                                        | <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 |                                     | <u>SA7163030</u>                    | <u>10/30/19</u>                         | <input checked="" type="checkbox"/> <2                             |                                                    |                               |  |
| Metals                                                                                                                     | <input type="checkbox"/> W-ICPMS <input type="checkbox"/> W-ICP                                                 |                 |                  |                                                | <input type="checkbox"/> Ice <input type="checkbox"/> HNO3                        |                                     |                                     |                                         | <input type="checkbox"/> <2                                        |                                                    |                               |  |
| Filtered Nutrients                                                                                                         | <input checked="" type="checkbox"/> W-PO4-F <input checked="" type="checkbox"/> Field Filtered 0.45 um Filter   |                 |                  |                                                | <input checked="" type="checkbox"/> Ice                                           |                                     | <u>16930280</u>                     |                                         |                                                                    |                                                    |                               |  |
| Chlorophyll                                                                                                                | <input checked="" type="checkbox"/> CHLSUITE-W                                                                  |                 |                  |                                                | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Physical/Aggregate (Fresh)                                                                                                 | <input checked="" type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS |                 |                  |                                                | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Physical/Aggregate (Marine)                                                                                                | <input type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY                                                   |                 |                  |                                                | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Macroinvertebrates                                                                                                         | <input type="checkbox"/> MI-FW-QLDC                                                                             |                 |                  |                                                | <input type="checkbox"/> Formalin                                                 |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Periphyton                                                                                                                 | <input type="checkbox"/> ALGAE-ID                                                                               |                 |                  |                                                | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Microbiology                                                                                                               | <input type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enterococci            |                 |                  |                                                | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Molecular                                                                                                                  | <input type="checkbox"/> PCR-FILTER <input type="checkbox"/> PCR-BacR <input type="checkbox"/> PCR-GULL2        |                 |                  |                                                | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
|                                                                                                                            | <input type="checkbox"/> PCR-HF183 <input type="checkbox"/> PCR-DG3 <input type="checkbox"/> PCR-GFD            |                 |                  |                                                |                                                                                   |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Tracers                                                                                                                    | <input type="checkbox"/> W-E8321-DI <input type="checkbox"/> W-E8321-MS                                         |                 |                  |                                                | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Pesticides                                                                                                                 | <input type="checkbox"/> W-PSNP-TQ <input type="checkbox"/> W-CT-CL-R <input type="checkbox"/> W-E8321-DI       |                 |                  |                                                | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
|                                                                                                                            | <input type="checkbox"/> W-PCL-SQ-R <input type="checkbox"/> WE8321-MS <input type="checkbox"/> W-CARB-AA       |                 |                  |                                                | <input type="checkbox"/> Other                                                    |                                     |                                     |                                         |                                                                    |                                                    |                               |  |
| Phytoplankton                                                                                                              | <input type="checkbox"/> DTY-QN-C <input type="checkbox"/> PKD-QN-C                                             |                 |                  |                                                | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                         |                                                                    |                                                    |                               |  |

Notes:

WIN ID / Field ID →

Lake Kathryn @ Center



G2CE0217

Signature: \_\_\_\_\_

Date: 10/8/19

LIMS EVENT ID: CENT-DIST-2019-10-09-01

Enter Field Parameters, Verify Station ID In LIMS DMT: MD 11/7/19

(Initials/Date)

QC Station ID, Field Parameters In LIMS DMT: MXL 11/13/19

(Initials/Date)

Scan/Save Field Sheets

(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data In WIN:

(Initials/Date)

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

| Waterbody: <u>Lake Kathryn</u>                                                                                                                             |   | County: <u>Seminole</u>       |   | Date: <u>10/8/19</u>                                                                    |                |                                                |   |   |   |    |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------|---|-----------------------------------------------------------------------------------------|----------------|------------------------------------------------|---|---|---|----|----------------|
| Analyst: <u>Mike Linger / Mike Drennan</u>                                                                                                                 |   | Signature: <u>[Signature]</u> |   | STORET: <u>GZCE0217</u>                                                                 |                |                                                |   |   |   |    |                |
| 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 <u>2, 5, 8, 11</u><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. |   |                               |   |                                                                                         |                |                                                |   |   |   |    |                |
| SPECIES                                                                                                                                                    | 2 | 5                             | 8 | 11                                                                                      | Collected? (✓) | SPECIES                                        | 2 | 5 | 8 | 11 | Collected? (✓) |
| Acer rubrum                                                                                                                                                | / | /                             | / | /                                                                                       |                | Fraxinus                                       |   |   |   |    |                |
| <b>Alternanthera philoxeroides</b>                                                                                                                         | / | /                             | / | /                                                                                       |                | Fuirena scirpoides                             |   |   |   |    |                |
| Amaranthus australis                                                                                                                                       |   |                               |   |                                                                                         |                | Gordonia lasianthus                            |   |   |   |    |                |
| Andropogon sp.                                                                                                                                             |   |                               |   |                                                                                         |                | Habenaria repens                               |   |   |   |    |                |
| Azolla filiculoides (A. caroliniana)                                                                                                                       |   |                               |   |                                                                                         |                | Hibiscus coccineus                             |   |   |   |    |                |
| Baccharis sp.                                                                                                                                              | / |                               |   |                                                                                         |                | Hibiscus grandiflora                           |   |   |   |    |                |
| Bacopa caroliniana                                                                                                                                         |   |                               |   |                                                                                         |                | <b>Hydrilla verticillata</b>                   | / | / | / | /  |                |
| Bacopa monnieri                                                                                                                                            |   |                               |   |                                                                                         |                | Hydrocotyle sp.                                |   |   |   |    |                |
| Bidens alba                                                                                                                                                |   |                               |   |                                                                                         |                | <b>Hygrophila polysperma</b>                   |   |   |   |    |                |
| Bidens laevis                                                                                                                                              |   |                               |   |                                                                                         |                | Hymenocallis sp.                               |   |   |   |    |                |
| Bidens mitis                                                                                                                                               |   |                               |   |                                                                                         |                | *Hypericum fasciculatum                        |   |   |   |    |                |
| Blechnum serrulatum                                                                                                                                        |   |                               |   |                                                                                         |                | *Hypericum hypericoides                        |   |   |   |    |                |
| Boehmeria cylindrica                                                                                                                                       |   |                               |   |                                                                                         |                | *Hypericum myrtifolium                         |   |   |   |    |                |
| Brasenia schreberi                                                                                                                                         |   |                               |   |                                                                                         |                | Ilex cassine                                   |   |   |   |    |                |
| Cabomba caroliniana                                                                                                                                        |   |                               |   |                                                                                         |                | <b>Ipomoea aquatica</b>                        |   |   |   |    |                |
| Canna                                                                                                                                                      |   |                               |   |                                                                                         |                | Ipomoea sagittata                              |   |   |   |    |                |
| Centella asiatica                                                                                                                                          |   |                               |   |                                                                                         |                | Itea virginica                                 |   |   |   |    |                |
| Cephalanthus occidentalis                                                                                                                                  | / | /                             | / | /                                                                                       |                | Juncus effusus                                 |   |   |   |    |                |
| Ceratophyllum demersum                                                                                                                                     | / | /                             | / | /                                                                                       |                | *Juncus marginatus                             |   |   |   |    |                |
| Chara sp.                                                                                                                                                  |   |                               |   |                                                                                         |                | *Juncus megacephalus                           |   |   |   |    |                |
| Cicuta maculata                                                                                                                                            |   |                               |   |                                                                                         |                | Juncus repens                                  |   |   |   |    |                |
| Cinnamomum camphora                                                                                                                                        |   |                               |   |                                                                                         |                | *Juncus scirpoides                             |   |   |   |    |                |
| Cladium jamaicense                                                                                                                                         |   |                               |   |                                                                                         |                | Lachnanthes caroliniana                        |   |   |   |    |                |
| <b>Colocasia esculenta</b>                                                                                                                                 | / | /                             | / | /                                                                                       |                | Leersia hexandra                               |   |   |   |    |                |
| *Commelina                                                                                                                                                 |   |                               |   |                                                                                         |                | <b>Landoltia punctata (Spirodela punctata)</b> |   |   |   |    |                |
| Crinum americanum                                                                                                                                          |   |                               |   |                                                                                         |                | Lemna sp.                                      |   |   |   |    |                |
| <b>*Cyperus alternifolius (C. involucratus)</b>                                                                                                            |   |                               |   |                                                                                         |                | Leucothoe racemosa (Eubotrys racemosa)         |   |   |   |    |                |
| Cyperus articulatus                                                                                                                                        |   |                               |   |                                                                                         |                | Limnobia spongia                               |   |   |   |    |                |
| Cyperus haspan                                                                                                                                             |   |                               |   |                                                                                         |                | <b>Limnophila sessiliflora</b>                 |   |   |   |    |                |
| *Cyperus lecontei                                                                                                                                          |   |                               |   |                                                                                         |                | Liquidambar styraciflua                        |   |   |   |    |                |
| *Cyperus polystachyos                                                                                                                                      |   |                               |   |                                                                                         |                | *Ludwigia arcuata                              |   |   |   |    |                |
| *Cyperus odoratus                                                                                                                                          | / | /                             | / | /                                                                                       |                | *Ludwigia grandiflora                          |   |   |   |    |                |
| *Cyperus surinamensis                                                                                                                                      |   |                               |   |                                                                                         |                | *Ludwigia hexapetala                           |   |   |   |    |                |
| Cyrtilla racemiflora                                                                                                                                       |   |                               |   |                                                                                         |                | *Ludwigia leptocarpa                           | / | / | / | /  |                |
| Decodon verticillatus                                                                                                                                      |   |                               |   |                                                                                         |                | Ludwigia (native)                              |   |   |   |    |                |
| Diodia virginiana                                                                                                                                          | / | /                             | / | /                                                                                       |                | *Ludwigia octovalvis                           |   |   |   |    |                |
| *Echinochloa crus-galli                                                                                                                                    |   |                               |   |                                                                                         |                | <b>*Ludwigia peruviana</b>                     | / | / | / | /  |                |
| *Echinochloa muricatum                                                                                                                                     |   |                               |   |                                                                                         |                | *Ludwigia repens                               |   |   |   |    |                |
| Echinochloa walteri                                                                                                                                        |   |                               |   |                                                                                         |                | Ludwigia suffruticosa                          |   |   |   |    |                |
| Eclipta prostrata (E. alba)                                                                                                                                |   |                               |   |                                                                                         |                | Luziola fluitans (Hydrochloa carolinensis)     |   |   |   |    |                |
| <b>Eichhornia crassipes</b>                                                                                                                                |   |                               |   |                                                                                         |                | Magnolia virginiana                            |   |   |   |    |                |
| *Eleocharis <u>baldwinii</u>                                                                                                                               | / | /                             | / | /                                                                                       |                | Mayaca fluviatilis                             |   |   |   |    |                |
| Eleocharis cellulosa                                                                                                                                       |   |                               |   |                                                                                         |                | <b>Melaleuca quinquenervia</b>                 |   |   |   |    |                |
| *Eleocharis elongata                                                                                                                                       |   |                               |   |                                                                                         |                | Micranthemum glomeratum                        |   |   |   |    |                |
| Eleocharis equisetoides                                                                                                                                    |   |                               |   |                                                                                         |                | Micranthemum umbrosum                          |   |   |   |    |                |
| Eleocharis interstincta                                                                                                                                    |   |                               |   |                                                                                         |                | Mikania scandens                               | / | / | / | /  |                |
| Eleocharis submersa viviparous                                                                                                                             |   |                               |   |                                                                                         |                | <b>Mimosa pigra</b>                            |   |   |   |    |                |
| *Eriocaulon compressum                                                                                                                                     |   |                               |   |                                                                                         |                | Myrica cerifera                                | / | / | / | /  |                |
| *Eriocaulon decangulare                                                                                                                                    |   |                               |   |                                                                                         |                |                                                |   |   |   |    |                |
| Eupatorium capillifolium                                                                                                                                   |   |                               |   |                                                                                         |                |                                                |   |   |   |    |                |

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

Site: Lake KathrynDate: 10/8/19

| SPECIES                                                         | 2 | 5 | 8 | 11 | Collected? (✓) | SPECIES                                                            | 2 | 5 | 8 | 11 | Collected? (✓) |
|-----------------------------------------------------------------|---|---|---|----|----------------|--------------------------------------------------------------------|---|---|---|----|----------------|
| <b>Myriophyllum aquaticum</b>                                   |   |   |   |    |                | <i>Salix caroliniana</i>                                           |   |   |   |    |                |
| * <i>Myriophyllum heterophyllum</i>                             |   |   |   |    |                | <b><i>Salvinia minima</i></b>                                      |   |   |   |    |                |
| * <i>Myriophyllum laxum</i>                                     |   |   |   |    |                | <i>Sambucus canadensis</i>                                         |   |   |   |    |                |
| * <i>Myriophyllum pinnatum</i>                                  |   |   |   |    |                | <b><i>Sapium sebiferum</i></b>                                     |   |   |   |    |                |
| <b><i>Myriophyllum spicatum</i></b>                             |   |   |   |    |                | <i>Saururus cernuus</i>                                            |   |   |   |    |                |
| * <i>Najas filifolia</i>                                        |   |   |   |    |                | <b><i>Schinus terebinthifolius</i></b>                             |   |   |   |    |                |
| * <i>Najas guadalupensis</i>                                    |   |   |   |    |                | * <i>Schoenoplectus californicus</i>                               |   |   |   |    |                |
| * <i>Najas minor</i>                                            |   |   |   |    |                | * <i>Schoenoplectus pungens</i>                                    |   |   |   |    |                |
| <i>Nelumbo lutea</i>                                            |   |   |   |    |                | * <i>Schoenoplectus tabernaemontani</i> ( <i>Scirpus validus</i> ) |   |   |   |    |                |
| <i>Nitella</i> spp.                                             |   |   |   |    |                | <i>Scirpus cubensis</i> ( <i>Oxycaryon cubense</i> )               |   |   |   |    |                |
| <i>Nuphar</i> sp.                                               |   |   |   |    |                | <i>Scirpus cyperinus</i>                                           |   |   |   |    |                |
| <i>Nymphaea mexicana</i>                                        |   |   |   |    |                | * <i>Sesbania</i>                                                  |   |   |   |    |                |
| <i>Nymphaea odorata</i>                                         |   |   |   |    |                | <i>Solidago</i> sp.                                                |   |   |   |    |                |
| <i>Nymphoides aquatica</i>                                      |   |   |   |    |                | <i>Sparganium americanum</i>                                       |   |   |   |    |                |
| <i>Nyssa sylvatica</i> var. <i>biflora</i>                      |   |   |   |    |                | <i>Spartina bakeri</i>                                             |   |   |   |    |                |
| <i>Orontium aquaticum</i>                                       |   |   |   |    |                | <i>Spirodela polyrhiza</i>                                         |   |   |   |    |                |
| <i>Osmunda cinnamomea</i>                                       |   |   |   |    |                | <i>Taxodium</i> sp.                                                |   |   |   |    |                |
| <i>Osmunda regalis</i>                                          |   |   |   |    |                | <i>Thalia geniculata</i>                                           |   |   |   |    |                |
| <i>Panicum hemitomon</i>                                        |   |   |   |    |                | <i>Thelypteris interrupta</i>                                      |   |   |   |    |                |
| <b><i>Panicum repens</i></b>                                    |   |   |   |    |                | <i>Thelypteris palustris</i>                                       |   |   |   |    |                |
| <i>Paspalidium geminatum</i>                                    |   |   |   |    |                | <i>Triadenum virginicum</i>                                        |   |   |   |    |                |
| * <i>Paspalum repens</i>                                        |   |   |   |    |                | <i>Typha</i> sp.                                                   |   |   |   |    |                |
| <i>Paspalum urvillei</i>                                        |   |   |   |    |                | <b><i>Urochloa mutica</i> (<i>Brachiaria mutica</i>)</b>           |   |   |   |    |                |
| <i>Peltandra</i> sp.                                            |   |   |   |    |                | * <i>Utricularia gibba</i> ( <i>U. biflora</i> )                   |   |   |   |    |                |
| <i>Persea</i> sp.                                               |   |   |   |    |                | * <i>Utricularia foliosa</i>                                       |   |   |   |    |                |
| <b><i>Pennisetum purpureum</i></b>                              |   |   |   |    |                | * <i>Utricularia inflata</i>                                       |   |   |   |    |                |
| <i>Phragmites australis</i>                                     |   |   |   |    |                | * <i>Utricularia purpurea</i>                                      |   |   |   |    |                |
| <i>Pinus elliotii</i>                                           |   |   |   |    |                | * <i>Utricularia radiata</i>                                       |   |   |   |    |                |
| <b><i>Pistia stratioides</i></b>                                |   |   |   |    |                | * <i>Utricularia resupinata</i>                                    |   |   |   |    |                |
| <i>Pluchea</i> sp.                                              |   |   |   |    |                | <i>Vallisneria americana</i>                                       |   |   |   |    |                |
| * <i>Polygonum glabrum</i> ( <i>densiflorum</i> )               |   |   |   |    |                | <i>Vitis</i> sp.                                                   |   |   |   |    |                |
| <i>Polygonum hirsutum</i>                                       |   |   |   |    |                | * <i>Websteria confervoides</i>                                    |   |   |   |    |                |
| * <i>Polygonum hydropiperoides</i>                              |   |   |   |    |                | <b><i>Wedelia trilobata</i> (<i>Sphagneticola trilobata</i>)</b>   |   |   |   |    |                |
| * <i>Polygonum punctatum</i>                                    |   |   |   |    |                | <i>Wolffiella</i> spp.                                             |   |   |   |    |                |
| * <i>Polygonum</i>                                              |   |   |   |    |                | <i>Woodwardia virginica</i>                                        |   |   |   |    |                |
| <i>Pontederia cordata</i>                                       |   |   |   |    |                | <i>Xyris</i> sp.                                                   |   |   |   |    |                |
| * <i>Potamogeton diversifolius</i>                              |   |   |   |    |                | <i>Zizania aquatica</i>                                            |   |   |   |    |                |
| * <i>Potamogeton illinoensis</i>                                |   |   |   |    |                | <i>Zizaniopsis milacea</i>                                         |   |   |   |    |                |
| * <i>Potamogeton pusillus</i>                                   |   |   |   |    |                | <i>Impatiopsis arbores</i>                                         |   |   |   |    |                |
| * <i>Potamogeton pectinatus</i> ( <i>Stuckenia pectinatus</i> ) |   |   |   |    |                |                                                                    |   |   |   |    |                |
| <i>Proserpinaca pectinata</i>                                   |   |   |   |    |                |                                                                    |   |   |   |    |                |
| * <i>Rhexia</i>                                                 |   |   |   |    |                |                                                                    |   |   |   |    |                |
| * <i>Rhynchospora corniculata</i>                               |   |   |   |    |                |                                                                    |   |   |   |    |                |
| * <i>Rhynchospora inundata</i>                                  |   |   |   |    |                |                                                                    |   |   |   |    |                |
| <i>Rhynchospora nitens</i>                                      |   |   |   |    |                |                                                                    |   |   |   |    |                |
| <i>Ricciocarpus natans</i>                                      |   |   |   |    |                |                                                                    |   |   |   |    |                |
| <i>Sabal palmetto</i>                                           |   |   |   |    |                |                                                                    |   |   |   |    |                |
| <i>Sacciolepis striata</i>                                      |   |   |   |    |                |                                                                    |   |   |   |    |                |
| * <i>Sagittaria filiformis</i>                                  |   |   |   |    |                |                                                                    |   |   |   |    |                |
| * <i>Sagittaria graminea</i>                                    |   |   |   |    |                |                                                                    |   |   |   |    |                |
| * <i>Sagittaria isoetiformis</i>                                |   |   |   |    |                |                                                                    |   |   |   |    |                |
| <i>Sagittaria lancifolia</i>                                    |   |   |   |    |                |                                                                    |   |   |   |    |                |
| <i>Sagittaria latifolia</i>                                     |   |   |   |    |                |                                                                    |   |   |   |    |                |



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

SAMPLE ID: \_\_\_\_\_ MACROPHYTE ID: \_\_\_\_\_ LATITUDE: 28.682500  
COUNTY: Seminole STORET #: G2 CE 0217 LONGITUDE: -81.329300  
DATE: 10/8/19 TIME: 1158 SAMPLING AGENCY: FDEP CE-ROC  
SITE NAME: Lake Kathryn WBID: 2994 B  
FIELD ID/NAME: \_\_\_\_\_ LAKE SIZE: Mcd. RQ: 2019-09-09-39

## WATERSHED / LAKESIDE FEATURES

| PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) :                                                                                       |                          |                                                                                                           |                          |                                     |                          |                                                                                                    |                          |  |  | LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)                                                             |  |  |  |                                                                                                                   |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------|--------------------------|--|--|------------------------------------------------------------------------------------------------------------|--|--|--|-------------------------------------------------------------------------------------------------------------------|--|
| Forest/Natural                                                                                                                                                                   | Silviculture             | Field/Pasture                                                                                             | Agricultural             | Residential                         | Commercial               | Industrial                                                                                         | Other (Specify)          |  |  | LDI: _____                                                                                                 |  |  |  |                                                                                                                   |  |
| <input type="checkbox"/>                                                                                                                                                         | <input type="checkbox"/> | <input type="checkbox"/>                                                                                  | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>                                                                           | <input type="checkbox"/> |  |  | Land Use Source & Year: _____                                                                              |  |  |  |                                                                                                                   |  |
| Local Watershed Erosion (select one) : <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |                          |                                                                                                           |                          |                                     |                          | Artificially Impounded                                                                             |                          |  |  |                                                                                                            |  |  |  |                                                                                                                   |  |
| Local Watershed NPS Pollution : <input type="checkbox"/> No evidence <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy |                          |                                                                                                           |                          |                                     |                          | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                |                          |  |  |                                                                                                            |  |  |  |                                                                                                                   |  |
| STORMWATER INPUTS                                                                                                                                                                |                          | 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 |  |
| <u>3</u>                                                                                                                                                                         |                          | 20 19 18 17 16                                                                                            |                          |                                     |                          | 15 14 13 12 11                                                                                     |                          |  |  | 10 9 8 7 6                                                                                                 |  |  |  | 5 4 3 2 1                                                                                                         |  |
| LAKESIDE ALTERATIONS                                                                                                                                                             |                          | 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)                                                         |  |
| <u>3</u>                                                                                                                                                                         |                          | 20 19 18 17 16                                                                                            |                          |                                     |                          | 15 14 13 12 11                                                                                     |                          |  |  | 10 9 8 7 6                                                                                                 |  |  |  | 5 4 3 2 1                                                                                                         |  |
| BUFFER ZONE                                                                                                                                                                      |                          | 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                                                                               |  |
| <u>3</u>                                                                                                                                                                         |                          | 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No Preserved? <input 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 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 _____<br><b>Water Surface Oils:</b> <input checked="" type="checkbox"/> None<br><input type="checkbox"/> Sheen/Slick <input type="checkbox"/> Glob <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: <u>0.3</u> <u>28.6</u> <u>7.56</u> <u>7.03</u> <u>90.7</u> <u>154.8</u> <u>0.07</u><br>Mid-Depth: _____<br>Bottom: <u>2.8</u> <u>28.0</u> <u>7.29</u> <u>5.60</u> <u>69.7</u> <u>155.1</u> <u>0.07</u>                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  | <b>Clarity:</b> <input type="checkbox"/> Clear <input type="checkbox"/> Opaque <input type="checkbox"/> Turbid <input checked="" type="checkbox"/> Slightly Turbid<br><b>Color:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Tannic <input type="checkbox"/> Green<br>SECCHI (M) <u>1.4</u> Total Station Depth (M) <u>3.3</u><br>VOB <input type="checkbox"/>                                                                                                                                                                                                 |  |  |  |                             |  |  |  |                                  |  |  |  |  |  |  |  |
| <b>Sediment Type:</b> (may check more than one)<br><input type="checkbox"/> Sandy <input checked="" type="checkbox"/> Organic fibrous (peaty, CPOM) <input checked="" type="checkbox"/> Vegetated<br><input type="checkbox"/> Sand/Silt <input checked="" type="checkbox"/> Organic smooth (muck) <input type="checkbox"/> Other (Specify): _____<br>Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                         |  |  |  |  |  |  |  | <b>Sediment Odors:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Anaerobic <input type="checkbox"/> Other (Specify): _____                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |                             |  |  |  |                                  |  |  |  |  |  |  |  |
| <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 checked="" type="checkbox"/> No<br>Lot #: _____ Exp. Date: _____<br>Algal Bloom/Algal ID Sample Taken? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Active Vegetation Mgmt? <input checked="" type="checkbox"/> Yes <input 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 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><br> |  |  |  |  |  |  |  |
| <b>Weather Conditions :</b> <u>80's overcast / light rain</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |                             |  |  |  |                                  |  |  |  |  |  |  |  |
| <b>SAMPLING TEAM:</b> <u>Mike Linger / Mike Drennon</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  |  |  |  |  |  | <b>SIGNATURE:</b> <u>[Signature]</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  | <b>DATE:</b> <u>10/8/19</u> |  |  |  |                                  |  |  |  |  |  |  |  |

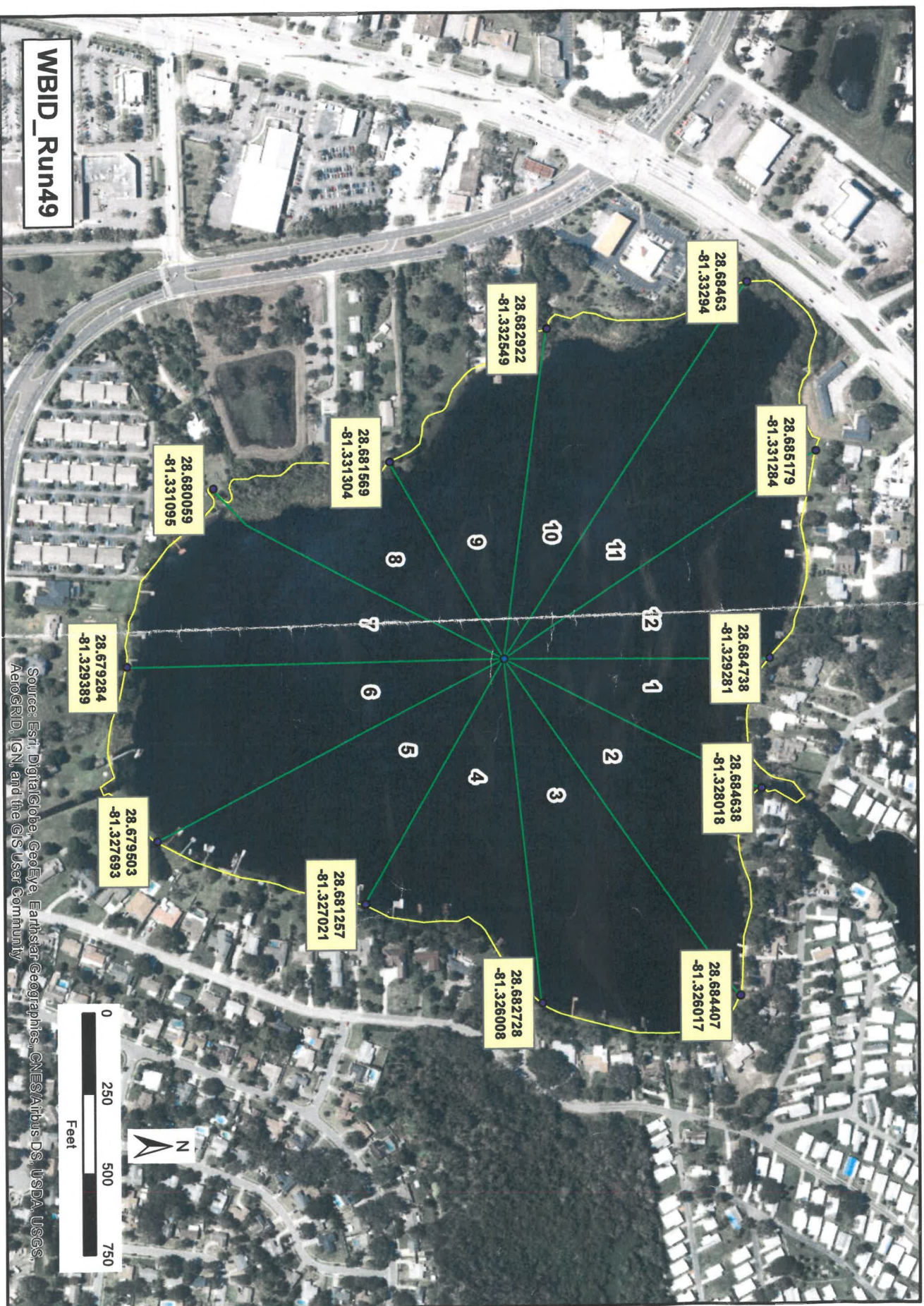
**DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet**

|                                                                          |                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                      |                                                                                                                                                            |                                                                                                                                                                 |  |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| STORET STATION NUMBER:<br><b>62CE0217</b>                                | DATE (M/D/Y)<br><b>10/08/2019</b>                                                                                                                                                                                                                                                                                                                                                     | LAKE NAME<br><b>Lake Kathryn</b>                                                                                                                                     |                                                                                                                                                            | FIELD ID / NAME:                                                                                                                                                |  |
| ECO-REGION:                                                              | COUNTY:<br><b>Seminole</b>                                                                                                                                                                                                                                                                                                                                                            | SAMPLING LOCATION/DESCRIPTION:<br><b>@ Center</b>                                                                                                                    |                                                                                                                                                            | LAKE SIZE:<br><b>Medium</b>                                                                                                                                     |  |
| <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 checked="" type="checkbox"/> | Impounded, hydrology of system artificially controlled<br><input 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> <input type="text" value="11"/>                            | 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> <input type="text" value="6"/>                 | 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> <input type="text" value="3"/>                  | 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> <input type="text" value="4"/>           | 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> <input type="text" value="3"/> | 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> <input type="text" value="3"/>                 | 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> <input type="text" value="7"/>         | 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 |                                                                                                                                                                      |                                                                                                                                                            |                                                                                                                                                                 |  |
| <b>TOTAL SCORE</b> <input type="text" value="37"/>                       | <b>COMMENTS:</b>                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                      |                                                                                                                                                            |                                                                                                                                                                 |  |

|                                  |                                |                                                                                                     |
|----------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------|
| ANALYSIS DATE:<br><b>10/8/19</b> | ANALYST:<br><b>Mike Linger</b> | SIGNATURE:<br> |
|----------------------------------|--------------------------------|-----------------------------------------------------------------------------------------------------|



# LVI Map for Lake Kathryn, WBID 2994B



WBID\_Run49