

LVI - REF Lake

Site Name Lawbreaker Lake Sample Date 7/16/19

WBID 2905 WIN ID G1CE0108 RQ 2019-07-01-44

|                                    | Initial/Date | QC Initial/Date |
|------------------------------------|--------------|-----------------|
| Water chemistry data to LIMS       | 8/5/19 LMD   | MKL 8/19/19     |
| Create SBIO station visit 80100    | LMD 8/19/19  | n/a             |
| Vascular Entry (add LIMS ID) 11450 | LMD 8/19/19  | MKL 8/19/19     |
| Lake Observation Sheet Entry       | LMD 8/19/19  | MKL 8/19/19     |
| Authorize SBIO data                | MKL 8/19/19  | n/a             |
| Scan all sheets to 21FLCEN folder  | LMD 8/19/19  | n/a             |
| LIMS/WIN migration                 |              | n/a             |
| File in cabinet                    |              | n/a             |

Comments/notes:



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REFERENCE LAKE FIELD SHEET

Data Qualified?

Yes / No

January 2019

WIN Station Name: Lawbreaker Lake @ Center of South Lobe

Date: 07/16/2019

(mm/dd/yyyy)

WIN/ Field ID: G1CE0108

WBID: 2905

Latitude: 29.16229

County: Lake

ORG ID: 21FLCEN

Longitude: -81.61588

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water:

RQ-2019- 07-01-44

| Sampling Team Members                                                                    |                                                                                                                                                                                                                     |                 |                  |                 | WQ Measurements                                                                   | Sample Collection | Documentation                    | Preservation                           | Preservation Check   |            |
|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------|-----------------|-----------------------------------------------------------------------------------|-------------------|----------------------------------|----------------------------------------|----------------------|------------|
| Mike Linger                                                                              |                                                                                                                                                                                                                     |                 |                  |                 |                                                                                   |                   |                                  |                                        |                      |            |
| Mike Drennan                                                                             |                                                                                                                                                                                                                     |                 |                  |                 |                                                                                   |                   |                                  |                                        |                      |            |
| Water Level: Dry/ Pooled/ Low / Normal / High / Flooded                                  |                                                                                                                                                                                                                     |                 |                  |                 | Meter ID#                                                                         |                   | Matrix: Fresh / Marine / DI      |                                        |                      |            |
| Photos: Yes No                                                                           |                                                                                                                                                                                                                     |                 |                  |                 | Flow: No Flow / Intestinal / Flowing / NA                                         |                   | Tide: Rising/ Falling/ Slack/ NA |                                        | Tide Times: High Low |            |
| Time Zone                                                                                | Time                                                                                                                                                                                                                | Total Depth (m) | Sample Depth (m) | Secchi Disk (m) | DO (mg/L)                                                                         | DO (%SAT)         | pH                               | Salinity (PPTH)                        | Sp COND (µmhos/cm)   | Temp. (C°) |
| EST                                                                                      | 1209                                                                                                                                                                                                                | 6.5             | 0.3              | 6.0             | 6.68                                                                              | 91.8              | 4.33                             | 0.02                                   | 53.0                 | 32.3       |
| GEN                                                                                      |                                                                                                                                                                                                                     |                 | 6.0              |                 | 5.94                                                                              | 80.5              | 4.21                             | 0.02                                   | 53.0                 | 31.5       |
| Biological Samples Collected: None HA SCI RPS Algae ID LVS CVI Other:                    |                                                                                                                                                                                                                     |                 |                  |                 |                                                                                   |                   |                                  |                                        |                      |            |
| SBIO ID Numbers: SBIO-ID: 80100 HA-ID: 16179 RPS-ID: Macrophyte-ID: 11450 LIMS#: 2103724 |                                                                                                                                                                                                                     |                 |                  |                 |                                                                                   |                   |                                  |                                        |                      |            |
| 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 | SA7163030         | 10/30/19                         | <input checked="" type="checkbox"/> <2 |                      |            |
| Metals                                                                                   | <input checked="" type="checkbox"/> W-ICPMS <input checked="" type="checkbox"/> W-ICP                                                                                                                               |                 |                  |                 | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> HNO3  | NA8197080         | 7/16/19                          | <input checked="" type="checkbox"/> <2 |                      |            |
| Filtered Nutrients                                                                       | <input checked="" type="checkbox"/> W-PO4-F <input checked="" type="checkbox"/> Field Filtered 0.45 µm Filter                                                                                                       |                 |                  |                 | <input checked="" type="checkbox"/> Ice                                           | 13615055          |                                  |                                        |                      |            |
| 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-CL-C / 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"/> PCR-HF183 <input type="checkbox"/> PCR-DG3 <input type="checkbox"/> PCR-GFD       |                 |                  |                 | <input type="checkbox"/> Ice                                                      |                   |                                  |                                        |                      |            |
| 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"/> W-PCL-SQ-R <input type="checkbox"/> WE8321-MS <input type="checkbox"/> W-CARB-AA |                 |                  |                 | <input type="checkbox"/> Ice <input type="checkbox"/> Other                       |                   |                                  |                                        |                      |            |
| Phytoplankton                                                                            | <input checked="" type="checkbox"/> DTY-QN-C <input checked="" type="checkbox"/> PKD-QN-C                                                                                                                           |                 |                  |                 | <input checked="" type="checkbox"/> Ice                                           |                   |                                  |                                        |                      |            |

H2SO4  
LOT# SA7163030  
EXP: 10/30/2019

HNO3  
LOT# NA8197080  
EXP: 07/16/2019

Place Preservative Sticker(s) Here  
(If Available)

Notes:

WIN ID / Field ID →

Lawbreaker Lake @ Center  
of South Lobe

G1CE0108

Signature: *Mike Linger*

Date: 7/16/19

LIMS EVENT ID: CENT-DIST-2019- 07-17-01

Enter Field Parameters, Verify Station ID in LIMS DMT: *cmd 8/5/19*QC Station ID, Field Parameters in LIMS DMT: *MKL 8/19/19*

Scan/Save Field Sheets

*cmd 8/19/19*

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

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

|                                           |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |  |                                                                                                                                                 |  |  |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| STORET STATION NUMBER:<br><b>GICE0108</b> | DATE (M/D/Y):<br><b>07/16/19</b>                                                                                                                                                                                                                                                                       | LAKE NAME<br><b>Lawbreaker Lake</b>                                                                                                        |  | FIELD ID / NAME:                                                                                                                                |  |  |
| ECO-REGION:<br><b>Peninsular</b>          | COUNTY:<br><b>Lake</b>                                                                                                                                                                                                                                                                                 | SAMPLING LOCATION/DESCRIPTION:<br><b>Center of South lobe</b>                                                                              |  | LAKE SIZE:<br><b>Small</b>                                                                                                                      |  |  |
| <b>PARAMETER</b>                          | No surface inflow or outflow present, very long water residence time, groundwater seepage dominates<br><input checked="" type="checkbox"/>                                                                                                                                                             | Surface water inflow present, but flow is rare, moderate to long water residence time<br><input type="checkbox"/>                          |  | Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time<br><input type="checkbox"/> |  |  |
| <b>HYDROLOGY</b>                          |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |  |                                                                                                                                                 |  |  |
| <b>Color</b>                              | Very clear, uncolored water (benthic sampling appropriate)<br><input checked="" type="checkbox"/>                                                                                                                                                                                                      | Water somewhat tannin stained (benthic sampling appropriate)<br><input type="checkbox"/>                                                   |  | Dark, discolored water (water color 20 PCU or higher)<br><input type="checkbox"/>                                                               |  |  |
|                                           |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |  |                                                                                                                                                 |  |  |
|                                           | <b>Optimal</b>                                                                                                                                                                                                                                                                                         | <b>Suboptimal</b>                                                                                                                          |  | <b>Marginal</b>                                                                                                                                 |  |  |
|                                           |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |  |                                                                                                                                                 |  |  |
| <b>Secchi</b>                             | Secchi >3 m<br>Or VOB                                                                                                                                                                                                                                                                                  | Secchi(m)                                                                                                                                  |  | Secchi(m)                                                                                                                                       |  |  |
| <b>20</b>                                 | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |  | 10 9 8 7 6                                                                                                                                      |  |  |
|                                           |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |  |                                                                                                                                                 |  |  |
| <b>Vegetation Quality</b>                 | Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa<br><b>19</b>                                                                                                                                                                                                   | Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants |  | Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats                                          |  |  |
|                                           | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |  | 10 9 8 7 6                                                                                                                                      |  |  |
| <b>Stormwater Inputs</b>                  | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation<br><b>19</b>                                                                                                                                                                                                     | 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                                      |  |  |
|                                           | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |  | 10 9 8 7 6                                                                                                                                      |  |  |
| <b>Bottom Substrate Quality</b>           | Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present<br><b>18</b>                                                                                                                                                                                                | Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present                                               |  | Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom                                    |  |  |
|                                           | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |  | 10 9 8 7 6                                                                                                                                      |  |  |
| <b>Lakeside Adverse Human Alterations</b> | Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)<br><b>18</b>                                                                                                                                                                                                         | Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected                                                       |  | Many structures, roads or other human disturbance visible (50%-70%) lakeside affected                                                           |  |  |
|                                           | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |  | 10 9 8 7 6                                                                                                                                      |  |  |
| <b>Upland Buffer Zone</b>                 | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer<br><b>19</b>                                                                                                                                                                                 | 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                                                                         |  |  |
|                                           | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |  | 10 9 8 7 6                                                                                                                                      |  |  |
| <b>Adverse Watershed Land Use</b>         | Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial<br><b>19</b> |                                                                                                                                            |  |                                                                                                                                                 |  |  |
|                                           | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |  | 10 9 8 7 6                                                                                                                                      |  |  |
| <b>TOTAL SCORE</b>                        | <b>132</b>                                                                                                                                                                                                                                                                                             | <b>COMMENTS:</b>                                                                                                                           |  |                                                                                                                                                 |  |  |
| <b>ANALYSIS DATE:</b>                     | <b>7/16/19</b>                                                                                                                                                                                                                                                                                         | <b>ANALYST:</b>                                                                                                                            |  | <b>SIGNATURE:</b>                                                                                                                               |  |  |
|                                           |                                                                                                                                                                                                                                                                                                        | <b>Mike Linger</b>                                                                                                                         |  | <b>Dr. K. Li</b>                                                                                                                                |  |  |

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

SAMPLE ID: \_\_\_\_\_ MACROPHYTE ID: 11450 LATITUDE: 29.16229  
 COUNTY: Lake STORET #: GICE0108 LONGITUDE: -81.61588  
 DATE: 7/16/19 TIME: 1209 SAMPLING AGENCY: FDEP CE-ROC  
 SITE NAME: Lawbreaker Lake WBID: 2905  
 FIELD ID/NAME: GICE0108 LAKE SIZE: Small RQ: 2019-07-01-44

## WATERSHED / LAKESIDE FEATURES

| PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) :                                                                                       |                                                                                                           |               |                                                                                                    | LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)                      |                                                                                                            |                         |                                                                                                                   |            |    |    |    |   |   |   |   |   |   |   |   |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------|------------|----|----|----|---|---|---|---|---|---|---|---|---|
| Forest/Natural<br><u>100</u>                                                                                                                                                     | Silviculture                                                                                              | Field/Pasture | Agricultural                                                                                       | Residential                                                         | Commercial                                                                                                 | Industrial              | Other (Specify)                                                                                                   | LDI: _____ |    |    |    |   |   |   |   |   |   |   |   |   |
| Local Watershed Erosion (select one) : <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |                                                                                                           |               |                                                                                                    | Artificially Impounded                                              |                                                                                                            | Land Use Source & Year: |                                                                                                                   |            |    |    |    |   |   |   |   |   |   |   |   |   |
| Local Watershed NPS Pollution : <input checked="" type="checkbox"/> No evidence <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |                                                                                                           |               |                                                                                                    | <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |                                                                                                            |                         |                                                                                                                   |            |    |    |    |   |   |   |   |   |   |   |   |   |
| STORMWATER INPUTS<br><u>19</u>                                                                                                                                                   | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation                     |               | Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place |                                                                     | Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place |                         | Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place |            |    |    |    |   |   |   |   |   |   |   |   |   |
|                                                                                                                                                                                  | 20                                                                                                        | 19            | 18                                                                                                 | 17                                                                  | 16                                                                                                         | 15                      | 14                                                                                                                | 13         | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| LAKESIDE ALTERATIONS<br><u>18</u>                                                                                                                                                | Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)       |               | Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)              |                                                                     | Many structures, roads or other human disturbance visible (50%-70% lakeside affected)                      |                         | Highly developed or disturbed (>70% of lakeside affected)                                                         |            |    |    |    |   |   |   |   |   |   |   |   |   |
|                                                                                                                                                                                  | 20                                                                                                        | 19            | 18                                                                                                 | 17                                                                  | 16                                                                                                         | 15                      | 14                                                                                                                | 13         | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| BUFFER ZONE<br><u>19</u>                                                                                                                                                         | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer |               | 89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer                               |                                                                     | 50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer                                    |                         | < 29% of shoreline with >18m buffer                                                                               |            |    |    |    |   |   |   |   |   |   |   |   |   |
|                                                                                                                                                                                  | 20                                                                                                        | 19            | 18                                                                                                 | 17                                                                  | 16                                                                                                         | 15                      | 14                                                                                                                | 13         | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 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 _____      |  |
| <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>32.3</u> <u>4.33</u> <u>6.68</u> <u>91.8</u> <u>53.0</u> <u>0.02</u><br>Mid-Depth: _____<br>Bottom: <u>6.0</u> <u>31.5</u> <u>4.21</u> <u>5.94</u> <u>80.5</u> <u>53.0</u> <u>0.02</u>                                                                                                                                                                                                                                                                     |  | <b>Water Surface Oils:</b> <input checked="" type="checkbox"/> None<br><input type="checkbox"/> Sheen/Slick <input type="checkbox"/> Glob <input type="checkbox"/> Other _____ |  |
| Meter ID: <u>Craw Daddy</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | <b>Clarity:</b> <input checked="" type="checkbox"/> Clear<br><input type="checkbox"/> Opaque <input type="checkbox"/> Turbid <input type="checkbox"/> Slightly Turbid          |  |
| <b>Sediment Type:</b> (may check more than one)<br><input checked="" type="checkbox"/> Sandy <input type="checkbox"/> Organic fibrous (peaty, CPOM) <input checked="" type="checkbox"/> Vegetated<br><input type="checkbox"/> Sand/Silt <input type="checkbox"/> Organic smooth (muck) <input type="checkbox"/> Other (Specify): _____                                                                                                                                                                                                                                                           |  | <b>Color:</b> <input checked="" type="checkbox"/> Clear<br><input type="checkbox"/> Tannic <input type="checkbox"/> Green                                                      |  |
| <b>Biological Communities:</b><br>LVI Conducted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Phytoplankton Sample Taken? <input checked="" type="checkbox"/> Yes <input 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"/> No<br>Active Vegetation Mgmt? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know |  | <b>SECCHI (M)</b> <u>6.0</u> <b>Total Station Depth (M)</b> <u>6.5</u><br><b>VOB</b> <input type="checkbox"/>                                                                  |  |
| <b>Abundance:</b><br>Absent Rare Common Abundant<br>Periphyton <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Nuisance Plants <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input 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>Sediment Odors:</b><br><input type="checkbox"/> Normal <input type="checkbox"/> Other (Specify): _____<br><input type="checkbox"/> Anaerobic                                |  |
| <b>Additional Notes:</b><br><u>90's</u><br><u>etc</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                                                                                                                                                                                |  |
| <b>Weather Conditions :</b><br><u>90's clear</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                |  |
| <b>SAMPLING TEAM:</b> <u>Mike Linger / Mike Dremman</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <b>SIGNATURE:</b> <u>[Signature]</u>                                                                                                                                           |  |
| <b>DATE:</b> <u>7/16/19</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                |  |

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

| Waterbody: <u>Lawbreaker Lake</u>                                                                                                                                                                                                                                                                                       |   | County: <u>Lake</u>           |   | Date: <u>7/16/19</u>                                                                  |                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------|---|---------------------------------------------------------------------------------------|----------------|
| Analyst: <u>Mike Linger/Mike Padden</u>                                                                                                                                                                                                                                                                                 |   | Signature: <u>[Signature]</u> |   | STORET: <u>61CE0108</u>                                                               |                |
| Except where noted as "sp." species level identification required. *Genera that may require lab verification*<br>Plants in bold = FLEPPC invasive exotic.<br>It is important to note dominant or co-dominant taxa (by areal extent) for each unit. Use "D" to denote dominant taxon, or "C" for the 2 co-dominant taxa. |   |                               |   | Lake units sampled (circle one group):<br>1, 4, 7, 10      2, 5, 8, 11<br>3, 6, 9, 12 |                |
| SPECIES                                                                                                                                                                                                                                                                                                                 | 2 | 5                             | 8 | 11                                                                                    | Collected? (✓) |
| Acer rubrum                                                                                                                                                                                                                                                                                                             |   |                               |   |                                                                                       |                |
| <b>Alternanthera philoxeroides</b>                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| Amaranthus australis                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| Andropogon sp.                                                                                                                                                                                                                                                                                                          | / | /                             | / | /                                                                                     |                |
| Azolla filiculoides (A. caroliniana)                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| Baccharis sp.                                                                                                                                                                                                                                                                                                           |   |                               |   |                                                                                       |                |
| Bacopa caroliniana                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| Bacopa monnieri                                                                                                                                                                                                                                                                                                         |   |                               |   |                                                                                       |                |
| Bidens alba                                                                                                                                                                                                                                                                                                             |   |                               |   |                                                                                       |                |
| Bidens laevis                                                                                                                                                                                                                                                                                                           |   |                               |   |                                                                                       |                |
| Bidens mitis                                                                                                                                                                                                                                                                                                            |   |                               |   |                                                                                       |                |
| Blechnum serrulatum                                                                                                                                                                                                                                                                                                     |   |                               |   |                                                                                       |                |
| Boehmeria cylindrica                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| Brasenia schreberi                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| Cabomba caroliniana                                                                                                                                                                                                                                                                                                     |   |                               |   |                                                                                       |                |
| Canna                                                                                                                                                                                                                                                                                                                   |   |                               |   |                                                                                       |                |
| Centella asiatica                                                                                                                                                                                                                                                                                                       |   |                               |   |                                                                                       |                |
| Cephalanthus occidentalis                                                                                                                                                                                                                                                                                               | / | /                             | / | /                                                                                     |                |
| Ceratophyllum demersum                                                                                                                                                                                                                                                                                                  |   |                               |   |                                                                                       |                |
| Chara sp.                                                                                                                                                                                                                                                                                                               |   |                               |   |                                                                                       |                |
| Cicuta maculata                                                                                                                                                                                                                                                                                                         |   |                               |   |                                                                                       |                |
| Cinnamomum camphora                                                                                                                                                                                                                                                                                                     |   |                               |   |                                                                                       |                |
| Cladium jamaicense                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| <b>Colocasia esculenta</b>                                                                                                                                                                                                                                                                                              |   |                               |   |                                                                                       |                |
| *Commelina                                                                                                                                                                                                                                                                                                              |   |                               |   |                                                                                       |                |
| Crinum americanum                                                                                                                                                                                                                                                                                                       |   |                               |   |                                                                                       |                |
| <b>*Cyperus alternifolius (C. involucratus)</b>                                                                                                                                                                                                                                                                         |   |                               |   |                                                                                       |                |
| Cyperus articulatus                                                                                                                                                                                                                                                                                                     |   |                               |   |                                                                                       |                |
| Cyperus haspan                                                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| <b>*Cyperus lecontei</b>                                                                                                                                                                                                                                                                                                |   |                               |   |                                                                                       |                |
| <b>*Cyperus polystachyos</b>                                                                                                                                                                                                                                                                                            |   |                               |   |                                                                                       |                |
| <b>*Cyperus odoratus</b>                                                                                                                                                                                                                                                                                                |   |                               |   |                                                                                       |                |
| <b>*Cyperus surinamensis</b>                                                                                                                                                                                                                                                                                            |   |                               |   |                                                                                       |                |
| Cyrtilla racemiflora                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| Decodon verticillatus                                                                                                                                                                                                                                                                                                   |   |                               |   |                                                                                       |                |
| Diodia virginiana                                                                                                                                                                                                                                                                                                       |   |                               |   |                                                                                       |                |
| <b>*Echinochloa crus-galli</b>                                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| <b>*Echinochloa muricatum</b>                                                                                                                                                                                                                                                                                           |   |                               |   |                                                                                       |                |
| Echinochloa walteri                                                                                                                                                                                                                                                                                                     |   |                               |   |                                                                                       |                |
| Eclipta prostrata (E. alba)                                                                                                                                                                                                                                                                                             |   |                               |   |                                                                                       |                |
| <b>Eichhornia crassipes</b>                                                                                                                                                                                                                                                                                             |   |                               |   |                                                                                       |                |
| <b>*Eleocharis</b>                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| Eleocharis cellulosa                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| <b>*Eleocharis elongata</b>                                                                                                                                                                                                                                                                                             |   |                               |   |                                                                                       |                |
| Eleocharis equisetoides                                                                                                                                                                                                                                                                                                 |   |                               |   |                                                                                       |                |
| Eleocharis interstincta                                                                                                                                                                                                                                                                                                 |   |                               |   |                                                                                       |                |
| Eleocharis submersed viviparous                                                                                                                                                                                                                                                                                         |   |                               |   |                                                                                       |                |
| <b>*Eriocaulon compressum</b>                                                                                                                                                                                                                                                                                           |   |                               |   |                                                                                       |                |
| <b>*Eriocaulon decangulare</b>                                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| Eupatorium capillifolium                                                                                                                                                                                                                                                                                                | / | /                             | / | /                                                                                     |                |
| SPECIES                                                                                                                                                                                                                                                                                                                 | 2 | 5                             | 8 | 11                                                                                    | Collected? (✓) |
| Fraxinus                                                                                                                                                                                                                                                                                                                |   |                               |   |                                                                                       |                |
| Fuirena scirpoides                                                                                                                                                                                                                                                                                                      | / | /                             | / | /                                                                                     |                |
| Gordonia lasianthus                                                                                                                                                                                                                                                                                                     | / | /                             | / | /                                                                                     |                |
| Habenaria repens                                                                                                                                                                                                                                                                                                        |   |                               |   |                                                                                       |                |
| Hibiscus coccineus                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| Hibiscus grandiflora                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| <b>Hydrilla verticillata</b>                                                                                                                                                                                                                                                                                            |   |                               |   |                                                                                       |                |
| Hydrocotyle sp.                                                                                                                                                                                                                                                                                                         |   |                               |   |                                                                                       |                |
| <b>Hygrophila polysperma</b>                                                                                                                                                                                                                                                                                            |   |                               |   |                                                                                       |                |
| Hymenocallis sp.                                                                                                                                                                                                                                                                                                        |   |                               |   |                                                                                       |                |
| *Hypericum fasciculatum                                                                                                                                                                                                                                                                                                 | / | /                             | / | /                                                                                     |                |
| *Hypericum hypericoides                                                                                                                                                                                                                                                                                                 |   |                               |   |                                                                                       |                |
| *Hypericum myrtifolium                                                                                                                                                                                                                                                                                                  |   |                               |   |                                                                                       |                |
| Ilex cassine                                                                                                                                                                                                                                                                                                            | / | /                             | / | /                                                                                     |                |
| <b>Ipomoea aquatica</b>                                                                                                                                                                                                                                                                                                 |   |                               |   |                                                                                       |                |
| Ipomoea sagittata                                                                                                                                                                                                                                                                                                       |   |                               |   |                                                                                       |                |
| Itea virginica                                                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| Juncus effusus                                                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| *Juncus marginatus                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| *Juncus megacephalus                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| Juncus repens                                                                                                                                                                                                                                                                                                           |   |                               |   |                                                                                       |                |
| *Juncus scirpoides                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| Lachnanthes caroliniana                                                                                                                                                                                                                                                                                                 | / | /                             | / | /                                                                                     |                |
| Leersia hexandra                                                                                                                                                                                                                                                                                                        | / | /                             | / | /                                                                                     |                |
| <b>Landoltia punctata (Spirodela punctata)</b>                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| Lemna sp.                                                                                                                                                                                                                                                                                                               |   |                               |   |                                                                                       |                |
| Leucothoe racemosa (Eubotrys racemosa)                                                                                                                                                                                                                                                                                  |   |                               |   |                                                                                       |                |
| Limnium spongia                                                                                                                                                                                                                                                                                                         |   |                               |   |                                                                                       |                |
| <b>Limnophila sessiliflora</b>                                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| Liquidambar styraciflua                                                                                                                                                                                                                                                                                                 |   |                               |   |                                                                                       |                |
| *Ludwigia arcuata                                                                                                                                                                                                                                                                                                       |   |                               |   |                                                                                       |                |
| *Ludwigia grandiflora                                                                                                                                                                                                                                                                                                   |   |                               |   |                                                                                       |                |
| *Ludwigia hexapetala                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| *Ludwigia leptocarpa                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| Ludwigia (native)                                                                                                                                                                                                                                                                                                       |   |                               |   |                                                                                       |                |
| *Ludwigia octovalvis                                                                                                                                                                                                                                                                                                    |   |                               |   |                                                                                       |                |
| <b>*Ludwigia peruviana</b>                                                                                                                                                                                                                                                                                              |   |                               |   |                                                                                       |                |
| *Ludwigia repens                                                                                                                                                                                                                                                                                                        |   |                               |   |                                                                                       |                |
| Ludwigia suffruticosa                                                                                                                                                                                                                                                                                                   |   |                               |   |                                                                                       |                |
| Luziola fluitans (Hydrochloa carolinensis)                                                                                                                                                                                                                                                                              |   |                               |   |                                                                                       |                |
| Magnolia virginiana                                                                                                                                                                                                                                                                                                     |   |                               |   |                                                                                       |                |
| Mayaca fluviatilis                                                                                                                                                                                                                                                                                                      |   |                               |   |                                                                                       |                |
| <b>Melaleuca quinquenervia</b>                                                                                                                                                                                                                                                                                          |   |                               |   |                                                                                       |                |
| Micranthemum glomeratum                                                                                                                                                                                                                                                                                                 |   |                               |   |                                                                                       |                |
| Micranthemum umbrosum                                                                                                                                                                                                                                                                                                   |   |                               |   |                                                                                       |                |
| Mikania scandens                                                                                                                                                                                                                                                                                                        |   |                               |   |                                                                                       |                |
| <b>Mimosa pigra</b>                                                                                                                                                                                                                                                                                                     |   |                               |   |                                                                                       |                |
| Myrica cerifera                                                                                                                                                                                                                                                                                                         |   |                               |   |                                                                                       |                |

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

Site: *Cawbreaker*Date: *7/16/19*

## SPECIES

Collected?  
(✓)

## SPECIES

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

WBFD: 2905

