

LVI

Site Name Lake Molly Sample Date 10/22/19  
WBID 2690 A WIN ID GZCF 0221 RQ -2019-10-21-60

|                                    | Initial/Date | QC Initial/Date |
|------------------------------------|--------------|-----------------|
| Water chemistry data to LIMS       | LMD 11/7/19  | MKL 11/13/19    |
| Create SBIO station visit 60458    | LMD 11/8/19  | n/a             |
| Vascular Entry (add LIMS ID) 11540 | LMD 11/8/19  | MKL 11/13/19    |
| Lake Observation Sheet Entry       | LMD 11/8/19  | MKL 11/13/19    |
| Authorize SBIO data                | MKL 11/13/19 | n/a             |
| Scan all sheets to 21FLCEN folder  |              | n/a             |
| LIMS/WIN migration                 |              | n/a             |
| File in cabinet                    |              | n/a             |

Comments/notes:



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Lake Molly @ Center

Date: 10/22/2019

(mm/dd/yyyy)

WIN/ Field ID: G2CE0221

WBID: 2680A

Latitude: 29.068786

(Decimal Degrees)

County: Volusia

ORG ID: 21FLCEN

Longitude: -81.300066

(Decimal Degrees)

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

RQ-2019- 10-21-60

| Sampling Team Members |  |  |  |  | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|-----------------------|--|--|--|--|-----------------|-------------------|---------------|--------------|--------------------|
| Mike Linger           |  |  |  |  | /               | /                 | /             | /            | /                  |
| Mike Drennan          |  |  |  |  | /               | /                 | /             | /            | /                  |

  

| Sampling Equipment                                                                  |                                             |                               |  |
|-------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------|--|
| <input checked="" type="checkbox"/> Sample Container                                | <input type="checkbox"/> Van Dorn           | <input type="checkbox"/> Pole |  |
| <input type="checkbox"/> Carboy                                                     | <input checked="" type="checkbox"/> Syringe |                               |  |
| <input type="checkbox"/> Dipper                                                     | <input type="checkbox"/> Other              |                               |  |
| Depth Measured with <u>Secchi Disk Line / Meter</u>                                 |                                             |                               |  |
| Equipment ID <u>Leadfoot</u> <u>Knothead</u> <u>Crusty/Bucket</u> <u>Mucky/Trap</u> |                                             |                               |  |

  

| Collection Method                   |                                                    |  |  |
|-------------------------------------|----------------------------------------------------|--|--|
| <input type="checkbox"/> Wading     | <input checked="" type="checkbox"/> Canoe/Kayak    |  |  |
| <input type="checkbox"/> From Shore | <input checked="" type="checkbox"/> Electric Motor |  |  |
| <input type="checkbox"/> Other      | <input type="checkbox"/> Gasoline Motor            |  |  |

  

| Water Level: <u>Dry/ Pooled/ Low / Normal / High / Flooded</u> |             |                 |                  | Motor ID# <u>Shrimp / Trap</u>                        |             |              |             | Matrix: <u>Fresh</u> Marine / DI              |                    |             |  |                                    |  |  |  |
|----------------------------------------------------------------|-------------|-----------------|------------------|-------------------------------------------------------|-------------|--------------|-------------|-----------------------------------------------|--------------------|-------------|--|------------------------------------|--|--|--|
| Photos: <u>Yes</u> / No                                        |             |                 |                  | Flow: <u>No Flow / Intestinal / Flowing</u> <u>NA</u> |             |              |             | Tide: <u>Rising/ Falling/ Slack</u> <u>NA</u> |                    |             |  | Tide Times: <u>High</u> <u>Low</u> |  |  |  |
| Time Zone                                                      | Time        | Total Depth (m) | Sample Depth (m) | Secchi Disk (m)                                       | DO (mg/L)   | DO (%SAT)    | pH          | Salinity (PPT)                                | Sp COND (umhos/cm) | Temp. (C°)  |  |                                    |  |  |  |
| <u>EST</u>                                                     | <u>1142</u> | <u>6.0</u>      | <u>0.3</u>       | <u>1.4</u>                                            | <u>9.12</u> | <u>114.9</u> | <u>7.97</u> | <u>0.08</u>                                   | <u>178.8</u>       | <u>27.1</u> |  |                                    |  |  |  |
| <u>GEN</u>                                                     |             |                 | <u>5.5</u>       |                                                       | <u>4.52</u> | <u>60.5</u>  | <u>7.23</u> | <u>0.08</u>                                   | <u>178.6</u>       | <u>25.9</u> |  |                                    |  |  |  |

  

|                                                                                                                              |  |                |  |                     |  |               |  |                            |  |                       |  |
|------------------------------------------------------------------------------------------------------------------------------|--|----------------|--|---------------------|--|---------------|--|----------------------------|--|-----------------------|--|
| Biological Samples Collected: <u>None</u> <u>HA</u> <u>SCI</u> <u>RPS</u> <u>Algae ID</u> <u>LVS</u> <u>LVI</u> Other: _____ |  |                |  |                     |  |               |  |                            |  |                       |  |
| SBIO ID Numbers:                                                                                                             |  | SBIO-ID: _____ |  | HA-ID: <u>16369</u> |  | RPS-ID: _____ |  | Macrophyte-ID: <u>1540</u> |  | LIMS#: <u>2130755</u> |  |

  

| Parameter Suite             | Parameter Methods                                                                                                                                                                                                   | Preservation                                                                      | Lot#             | Expiration      | pH Check                               |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------|-----------------|----------------------------------------|
| Preserved Nutrients         | <input checked="" type="checkbox"/> W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP                                                                                                                                     | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H2SO4 | <u>SA7163030</u> | <u>10/30/19</u> | <input checked="" type="checkbox"/> <2 |
| Metals                      | <input type="checkbox"/> W-ICPMS <input type="checkbox"/> W-ICP                                                                                                                                                     | <input type="checkbox"/> Ice <input type="checkbox"/> HNO3                        |                  |                 | <input type="checkbox"/> <2            |
| Filtered Nutrients          | <input checked="" type="checkbox"/> W-PO4-F <input checked="" type="checkbox"/> Field Filtered 0.45 um Filter                                                                                                       | <input checked="" type="checkbox"/> Ice                                           | <u>16930280</u>  |                 |                                        |
| Chlorophyll                 | <input checked="" type="checkbox"/> CHLSUITE-W                                                                                                                                                                      | <input checked="" type="checkbox"/> Ice                                           |                  |                 |                                        |
| Physical/Aggregate (Fresh)  | <input checked="" type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS                                                                                                     | <input checked="" type="checkbox"/> Ice                                           |                  |                 |                                        |
| Physical/Aggregate (Marine) | <input type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY                                                                                                                                                       | <input type="checkbox"/> Ice                                                      |                  |                 |                                        |
| Macroinvertebrates          | <input type="checkbox"/> MI-FW-QLDC                                                                                                                                                                                 | <input type="checkbox"/> Formalin                                                 |                  |                 |                                        |
| Periphyton                  | <input type="checkbox"/> ALGAE-ID                                                                                                                                                                                   | <input type="checkbox"/> Ice                                                      |                  |                 |                                        |
| Microbiology                | <input type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enterococci                                                                                                                | <input type="checkbox"/> Ice                                                      |                  |                 |                                        |
| Molecular                   | <input type="checkbox"/> PCR-FILTER <input type="checkbox"/> PCR-BacR <input type="checkbox"/> PCR-GULL2 <input type="checkbox"/> 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 type="checkbox"/> DTY-QN-C <input type="checkbox"/> PKD-QN-C                                                                                                                                                 | <input type="checkbox"/> Ice                                                      |                  |                 |                                        |

**H2SO4-Recertif**  
LOT# SA7163030  
EXP: 10/30/2019  
(If Available)

Notes:

WIN ID / Field ID →

Lake Molly @ Center



G2CE0221

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

Date: 10/22/19

LIMS EVENT ID: CENT-DIST-2019- 10-22-01

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

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

Scan/Save Field Sheets \_\_\_\_\_  
(Initials/Date)

Migrate Data to WIN: \_\_\_\_\_  
(Initials/Date)

Verify Data In WIN: \_\_\_\_\_  
(Initials/Date)

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

|                                            |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |                                                                                                                                                 |                                                                                    |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----|----|--------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|--------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| STORET STATION NUMBER:<br><i>G2CE0721</i>  | DATE (M/D/Y)<br><i>10/22/19</i>                                                                                                                                                                                                                                                                        | LAKE NAME<br><i>Lake Molly</i>                                                                                                             |                                                                                                                                                 | FIELD ID / NAME:                                                                   |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |
| ECO-REGION:                                | COUNTY:<br><i>Volusia</i>                                                                                                                                                                                                                                                                              | SAMPLING LOCATION/DESCRIPTION:<br><i>P. Center</i>                                                                                         |                                                                                                                                                 | LAKE SIZE:<br><i>Small</i>                                                         |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |
| <b>PARAMETER</b>                           | No surface inflow or outflow present, very long water residence time, groundwater seepage dominates<br><input type="checkbox"/>                                                                                                                                                                        | Surface water inflow present, but flow is rare, moderate to long water residence time<br><input checked="" type="checkbox"/>               | Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time<br><input type="checkbox"/> | Impounded, hydrology of system artificially controlled<br><input type="checkbox"/> |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |
| <b>HYDROLOGY</b>                           |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |                                                                                                                                                 |                                                                                    |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |
| <b>Color</b>                               | Very clear, uncolored water* (benthic sampling appropriate)<br><input type="checkbox"/>                                                                                                                                                                                                                | Water somewhat tannin stained (benthic sampling appropriate)<br><input checked="" type="checkbox"/>                                        | Dark, discolored water (water color 20 PCU or higher)<br><input type="checkbox"/>                                                               | Visibility extremely reduced due to high color<br><input type="checkbox"/>         |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |
|                                            | <b>Optimal</b>                                                                                                                                                                                                                                                                                         | <b>Suboptimal</b>                                                                                                                          |                                                                                                                                                 |                                                                                    |    |    | <b>Marginal</b>                                                                                              |     |     |     |     | <b>Poor</b>                                                                                                                                |     |     |     |     |     |     |     |     |     |
| <b>Secchi</b>                              | Secchi >3 m<br>Or VOB                                                                                                                                                                                                                                                                                  | 20                                                                                                                                         | 19                                                                                                                                              | 18                                                                                 | 17 | 16 | 3                                                                                                            | 2.6 | 2.2 | 1.8 | 1.4 | 1.0                                                                                                                                        | 0.9 | 0.8 | 0.7 | 0.6 | 0.5 | 0.4 | 0.3 | 0.2 | 0.1 |
|                                            |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |                                                                                                                                                 |                                                                                    |    |    | 15                                                                                                           | 14  | 13  | 12  | 11  | 10                                                                                                                                         | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   |
| <b>Vegetation Quality</b>                  | Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa<br><i>9</i>                                                                                                                                                                                                    | 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       |     |     |     |     | Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed) |     |     |     |     |     |     |     |     |     |
|                                            |                                                                                                                                                                                                                                                                                                        | 20                                                                                                                                         | 19                                                                                                                                              | 18                                                                                 | 17 | 16 | 15                                                                                                           | 14  | 13  | 12  | 11  | 10                                                                                                                                         | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   |
| <b>Stormwater Inputs</b>                   | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation<br><i>6</i>                                                                                                                                                                                                      | Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place                                         |                                                                                                                                                 |                                                                                    |    |    | Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place   |     |     |     |     | Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place                          |     |     |     |     |     |     |     |     |     |
|                                            |                                                                                                                                                                                                                                                                                                        | 20                                                                                                                                         | 19                                                                                                                                              | 18                                                                                 | 17 | 16 | 15                                                                                                           | 14  | 13  | 12  | 11  | 10                                                                                                                                         | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   |
| <b>Bottom Substrate Quality</b>            | Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present<br><i>8</i>                                                                                                                                                                                                 | 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 |     |     |     |     | Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom           |     |     |     |     |     |     |     |     |     |
|                                            |                                                                                                                                                                                                                                                                                                        | 20                                                                                                                                         | 19                                                                                                                                              | 18                                                                                 | 17 | 16 | 15                                                                                                           | 14  | 13  | 12  | 11  | 10                                                                                                                                         | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   |
| <b>Lakeside Adverse Human Alternations</b> | Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)<br><i>7</i>                                                                                                                                                                                                          | Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected                                                       |                                                                                                                                                 |                                                                                    |    |    | Many structures, roads or other human disturbance visible (50%-70%) lakeside affected                        |     |     |     |     | Highly developed or disturbed (>70% of lakeside affected)                                                                                  |     |     |     |     |     |     |     |     |     |
|                                            |                                                                                                                                                                                                                                                                                                        | 20                                                                                                                                         | 19                                                                                                                                              | 18                                                                                 | 17 | 16 | 15                                                                                                           | 14  | 13  | 12  | 11  | 10                                                                                                                                         | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   |
| <b>Upland Buffer Zone</b>                  | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer<br><i>6</i>                                                                                                                                                                                  | 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   |
| <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><i>11</i> |                                                                                                                                            |                                                                                                                                                 |                                                                                    |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |
|                                            |                                                                                                                                                                                                                                                                                                        | 20                                                                                                                                         | 19                                                                                                                                              | 18                                                                                 | 17 | 16 | 15                                                                                                           | 14  | 13  | 12  | 11  | 10                                                                                                                                         | 9   | 8   | 7   | 6   | 5   | 4   | 3   | 2   | 1   |
| <b>TOTAL SCORE</b>                         | <i>58</i>                                                                                                                                                                                                                                                                                              | <b>COMMENTS:</b>                                                                                                                           |                                                                                                                                                 |                                                                                    |    |    |                                                                                                              |     |     |     |     |                                                                                                                                            |     |     |     |     |     |     |     |     |     |

|                                   |                                |                                  |
|-----------------------------------|--------------------------------|----------------------------------|
| ANALYSIS DATE:<br><i>10/22/19</i> | ANALYST:<br><i>Mike Linger</i> | SIGNATURE:<br><i>[Signature]</i> |
|-----------------------------------|--------------------------------|----------------------------------|

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

SAMPLE ID: \_\_\_\_\_ MACROPHYTE ID: \_\_\_\_\_ LATITUDE: 28.068786  
COUNTY: Volusia STORET #: G2CE0221 LONGITUDE: -81.300066  
DATE: 10/22/19 TIME: 1142 SAMPLING AGENCY: FDEP CE-ROC  
SITE NAME: Lake Molly Q Center WBID: 2680 A  
FIELD ID/NAME: \_\_\_\_\_ LAKE SIZE: small RQ: 2019-10-21-60

## WATERSHED / LAKESIDE FEATURES

| PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) :                                                                            |              |                                                                                                           |              |             |                                                                                                    |            |                 |                                                                                                            |    | LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)                                             |                                                                                                                   |    |   |   |   |   |   |   |   |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------|--------------|-------------|----------------------------------------------------------------------------------------------------|------------|-----------------|------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|----|---|---|---|---|---|---|---|---|---|
| Forest/Natural                                                                                                                                                        | Silviculture | Field/Pasture                                                                                             | Agricultural | Residential | Commercial                                                                                         | Industrial | Other (Specify) |                                                                                                            |    |                                                                                            |                                                                                                                   |    |   |   |   |   |   |   |   |   |   |
| <u>15</u>                                                                                                                                                             |              |                                                                                                           |              | <u>75</u>   | <u>10</u>                                                                                          |            |                 |                                                                                                            |    |                                                                                            |                                                                                                                   |    |   |   |   |   |   |   |   |   |   |
| Local Watershed Erosion (select one) : <input type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |              |                                                                                                           |              |             |                                                                                                    |            |                 |                                                                                                            |    | Artificially Impounded <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No |                                                                                                                   |    |   |   |   |   |   |   |   |   |   |
| Local Watershed NPS Pollution : <input type="checkbox"/> No evidence <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |              |                                                                                                           |              |             |                                                                                                    |            |                 |                                                                                                            |    | Land Use Source & Year:                                                                    |                                                                                                                   |    |   |   |   |   |   |   |   |   |   |
| STORMWATER INPUTS                                                                                                                                                     |              | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation                     |              |             | Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place |            |                 | Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place |    |                                                                                            | Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place |    |   |   |   |   |   |   |   |   |   |
| <u>6</u>                                                                                                                                                              |              | 20                                                                                                        | 19           | 18          | 17                                                                                                 | 16         | 15              | 14                                                                                                         | 13 | 12                                                                                         | 11                                                                                                                | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| LAKESIDE ALTERATIONS                                                                                                                                                  |              | Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected)       |              |             | Moderate disturbance visible - structures, roads or other (10%-49% lakeside affected)              |            |                 | Many structures, roads or other human disturbance visible (50%-70% lakeside affected)                      |    |                                                                                            | Highly developed or disturbed (>70% of lakeside affected)                                                         |    |   |   |   |   |   |   |   |   |   |
| <u>7</u>                                                                                                                                                              |              | 20                                                                                                        | 19           | 18          | 17                                                                                                 | 16         | 15              | 14                                                                                                         | 13 | 12                                                                                         | 11                                                                                                                | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| BUFFER ZONE                                                                                                                                                           |              | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer |              |             | 89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer                               |            |                 | 50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer                                    |    |                                                                                            | < 29% of shoreline with >18m buffer                                                                               |    |   |   |   |   |   |   |   |   |   |
| <u>6</u>                                                                                                                                                              |              | 20                                                                                                        | 19           | 18          | 17                                                                                                 | 16         | 15              | 14                                                                                                         | 13 | 12                                                                                         | 11                                                                                                                | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

## WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |                              |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|------------------------------|--|--|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|
| <b>Water:</b><br>Nutrient Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Preserved? <input type="checkbox"/> Yes <input type="checkbox"/> No pH<2 <input type="checkbox"/> No<br>Color Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Lot # _____ Exp. Date: _____<br>Alkalinity Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Water Level <input type="checkbox"/> Low <input checked="" type="checkbox"/> Normal <input type="checkbox"/> High |  |  |  |  |  |  |  | <b>Water Odors:</b> <input checked="" type="checkbox"/> Normal<br><input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum <input type="checkbox"/> Other _____                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |                              |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |
| <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>27.1</u> <u>7.97</u> <u>9.12</u> <u>114.9</u> <u>178.8</u> <u>0.08</u><br>Mid-Depth: _____<br>Bottom: <u>5.5</u> <u>25.9</u> <u>7.23</u> <u>4.52</u> <u>60.5</u> <u>178.6</u> <u>0.08</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 _____                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |  |                              |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |
| <b>Meter ID:</b> <u>Shrimp Trap</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |  | <b>Clarity:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Opaque <input type="checkbox"/> Turbid <input type="checkbox"/> Slightly Turbid<br><b>Color:</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Tannic <input type="checkbox"/> Green                                                                                                                                                                                                                                                                                                  |  |  |  |                              |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |
| <b>Sediment Type:</b> (may check more than one)<br><input checked="" type="checkbox"/> Sandy <input checked="" 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>SECCHI (M)</b> <u>1.4</u> <b>Total Station Depth (M)</b> <u>6.0</u><br><b>VOB</b> <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |                              |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |
| <b>Sediment Odors:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Anaerobic <input type="checkbox"/> Other (Specify): _____                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  | <b>Biological Communities:</b><br>LVI Conducted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Phytoplankton Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot #: _____ Exp Date: _____<br>Algal Bloom/Algal ID Sample Taken? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/><br>Active Vegetation Mgmt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Don't Know |  |  |  |                              |  |  |  | <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 type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Submersed Plants <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Exotic Apple Snails <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |  |  |  |  |  |  |  |
| <b>Additional Notes:</b><br><u>80's</u><br>↓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |                              |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |
| <b>Weather Conditions :</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |                              |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |
| <b>SAMPLING TEAM:</b> <u>Mike Linger / Mike Drennan</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |  |  |  | <b>SIGNATURE:</b> <u>Mike Linger</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  | <b>DATE:</b> <u>10/22/19</u> |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |

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

|                                                                                                                                                            |                               |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-----------------------------------------------------------------------------------------|
| Waterbody: <u>Lake Molly</u>                                                                                                                               | County: <u>Volusia</u>        | Date: <u>8/22/19</u>                                                                    |
| Analyst: <u>Mike Lingel, Mike Drennon</u>                                                                                                                  | Signature: <u>[Signature]</u> | STORET: <u>62CE0221</u>                                                                 |
| Except where noted as "sp." species level identification required. *Genera that may require lab verification*<br>Plants in bold = FLEPPC invasive exotic.  |                               | Lake units sampled (circle one group):<br><u>1, 4, 7, 10</u> 2, 5, 8, 11<br>3, 6, 9, 12 |
| It is important to note dominant or co-dominant taxa (by areal extent) for each unit. Use "D" to denote dominant taxon, or "C" for the 2 co-dominant taxa. |                               |                                                                                         |

| SPECIES                                  | 1 | 4 | 7 | 10 | Collected? (✓) | SPECIES                                        | 1 | 4 | 7 | 10 | Collected? (✓) |
|------------------------------------------|---|---|---|----|----------------|------------------------------------------------|---|---|---|----|----------------|
| Acer rubrum                              | / | / | / | /  |                | Fraxinus                                       |   |   |   |    |                |
| <b>Alternanthera philoxeroides</b>       | / | / | / | /  |                | Fuirena scirpoides                             |   |   | / |    |                |
| Amaranthus australis                     |   |   |   |    |                | Gordonia lasianthus                            |   |   |   |    |                |
| Andropogon sp.                           |   |   |   |    |                | Habenaria repens                               |   |   |   |    |                |
| Azolla filiculoides (A. caroliniana)     |   |   |   |    |                | Hibiscus coccineus                             |   |   |   |    |                |
| Baccharis sp.                            |   |   |   |    |                | Hibiscus grandiflora                           |   |   |   |    |                |
| Bacopa caroliniana                       |   |   |   |    |                | <b>Hydrilla verticillata</b>                   |   |   |   |    |                |
| Bacopa monnieri                          |   |   |   |    |                | Hydrocotyle sp.                                |   |   | / |    |                |
| Bidens alba                              |   |   |   |    |                | <b>Hygrophila polysperma</b>                   |   |   |   |    |                |
| Bidens laevis                            |   |   |   |    |                | Hymenocallis sp.                               |   |   | / |    |                |
| Bidens mitis                             |   |   |   |    |                | *Hypericum fasciculatum                        |   |   | / |    |                |
| Blechnum serrulatum                      |   |   |   |    |                | *Hypericum hypericoides                        |   |   |   |    |                |
| Boehmeria cylindrica                     |   |   |   |    |                | *Hypericum myrtifolium                         |   |   |   |    |                |
| Brasenia schreberi                       |   |   |   |    |                | Ilex cassine                                   |   | / |   |    |                |
| <b>Cabomba caroliniana</b>               |   |   |   |    |                | <b>Ipomoea aquatica</b>                        |   |   |   |    |                |
| Canna                                    |   |   |   |    |                | Ipomoea sagittata                              |   |   |   |    |                |
| Centella asiatica                        |   |   |   |    |                | Itea virginica                                 |   |   |   |    |                |
| Cephalanthus occidentalis                |   |   |   |    |                | Juncus effusus                                 |   |   |   |    |                |
| Ceratophyllum demersum                   |   |   |   |    |                | *Juncus marginatus                             |   |   |   |    |                |
| Chara sp.                                | / | / | / | /  |                | *Juncus megacephalus                           |   |   |   |    |                |
| Cicuta maculata                          |   |   |   |    |                | Juncus repens                                  |   |   |   |    |                |
| Cinnamomum camphora                      | / | / | / | /  |                | *Juncus scirpoides                             |   |   |   |    |                |
| Cladium jamaicense                       |   |   |   |    |                | Lachnanthes caroliniana                        |   |   |   |    |                |
| <b>Colocasia esculenta</b>               | / | / | / | /  |                | <b>Leersia hexandra</b>                        | / | / | / | /  |                |
| *Commelina                               |   |   |   |    |                | <b>Landoltia punctata (Spirodela punctata)</b> |   |   |   |    |                |
| Crinum americanum                        |   |   |   |    |                | Lemna sp.                                      |   |   |   |    |                |
| *Cyperus alternifolius (C. involucratus) |   |   |   |    |                | Leucothoe racemosa (Eubotrys racemosa)         |   |   |   |    |                |
| Cyperus articulatus                      |   |   |   |    |                | Limnobiium spongia                             |   |   |   |    |                |
| Cyperus haspan                           |   |   |   |    |                | <b>Limnophila sessiliflora</b>                 |   |   |   |    |                |
| *Cyperus lecontei                        |   |   | / | /  |                | Liquidamber styraciflua                        |   |   |   |    |                |
| *Cyperus polystachyos                    |   |   |   |    |                | *Ludwigia arcuata                              |   |   |   |    |                |
| *Cyperus odoratus                        | / | / | / | /  |                | *Ludwigia grandiflora                          |   |   |   |    |                |
| *Cyperus surinamensis                    |   |   |   |    |                | *Ludwigia hexapetala                           |   |   |   |    |                |
| Cyrtilla racemiflora                     |   |   |   |    |                | *Ludwigia leptocarpa                           |   |   |   |    |                |
| Decodon verticillatus                    |   |   |   |    |                | Ludwigia (native)                              |   |   |   |    |                |
| Diodia virginiana                        |   |   |   |    |                | *Ludwigia octovalvis                           | / | / | / | /  |                |
| *Echinochloa crus-galli                  |   |   |   |    |                | *Ludwigia peruviana                            | / | / | / | /  |                |
| *Echinochloa muricatum                   |   |   |   |    |                | *Ludwigia repens                               |   |   |   |    |                |
| Echinochloa walteri                      |   |   |   |    |                | Ludwigia suffruticosa                          | / | / | / | /  |                |
| Eclipta prostrata (E. alba)              |   |   |   |    |                | Luziola fluitans (Hydrochloa carolinensis)     |   |   |   |    |                |
| <b>Eichhornia crassipes</b>              |   |   |   |    |                | Magnolia virginiana                            |   | / | / | /  |                |
| *Eleocharis <u>baldwinii</u>             | / | / | / | /  |                | Mayaca fluviatilis                             |   |   |   |    |                |
| Eleocharis cellulosa                     |   |   |   |    |                | <b>Melaleuca quinquenervia</b>                 |   |   |   |    |                |
| *Eleocharis elongata                     |   |   |   |    |                | Micranthemum glomeratum                        |   |   |   |    |                |
| Eleocharis equisetoides                  |   |   |   |    |                | Micranthemum umbrosum                          | / | / | / | /  |                |
| Eleocharis interstincta                  |   |   |   |    |                | Mikania scandens                               |   |   |   |    |                |
| Eleocharis submersed viviparous          |   |   |   |    |                | <b>Mimosa pigra</b>                            |   |   |   |    |                |
| *Eriocaulon compressum                   |   |   |   |    |                | Myrica cerifera                                | / | / | / | /  |                |
| *Eriocaulon decangulare                  |   |   |   |    |                |                                                |   |   |   |    |                |
| Eupatorium capillifolium                 | / | / | / | /  |                |                                                |   |   |   |    |                |

Eleocharis viv.

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

| Site: <u>Lake Molly</u>                        |   |   |   |    | Date: <u>10/22/19</u> |                                                    |   |   |   |    |                   |
|------------------------------------------------|---|---|---|----|-----------------------|----------------------------------------------------|---|---|---|----|-------------------|
| SPECIES                                        | 1 | 4 | 7 | 10 | Collected?<br>(✓)     | SPECIES                                            | 1 | 4 | 7 | 10 | Collected?<br>(✓) |
| <b>Myriophyllum aquaticum</b>                  |   |   |   |    |                       | Salix caroliniana                                  |   |   |   |    |                   |
| *Myriophyllum heterophyllum                    |   |   |   |    |                       | <b>Salvinia minima</b>                             |   |   |   |    |                   |
| *Myriophyllum laxum                            |   |   |   |    |                       | Sambucus canadensis                                |   |   |   |    |                   |
| *Myriophyllum pinnatum                         |   |   |   |    |                       | <b>Sapium sebiferum</b>                            |   |   |   |    |                   |
| <b>Myriophyllum spicatum</b>                   |   |   |   |    |                       | Saururus cernuus                                   |   |   |   |    |                   |
| *Najas filifolia                               |   |   |   |    |                       | <b>Schinus terebinthifolius</b>                    |   |   |   |    |                   |
| *Najas guadalupensis                           |   |   |   |    |                       | *Schoenoplectus californicus                       |   |   |   |    |                   |
| *Najas minor                                   |   |   |   |    |                       | *Schoenoplectus pungens                            |   |   |   |    |                   |
| Nelumbo lutea                                  |   |   |   |    |                       | *Schoenoplectus tabernaemontani (Scirpus validus)  |   |   |   |    |                   |
| Nitella spp.                                   |   |   |   |    |                       | Scirpus cubensis (Oxycaryon cubense)               |   |   |   |    |                   |
| Nuphar sp.                                     | / | / | / | /  |                       | Scirpus cyperinus                                  |   |   |   |    |                   |
| Nymphaea mexicana                              |   |   |   |    |                       | *Sesbania                                          |   |   |   |    |                   |
| Nymphaea odorata                               | / | / | / | /  |                       | Solidago sp.                                       |   |   |   |    |                   |
| Nymphoides aquatica                            |   |   |   |    |                       | Sparganium americanum                              |   |   |   |    |                   |
| Nyssa sylvatica var. biflora                   |   |   |   |    |                       | Spartina bakeri                                    |   |   |   |    |                   |
| Orontium aquaticum                             |   |   |   |    |                       | Spirodela polyrhiza                                |   |   |   |    |                   |
| Osmunda cinnamomea                             |   |   |   |    |                       | Taxodium sp.                                       | / |   |   |    |                   |
| Osmunda regalis                                |   |   |   |    |                       | Thalia geniculata                                  |   |   |   |    |                   |
| Panicum hemitomon                              | / | / | / | /  |                       | Thelypteris interrupta                             |   |   |   |    |                   |
| <b>Panicum repens</b>                          | / | / | / | /  |                       | Thelypteris palustris                              |   |   |   |    |                   |
| Paspalidium geminatum                          |   |   |   |    |                       | Triadenum virginicum                               |   |   |   |    |                   |
| *Paspalum repens                               |   |   |   |    |                       | Typha sp.                                          | / |   |   |    |                   |
| Paspalum urvillei                              |   |   |   |    |                       | <b>Urochloa mutica (Brachiaria mutica)</b>         |   |   |   |    |                   |
| Peltandra sp.                                  |   |   |   |    |                       | *Utricularia gibba (U. biflora)                    | / | / | / | /  |                   |
| Persea sp.                                     |   |   |   |    |                       | *Utricularia foliosa                               |   |   |   |    |                   |
| <b>Pennisetum purpureum</b>                    |   |   |   |    |                       | *Utricularia inflata                               |   |   |   |    |                   |
| Phragmites australis                           |   |   |   |    |                       | *Utricularia purpurea                              |   |   |   |    |                   |
| Pinus elliottii                                | / |   |   |    |                       | *Utricularia radiata                               |   |   |   |    |                   |
| <b>Pistia stratioides</b>                      |   |   |   |    |                       | *Utricularia resupinata                            |   |   |   |    |                   |
| Pluchea sp.                                    |   |   |   |    |                       | Vallisneria americana                              |   |   |   |    |                   |
| *Polygonum glabrum (densiflorum)               |   |   |   |    |                       | Vitis sp.                                          | / | / | / | /  |                   |
| Polygonum hirsutum                             |   |   |   |    |                       | *Websteria confervoides                            |   |   |   |    |                   |
| *Polygonum hydropiperoides                     |   |   |   |    |                       | <b>Wedelia trilobata (Sphagneticola trilobata)</b> |   |   |   |    |                   |
| *Polygonum punctatum                           |   |   |   |    |                       | Wolffiella spp.                                    |   |   |   |    |                   |
| *Polygonum                                     |   |   |   |    |                       | Woodwardia virginica                               |   |   |   |    |                   |
| Pontederia cordata                             |   |   |   |    |                       | Xyris sp.                                          | / |   |   |    |                   |
| *Potamogeton diversifolius                     |   |   |   |    |                       | Zizania aquatica                                   |   |   |   |    |                   |
| *Potamogeton illinoensis                       |   |   |   |    |                       | Zizaniopsis milacea                                |   |   |   |    |                   |
| *Potamogeton pusillus                          |   |   |   |    |                       | <i>Maroon flower (Macrotidium lathyroides)</i>     | / | / | / | /  |                   |
| *Potamogeton pectinatus (Stuckenia pectinatus) |   |   |   |    |                       | <i>Urena lobata</i>                                | / | / | / | /  |                   |
| Proserpinaca pectinata                         |   |   |   |    |                       | <i>Rhynchospora J. megacephalus</i>                |   |   |   |    |                   |
| *Rhexia <u>nashii</u>                          | / |   |   |    |                       |                                                    |   |   |   |    |                   |
| *Rhynchospora corniculata                      |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| *Rhynchospora inundata                         |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| Rhynchospora nitens                            |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| Ricciocarpus natans                            |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| Sabal palmetto                                 |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| Sacciolepis striata                            | / | / | / | /  |                       |                                                    |   |   |   |    |                   |
| *Sagittaria filiformis                         |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| *Sagittaria graminea                           |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| *Sagittaria isoetiformis                       |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| Sagittaria lancifolia                          |   |   |   |    |                       |                                                    |   |   |   |    |                   |
| Sagittaria latifolia                           |   |   |   |    |                       |                                                    |   |   |   |    |                   |

Site: 29.068786  
-81.300066

G2

open property @

29.067789, -81.298673  
1884 N. Palmetto Dr,  
Deland (Carol + Rick)

## LVI Map for Lake Molly, WBID 2680A

