



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Major Lake Center

Date: 05/30/2019  
(mm/dd/yyyy)

WIN/ Field ID: G3TLHR0011

WBID: 526B

Latitude: 30.4982

County: Washington

ORG ID: 21FLTLHR

Longitude: 85.7144  
(Decimal Degrees)

Receiving Body of Water: NA

RQ- 2019-05-13/65  
(Decimal Degrees)

| Sampling Team Members |  |  |  |  | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|-----------------------|--|--|--|--|-----------------|-------------------|---------------|--------------|--------------------|
| J. Burckhardt         |  |  |  |  |                 |                   |               |              |                    |
| J. Woods              |  |  |  |  |                 |                   |               |              |                    |

| 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 \_\_\_\_\_  
Equipment ID \_\_\_\_\_

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

Water Level: Dry/ Pooled/ Low / 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 (PPT) | Sp COND (µmhos/cm) | Temp. (C°) |
|-----------|------|-----------------|------------------|-----------------|-----------|-----------|------|----------------|--------------------|------------|
| EST       | 1215 | 7.2             | 0.3              | 4.8             | 7.28      | 98.3      | 5.66 | 0.01           | 15.7               | 31.1       |
| CEN       | 1218 |                 | 6.7              |                 | 2.10      | 225       | 5.38 | 0.01           | 18.0               | 18.9       |

Biological Samples Collected: None      HA      SCI      RPS      Algae ID      LVS      LVI      Other:

SBIO ID Numbers:      SBIO-ID:      HA-ID:      RPS-ID:      Macrophyte-ID:      LIMS#:

| 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 | 9010030 |            | <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 µm Filter                                                                                                          | <input checked="" type="checkbox"/> Ice                                           |         |            |                                        |
| Chlorophyll                 | <input checked="" type="checkbox"/> CHLSUITE-W                                                                                                                                                                         | <input checked="" type="checkbox"/> Ice                                           |         |            |                                        |
| Physical/Aggregate (Fresh)  | <input type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS                                                                                                                   | <input checked="" type="checkbox"/> Ice                                           |         |            |                                        |
| Physical/Aggregate (Marine) | <input type="checkbox"/> Alkalinity / W-BR-IC / 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<br><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<br><input type="checkbox"/> W-PCL-SQ-R <input type="checkbox"/> WE8321-MS <input type="checkbox"/> W-CARB-AA | <input type="checkbox"/> Ice                                                      |         |            |                                        |
| Phytoplankton               | <input type="checkbox"/> DTY-QN-C <input type="checkbox"/> PKD-QN-C                                                                                                                                                    | <input type="checkbox"/> Ice                                                      |         |            |                                        |

Notes: \_\_\_\_\_

Field/WIN ID → G3TLHR0011

Location ↓ MAJOR LAKE CENTER

Signature: [Signature]      Date: 05/30/19

LIMS EVENT ID: \_\_\_\_\_      WIN Import ID: \_\_\_\_\_

Enter Field Parameters, Verify Station ID in LIMS DMT: \_\_\_\_\_      QC Station ID, Field Parameters in LIMS DMT: \_\_\_\_\_

Scan/Save Field Sheets \_\_\_\_\_      Migrate Data to WIN: \_\_\_\_\_      Verify Data in WIN: \_\_\_\_\_

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

**SAMPLE ID:** \_\_\_\_\_ **MACROPHYTE ID:** \_\_\_\_\_ **LATITUDE:** \_\_\_\_\_  
**COUNTY:** Washington **STORET #:** G3TLHRC01 **LONGITUDE:** \_\_\_\_\_  
**DATE:** 05/30/19 **TIME:** 1215 **SAMPLING AGENCY:** 8034  
**SITE NAME:** Major Lake **WBID:** 526B  
**FIELD ID/NAME:** G3TLHRC011 **LAKE SIZE:** \_\_\_\_\_ **RQ:** 2019-05-13-63

## 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>70</u>                                                                                                                                                                       | <u>10</u>    |                                                                                                           |              | <u>20</u>   |                                                                                                    |            |                 |                                                                                                            |    |                                                                                            |                                                                                                                   |    |   |   |   |   |   |   |   |   |   |
| Local Watershed Erosion (select one): <input checked="" 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 checked="" 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>18</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>17</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>15</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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No pH<2 <input type="checkbox"/> No<br>Color Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Lot # <u>940030</u> 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>31.1</u> <u>5.66</u> <u>7.24</u> <u>98.3</u> <u>15.7</u> <u>0.01</u><br>Mid-Depth: _____<br>Bottom: <u>6.7</u> <u>16.9</u> <u>5.38</u> <u>2.10</u> <u>22.5</u> <u>18.0</u> <u>0.01</u>                                                                                                                                                                                                                                                     |  |  |  |  |  |  |  |  |  | <b>Water Surface Oils:</b> <input checked="" type="checkbox"/> None<br><input type="checkbox"/> Sheen/Slack <input type="checkbox"/> Glob <input type="checkbox"/> Other _____                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |  |  |  |
| <b>Sediment Type:</b> (may check more than one)<br><input checked="" type="checkbox"/> Sandy <input type="checkbox"/> Organic fibrous (peaty, CPOM) <input type="checkbox"/> Vegetated<br><input type="checkbox"/> Sand/Silt <input type="checkbox"/> Organic smooth (muck) <input type="checkbox"/> Other (Specify): _____                                                                                                                                                                                                                                                      |  |  |  |  |  |  |  |  |  | <b>Sediment Odors:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Other (Specify): _____<br><input type="checkbox"/> Anaerobic                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |  |  |  |  |  |  |  |
| <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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot #: _____ Exp Date: _____<br>Algal Bloom/Algal ID Sample Taken? Yes No<br>Active Vegetation Mgmt? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know                                                            |  |  |  |  |  |  |  |  |  | <b>Abundance:</b><br>Absent Rare Common Abundant<br>Periphyton <input type="checkbox"/> <input type="checkbox"/> <input 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 checked="" type="checkbox"/> <input type="checkbox"/><br>Exotic Apple Snails <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |  |  |  |  |  |  |  |  |  |
| <b>Weather Conditions:</b><br><u>Clear</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |  |  |  |  |  |  |  | <b>Additional Notes:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |  |  |  |  |  |  |  |
| <b>SAMPLING TEAM:</b> <u>J. Burtchett, J. Woods</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  |  |  |  |  |  |  |  | <b>SIGNATURE:</b> <u>[Signature]</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |  |  |  |  |  |  |
| <b>DATE:</b> <u>05</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |  |  |  |  |  |  |  |  |

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

| Waterbody: <u>Majes Lake</u>                                                                                                                               |   | County: <u>Washington</u>     |   | Date: <u>5/30/19</u>                                                                       |                |                                                |  |  |  |  |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-------------------------------|---|--------------------------------------------------------------------------------------------|----------------|------------------------------------------------|--|--|--|--|----------------|
| Analyst: <u>Jon Wards</u>                                                                                                                                  |   | Signature: <u>[Signature]</u> |   | STORET:                                                                                    |                |                                                |  |  |  |  |                |
| Except where noted as "sp." species level identification required. *Genera that may require lab verification*<br>Plants in bold = FLEPPC invasive exotic.  |   |                               |   | Lake units sampled (circle one group):<br>1, 4, 7, 10    2, 5, 8, 11<br><u>3, 6, 9, 12</u> |                |                                                |  |  |  |  |                |
| 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                                                                                                                                                    | 9 | 12                            | 3 | 6                                                                                          | Collected? (✓) | SPECIES                                        |  |  |  |  | Collected? (✓) |
| Acer rubrum                                                                                                                                                |   |                               |   |                                                                                            |                | Habenaria repens                               |  |  |  |  |                |
| <b>Alternanthera philoxeroides</b>                                                                                                                         |   |                               |   |                                                                                            |                | <b>Hydrilla verticillata</b>                   |  |  |  |  |                |
| Andropogon sp.                                                                                                                                             |   |                               |   |                                                                                            |                | Hydrocotyle sp.                                |  |  |  |  |                |
| Azolla filiculoides (A. caroliniana)                                                                                                                       |   |                               |   |                                                                                            |                | <b>Hygrophila polysperma</b>                   |  |  |  |  |                |
| Baccharis sp.                                                                                                                                              |   |                               |   |                                                                                            |                | *Hypericum fasciculatum                        |  |  |  |  |                |
| Bacopa caroliniana                                                                                                                                         |   |                               |   |                                                                                            |                | *Hypericum hypericoides                        |  |  |  |  |                |
| Bacopa monnieri                                                                                                                                            |   |                               |   |                                                                                            |                | *Hypericum myrtifolium                         |  |  |  |  |                |
| Bidens laevis                                                                                                                                              |   |                               |   |                                                                                            |                | Ilex cassine                                   |  |  |  |  |                |
| Bidens mitis                                                                                                                                               |   |                               |   |                                                                                            |                | <b>Ipomoea aquatica</b>                        |  |  |  |  |                |
| Blechnum serrulatum                                                                                                                                        |   |                               |   |                                                                                            |                | Ipomoea sagittata                              |  |  |  |  |                |
| Boehmeria cylindrica                                                                                                                                       |   |                               |   |                                                                                            |                | Itea virginica                                 |  |  |  |  |                |
| Brasenia schreberi                                                                                                                                         |   |                               |   |                                                                                            |                | Juncus effusus                                 |  |  |  |  |                |
| Cabomba caroliniana                                                                                                                                        |   |                               |   |                                                                                            |                | *Juncus marginatus                             |  |  |  |  |                |
| <b>Casuarina equisetifolia</b>                                                                                                                             |   |                               |   |                                                                                            |                | *Juncus megacephalus                           |  |  |  |  |                |
| Centella asiatica                                                                                                                                          |   |                               |   |                                                                                            |                | Juncus repens                                  |  |  |  |  |                |
| Cephalanthus occidentalis                                                                                                                                  |   |                               |   |                                                                                            |                | *Juncus scirpoides                             |  |  |  |  |                |
| Ceratophyllum demersum                                                                                                                                     |   |                               |   |                                                                                            |                | Lachnanthes caroliniana                        |  |  |  |  |                |
| Chara sp.                                                                                                                                                  |   |                               |   |                                                                                            |                | Leersia hexandra                               |  |  |  |  |                |
| Cladium jamaicense                                                                                                                                         |   |                               |   |                                                                                            |                | <b>Landoltia punctata (Spirodela punctata)</b> |  |  |  |  |                |
| Cliftonia monophylla                                                                                                                                       |   |                               |   |                                                                                            |                | Lemna sp.                                      |  |  |  |  |                |
| <b>Colocasia esculenta</b>                                                                                                                                 |   |                               |   |                                                                                            |                | Leucothoe racemosa (Eubotrys racemosa)         |  |  |  |  |                |
| *Commelina                                                                                                                                                 |   |                               |   |                                                                                            |                | Limnium spongia                                |  |  |  |  |                |
| Crinum americanum                                                                                                                                          |   |                               |   |                                                                                            |                | <b>Limnophila sessiliflora</b>                 |  |  |  |  |                |
| *Cyperus alternifolius (C. involucratus)                                                                                                                   |   |                               |   |                                                                                            |                | Liquidambar styraciflua                        |  |  |  |  |                |
| Cyperus articulatus                                                                                                                                        |   |                               |   |                                                                                            |                | *Ludwigia arcuata                              |  |  |  |  |                |
| Cyperus haspan                                                                                                                                             |   |                               |   |                                                                                            |                | *Ludwigia leptocarpa                           |  |  |  |  |                |
| *Cyperus lecontei                                                                                                                                          |   |                               |   |                                                                                            |                | *Ludwigia linearis                             |  |  |  |  |                |
| *Cyperus polystachyos                                                                                                                                      |   |                               |   |                                                                                            |                | *Ludwigia octovalvis                           |  |  |  |  |                |
| *Cyperus odoratus                                                                                                                                          |   |                               |   |                                                                                            |                | *Ludwigia peruviana                            |  |  |  |  |                |
| *Cyperus surinamensis                                                                                                                                      |   |                               |   |                                                                                            |                | *Ludwigia repens                               |  |  |  |  |                |
| Cyrtilla racemiflora                                                                                                                                       |   |                               |   |                                                                                            |                | *Ludwigia                                      |  |  |  |  |                |
| Decodon verticillatus                                                                                                                                      |   |                               |   |                                                                                            |                | Luziola fluitans (Hydrochloa carolinensis)     |  |  |  |  |                |
| Diodia virginiana                                                                                                                                          |   |                               |   |                                                                                            |                | Lyonia lucida                                  |  |  |  |  |                |
| *Echinochloa crus-galli                                                                                                                                    |   |                               |   |                                                                                            |                | Magnolia virginiana                            |  |  |  |  |                |
| *Echinochloa muricatum                                                                                                                                     |   |                               |   |                                                                                            |                | Mayaca fluviatilis                             |  |  |  |  |                |
| Echinochloa walteri                                                                                                                                        |   |                               |   |                                                                                            |                | <b>Melaleuca quinquenervia</b>                 |  |  |  |  |                |
| Eclipta prostrata (E. alba)                                                                                                                                |   |                               |   |                                                                                            |                | Micranthemum glomeratum                        |  |  |  |  |                |
| <b>Egeria densa</b>                                                                                                                                        |   |                               |   |                                                                                            |                | Micranthemum umbrosum                          |  |  |  |  |                |
| <b>Eichhornia crassipes</b>                                                                                                                                |   |                               |   |                                                                                            |                | Mikania scandens                               |  |  |  |  |                |
| *Eleocharis baldwinii                                                                                                                                      |   |                               |   |                                                                                            |                | <b>Mimosa pigra</b>                            |  |  |  |  |                |
| *Eleocharis <u>Viviparous</u>                                                                                                                              |   |                               |   |                                                                                            |                | Myrica cerifera                                |  |  |  |  |                |
| Eleocharis cellulosa                                                                                                                                       |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| Eleocharis equisetoides                                                                                                                                    |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| Eleocharis interstincta                                                                                                                                    |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| *Eriocaulon compressum                                                                                                                                     |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| *Eriocaulon decangulare                                                                                                                                    |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| Eupatorium capillifolium                                                                                                                                   |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| *Fuirena                                                                                                                                                   |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| Fuirena scirpoidea                                                                                                                                         |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |
| Gordonia lasianthus                                                                                                                                        |   |                               |   |                                                                                            |                |                                                |  |  |  |  |                |

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

|                                                        |                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                              |                                                                                                                                                 |                                                                                                                                                         |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| STORET STATION NUMBER:<br><b>G 3TLH R0011</b>          | DATE (M/D/Y)<br><b>05/30/19</b>                                                                                                                                                                                                                                                                                                                 | LAKE NAME<br><b>Major</b>                                                                                                                                    |                                                                                                                                                 | FIELD ID / NAME:<br><b>G 3TLH R0011</b>                                                                                                                 |
| ECO-REGION:                                            | COUNTY:<br><b>Washington</b>                                                                                                                                                                                                                                                                                                                    | SAMPLING LOCATION/DESCRIPTION:<br><b>Center of Lake</b>                                                                                                      |                                                                                                                                                 | LAKE SIZE:                                                                                                                                              |
| <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"/> | 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 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"/>                                                               | 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><br><b>20</b>                             | Secchi >3 m<br>Or VOB<br>20 19 18 17 16                                                                                                                                                                                                                                                                                                         | 3 2.6 2.2 1.8 1.4<br>15 14 13 12 11                                                                                                                          | 1.0 0.9 0.8 0.7 0.6<br>10 9 8 7 6                                                                                                               | 0.5 0.4 0.3 0.2 0.1<br>5 4 3 2 1                                                                                                                        |
| <b>Vegetation Quality</b><br><b>16</b>                 | Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa<br>20 19 18 17 16                                                                                                                                                                                                                                       | Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants<br>15 14 13 12 11 | Large masses (21%- 40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats<br>10 9 8 7 6                           | Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)<br>5 4 3 2 1 |
| <b>Stormwater Inputs</b><br><b>18</b>                  | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation<br>20 19 18 17 16                                                                                                                                                                                                                                         | Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place<br>15 14 13 12 11                                         | Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place<br>10 9 8 7 6                        | Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place<br>5 4 3 2 1                          |
| <b>Bottom Substrate Quality</b><br><b>19</b>           | Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present<br>20 19 18 17 16                                                                                                                                                                                                                                    | Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present<br>15 14 13 12 11                                               | Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom<br>10 9 8 7 6                      | Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom<br>5 4 3 2 1           |
| <b>Lakeside Adverse Human Alterations</b><br><b>17</b> | Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)<br>20 19 18 17 16                                                                                                                                                                                                                                             | Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected<br>15 14 13 12 11                                                       | Many structures, roads or other human disturbance visible (50%-70%) lakeside affected<br>10 9 8 7 6                                             | Highly developed or disturbed (>70% of lakeside affected)<br>5 4 3 2 1                                                                                  |
| <b>Upland Buffer Zone</b><br><b>15</b>                 | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer<br>20 19 18 17 16                                                                                                                                                                                                                     | 89%-51% of shoreline with >18m buffer or >75% with 10m to 18m buffer<br>15 14 13 12 11                                                                       | 50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer<br>10 9 8 7 6                                                           | < 29% of shoreline with >18m buffer<br>5 4 3 2 1                                                                                                        |
| <b>Adverse Watershed Land Use</b><br><b>16</b>         | Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial<br>20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 |                                                                                                                                                              |                                                                                                                                                 |                                                                                                                                                         |
| <b>TOTAL SCORE</b><br><b>123</b>                       | <b>COMMENTS:</b>                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                              |                                                                                                                                                 |                                                                                                                                                         |
| <b>ANALYSIS DATE:</b><br><b>05/30/19</b>               | <b>ANALYST:</b><br><b>J. Burchett</b>                                                                                                                                                                                                                                                                                                           | <b>SIGNATURE:</b><br>                                                   |                                                                                                                                                 |                                                                                                                                                         |