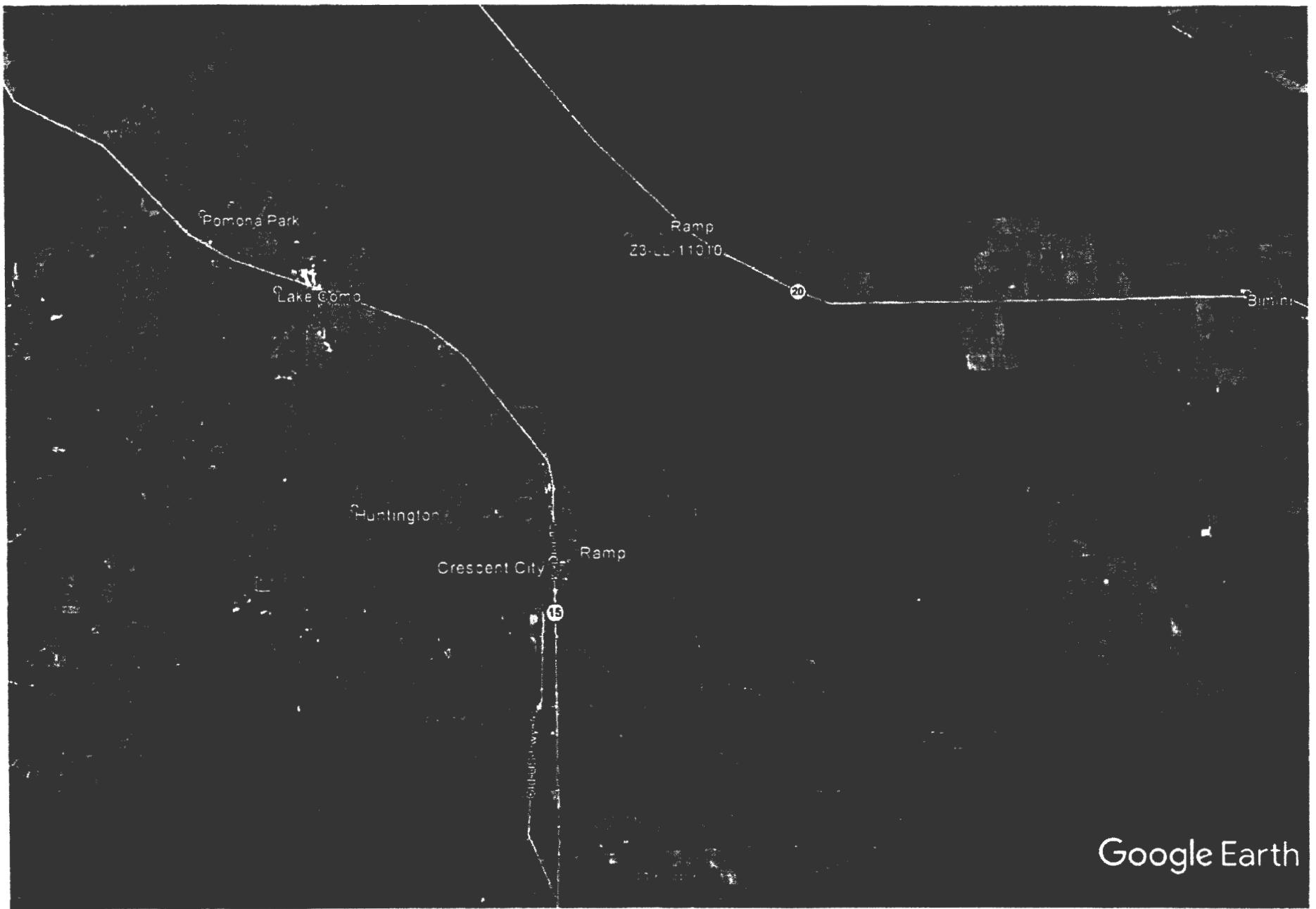




Google Earth



**DEP TIER 1  
STATUS NETWORK SITE CHARACTERIZATION**

Stream/Water Body Name: **Crescent Lake**

| Site ID            | Latitude | Longitude | Type of Recon     | Date of Recon |
|--------------------|----------|-----------|-------------------|---------------|
| <b>Z3-LL-11010</b> |          |           | <b>Site Visit</b> |               |

Return Recon #1 \_\_\_\_\_

Return Recon #2 \_\_\_\_\_

Return Recon #3 \_\_\_\_\_

| Resource Type                          | Secondary Resource Type |
|----------------------------------------|-------------------------|
| <b>Large Lake</b>                      |                         |
| Desk Recon: 10/19/2016 By: Nate Gargas | Letter Sent:            |
| Recon Team:                            |                         |

| Site Location Address & Contact Information | Property Owner's Address |
|---------------------------------------------|--------------------------|
|                                             |                          |
|                                             |                          |
|                                             |                          |
|                                             |                          |
| <i>Data Requested:</i>                      | <i>County:</i> Flagler   |

Tidal Info: \_\_\_\_\_

Access and Permission  
\_\_\_\_\_

Reason for Exclusion  
\_\_\_\_\_  
\_\_\_\_\_

Recon Result  
For Site:  
**Z3-LL-11010**

**INCLUDE**

**ADDITIONAL NOTES**

**DIRECTIONS:**

Use Public Boat Ramp at Crescent City

**FILES GENERATED:**  
(i.e. digital photos, GPS, etc.)

**GWIS** Generalized Water Information System  
Database Utilities

Recon Tracking

Existing Station

New SW Station

New GW Station

**PK RANDOM SAMPLE LOCATION = Z3-LL-11010**

|                 |                     |                  |                       |
|-----------------|---------------------|------------------|-----------------------|
| County          | FLAGLER             | Quarter Quad     |                       |
| WMD             | ST. JOHNS RIVER WMD | HUC              | ST JOHNS RIVER, LOWER |
| Random Latitude | 29° 29m 28.48164s   | Random Longitude | 81° 29m 40.59636s     |

**Is Z3-LL-11010 sampleable?**☐ Yes ☐ No ☒ N/A**Exclusion Category:****Exclusion Criteria:(definitions):****Was Z3-LL-11010 sampled?**

Yes

Month 10 ▼ Day 19 ▼ Year 2016 ▼

**Comments:**

Save

Reset

☒ Aerial Photo ☐ Quad Map ☐ No Image

Show Map

# CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there is qualified data on this name.



Meter **QUANTA #1** RQ- **2017-07-03-13** Project **CROSC LAKE LVI**

- Notes:** (1) Numbers  $\leq 4$ , are rounded down; numbers  $\geq 5$  are rounded up (e.g., 5.15 becomes 5.2).  
 (2) Always wait for meter to stabilize before recording any readings.  
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site \_\_\_\_\_

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification **06-2017**

| DO<br>DEP SOP<br>FT 1500 | Name               | Date     | Time<br>CT-ET | Temp | D.O.<br>Chart<br>mg/L | Meter<br>D.O.<br>mg/L | % DO  | Probe<br>Charge | Probe<br>Gain | Pass<br>/ Fail | Lab<br>/ Field |
|--------------------------|--------------------|----------|---------------|------|-----------------------|-----------------------|-------|-----------------|---------------|----------------|----------------|
| Calibr.                  | P O'Connor         | 07-25-17 | 0710          | 23.3 | 8.53                  | 8.49                  | 100.0 | —               | —             | Pass           | LMS            |
| ICV                      | ✓                  | ✓        | 0715          | 23.3 | 8.53                  | 8.49                  | 100.1 | —               | —             | Pass           | LMS            |
| CCV                      | <del>BS - DC</del> | 7/25/17  | 1645          | 26.0 | 8.11                  | 8.25                  | 101.2 | —               | —             | P              | L              |
| CCV                      |                    |          |               |      |                       |                       |       |                 |               |                |                |

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.

DO Acceptance criteria from Table  $\pm 0.3$  mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

| Spec.<br>Cond.<br>FT 1200 | Name               | Date     | Time<br>CT-ET | Lot #              | Expir.<br>Date | Standard<br>$\mu$ hos/cm | Meter<br>Reading<br>$\mu$ hos/cm | Pass<br>/ Fail | Lab<br>/ Field |
|---------------------------|--------------------|----------|---------------|--------------------|----------------|--------------------------|----------------------------------|----------------|----------------|
| Calibr.                   | P O'Connor         | 07-25-17 | 0717          | 170315B            | X03-2018       | 1000                     | 1000                             | Pass           | LMS            |
| ICV                       | ✓                  | ✓        | 0721          | 21472017           | 12-2017        | 147                      | 149                              | Pass           | LMS            |
| CCV                       |                    |          |               | <del>2902743</del> | <del>017</del> |                          |                                  |                |                |
| CCV                       | <del>BS - DC</del> | 7/25/17  | 1647          | 170315B            | 3/18           | 1000                     | 1003                             | P              | L              |

Report specific conductance as a whole number with no decimal figure.

Conductivity Acceptance criteria  $\pm 5\%$

| pH<br>DEP SOP<br>FT 1100 | Name               | Date     | Time<br>CT-ET | Lot #   | Expir.<br>Date | pH<br>Buffer<br>SU | Meter<br>reading<br>SU | mV | Pass<br>/ Fail | Lab<br>/ Field |
|--------------------------|--------------------|----------|---------------|---------|----------------|--------------------|------------------------|----|----------------|----------------|
| Calibr.                  | P O'Connor         | 07-25-17 | 0723          | 1607A12 | 06-2018        | 7.0                | 7.00                   | —  | Pass           | LMS            |
| Calibr.                  |                    |          | 0724          | 2702743 | 01-2019        | 4.0                | 4.00                   | —  | Pass           | LMS            |
| Calibr. ICV              | ✓                  | ✓        | 0730          | 2611998 | 05-2018        | 10.0               | 9.98                   | —  |                | LMS            |
| ICV                      | <del>BS - DC</del> | 7/25/17  | 1752          | 1607A12 | 6/18           | 7.0                | 7.07                   | —  | P              | L              |
| CCV                      |                    |          |               |         |                |                    |                        |    |                |                |
| CCV                      |                    |          |               |         |                |                    |                        |    |                |                |

Report pH with one decimal place; pH Acceptance criteria  $\pm 0.2$  SU; mV pH7 Range 0 $\pm$ 50;

mV pH 4 Range +180 $\pm$ 50;

mV pH 10 Range -180 $\pm$ 50;

Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

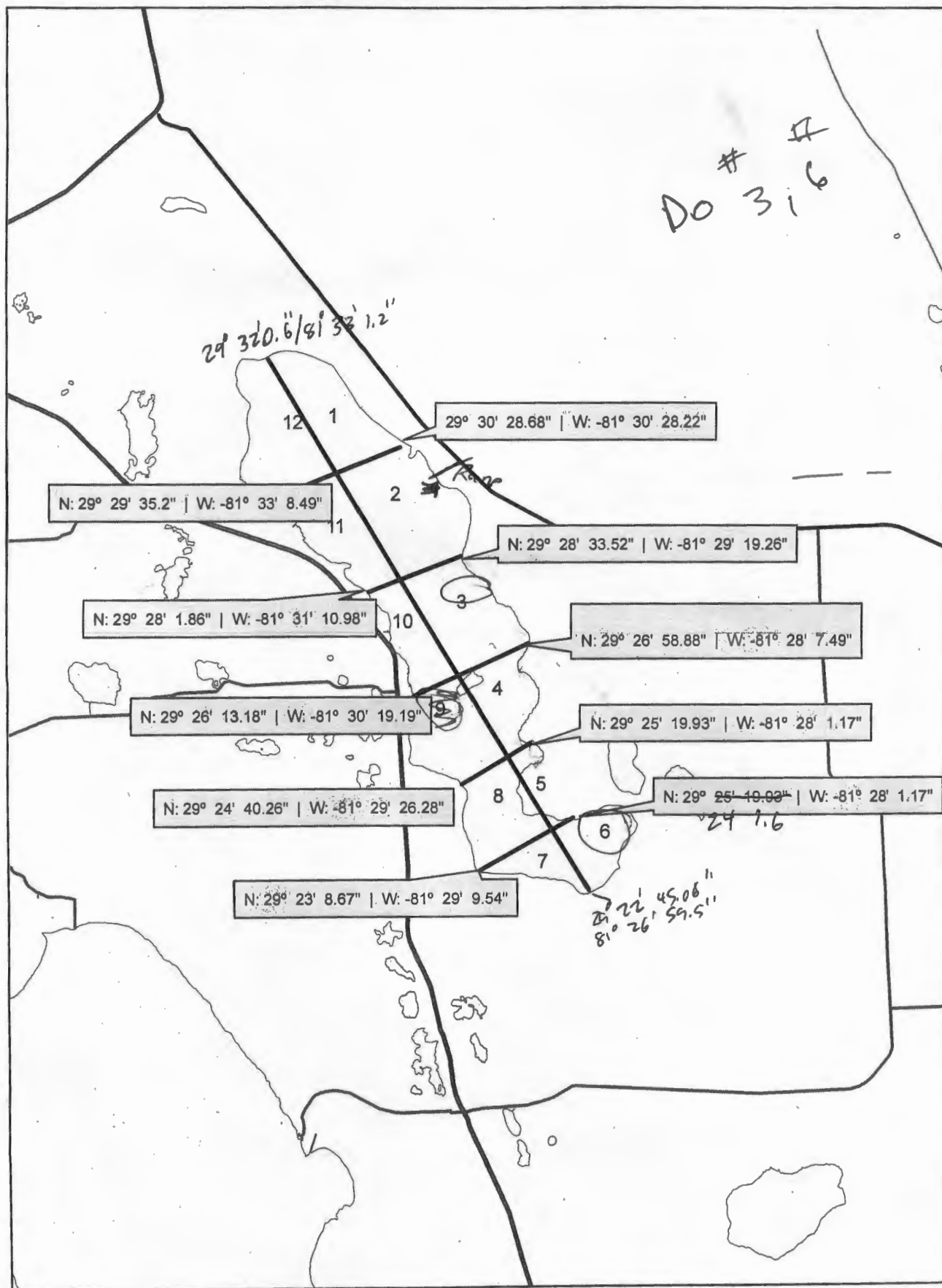
Depth (Quarterly)

Date of Last Depth Verification **N/A**

| Depth Sensor<br>(Daily) | Name | Date | Time<br>CT-ET | Zero the<br>Sensor | ICV Value | Pass /<br>Fail | Lab /<br>Field |
|-------------------------|------|------|---------------|--------------------|-----------|----------------|----------------|
| Pressure mode<br>in air |      |      |               | 0.000              |           |                |                |

ICV acceptance criteria  $\pm 5\%$  or  $\pm 0.05$ m, whichever is greater

# Crescent lake Z3-LL-11010



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

SAMPLE ID: 77913 MACROPHYTE ID: 56867 LATITUDE: 29° 29' 28.3"  
COUNTY: PUTNAM STORET #: 56867 LONGITUDE: 81° 29' 40.3"  
DATE: 07-25-17 TIME: 1500 SAMPLING AGENCY: DEAR NEP ROC  
SITE NAME: Crescent Lake WBID: \_\_\_\_\_  
FIELD ID/NAME: \_\_\_\_\_ LAKE SIZE: \_\_\_\_\_ RQ: \_\_\_\_\_

## WATERSHED / LAKESIDE FEATURES

| PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category - from GIS):                                                                                       |              |                                                                                                           |              |             |                                                                                                    |            |                 |                                                                                                            |    |    | LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer)                                                                    |    |                         |   |   |   |   |   |   |   |   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------|--------------|-------------|----------------------------------------------------------------------------------------------------|------------|-----------------|------------------------------------------------------------------------------------------------------------|----|----|-------------------------------------------------------------------------------------------------------------------|----|-------------------------|---|---|---|---|---|---|---|---|
| Forest/Natural                                                                                                                                                                  | Silviculture | Field/Pasture                                                                                             | Agricultural | Residential | Commercial                                                                                         | Industrial | Other (Specify) |                                                                                                            |    |    |                                                                                                                   |    | LDI:                    |   |   |   |   |   |   |   |   |
| <u>40</u>                                                                                                                                                                       | <u>20</u>    | <u>10</u>                                                                                                 | <u>10</u>    | <u>10</u>   | <u>10</u>                                                                                          |            |                 |                                                                                                            |    |    |                                                                                                                   |    |                         |   |   |   |   |   |   |   |   |
| Local Watershed Erosion (select one): <input type="checkbox"/> None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy |              |                                                                                                           |              |             |                                                                                                    |            |                 | Artificially Impounded <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                 |    |    |                                                                                                                   |    | Land Use Source & Year: |   |   |   |   |   |   |   |   |
| Local Watershed NPS Pollution: <input type="checkbox"/> No evidence <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy            |              |                                                                                                           |              |             |                                                                                                    |            |                 |                                                                                                            |    |    |                                                                                                                   |    |                         |   |   |   |   |   |   |   |   |
| 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>9</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>15</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

| Water:                                                                                                                                                                                       |                   |             |            |             |               |                 |                |                                                                            |                                            | Water Odors:                                                                                                                       |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|------------|-------------|---------------|-----------------|----------------|----------------------------------------------------------------------------|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--|--|
| Nutrient Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Preserved? <input type="checkbox"/> Yes <input type="checkbox"/> pH<2 <input type="checkbox"/> No |                   |             |            |             |               |                 |                |                                                                            |                                            | <input checked="" type="checkbox"/> Normal                                                                                         |  |  |
| Color Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Lot # _____ Exp. Date: _____                                                                         |                   |             |            |             |               |                 |                |                                                                            |                                            | <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum <input type="checkbox"/> Other _____                            |  |  |
| Alkalinity Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                 |                   |             |            |             |               |                 |                |                                                                            |                                            | Water Surface Oils: <input checked="" type="checkbox"/> None                                                                       |  |  |
| Water Level <input type="checkbox"/> Low <input type="checkbox"/> Normal <input checked="" type="checkbox"/> High                                                                            |                   |             |            |             |               |                 |                |                                                                            |                                            | <input type="checkbox"/> Sheen/Slick <input type="checkbox"/> Glob <input type="checkbox"/> Other _____                            |  |  |
| Meter                                                                                                                                                                                        | Depth (M)         | Temp. (°C)  | pH (SU)    | D.O. (MG/L) | D.O. Sat. (%) | Cond. (UMHO/CM) | Salinity (PPT) | Clarity:                                                                   |                                            | Color:                                                                                                                             |  |  |
| Readings:                                                                                                                                                                                    |                   |             |            |             |               |                 |                | <input type="checkbox"/> Clear                                             | <input type="checkbox"/> Clear             | <input type="checkbox"/> Clear                                                                                                     |  |  |
| Top:                                                                                                                                                                                         | <u>0.3</u>        |             |            |             |               |                 |                | <input type="checkbox"/> Opaque <input checked="" type="checkbox"/> Turbid | <input checked="" type="checkbox"/> Tannic | <input type="checkbox"/> Green                                                                                                     |  |  |
| Mid-Depth:                                                                                                                                                                                   | <u>0.3 to 1.0</u> | <u>30.8</u> | <u>7.6</u> | <u>7.9</u>  | <u>106.4</u>  | <u>844</u>      | <u>0.42</u>    | <input type="checkbox"/> Slightly Turbid                                   |                                            |                                                                                                                                    |  |  |
| Bottom:                                                                                                                                                                                      | <u>1.0</u>        | <u>29.4</u> | <u>7.7</u> | <u>6.5</u>  | <u>84.0</u>   | <u>844</u>      | <u>0.42</u>    |                                                                            |                                            |                                                                                                                                    |  |  |
| SECCHI (M) <u>0.5</u>                                                                                                                                                                        |                   |             |            |             |               |                 |                | Total Station Depth (M) <u>2.0</u>                                         |                                            |                                                                                                                                    |  |  |
| VOB <input type="checkbox"/>                                                                                                                                                                 |                   |             |            |             |               |                 |                |                                                                            |                                            |                                                                                                                                    |  |  |
| Sediment Type: (may check more than one)                                                                                                                                                     |                   |             |            |             |               |                 |                |                                                                            |                                            | Sediment Odors:                                                                                                                    |  |  |
| <input type="checkbox"/> Sandy <input type="checkbox"/> Organic fibrous (peaty, CPOM) <input type="checkbox"/> Vegetated                                                                     |                   |             |            |             |               |                 |                |                                                                            |                                            | <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Other (Specify): _____                                         |  |  |
| <input checked="" type="checkbox"/> Sand/Silt <input checked="" type="checkbox"/> Organic smooth (muck) <input type="checkbox"/> Other (Specify): _____                                      |                   |             |            |             |               |                 |                |                                                                            |                                            | <input type="checkbox"/> Anaerobic                                                                                                 |  |  |
| Biological Communities:                                                                                                                                                                      |                   |             |            |             |               |                 |                |                                                                            |                                            | Abundance:                                                                                                                         |  |  |
| LVI Conducted? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                           |                   |             |            |             |               |                 |                |                                                                            |                                            | Absent Rare Common Abundant                                                                                                        |  |  |
| Phytoplankton Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                              |                   |             |            |             |               |                 |                |                                                                            |                                            | Periphyton <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>          |  |  |
| Sample Preserved? <input type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                                   |                   |             |            |             |               |                 |                |                                                                            |                                            | Nuisance Plants <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>     |  |  |
| Lot #: _____ Exp Date: _____                                                                                                                                                                 |                   |             |            |             |               |                 |                |                                                                            |                                            | Submersed Plants <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>    |  |  |
| Algal Bloom/Algal ID Sample Taken? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                                                                                       |                   |             |            |             |               |                 |                |                                                                            |                                            | Exotic Apple Snails <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |  |  |
| Active Vegetation Mgmt? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know                                                              |                   |             |            |             |               |                 |                |                                                                            |                                            |                                                                                                                                    |  |  |
| Weather Conditions: <u>SUNNY WIND 5-10 mph out of SE</u>                                                                                                                                     |                   |             |            |             |               |                 |                |                                                                            |                                            |                                                                                                                                    |  |  |
| Total Depth <u>2.0 meters</u> Water level is <u>UP</u>                                                                                                                                       |                   |             |            |             |               |                 |                |                                                                            |                                            |                                                                                                                                    |  |  |
| SAMPLING TEAM: <u>A. Kambucha, P. O'Conor</u>                                                                                                                                                |                   |             |            |             |               |                 |                | SIGNATURE: <u>P. O'Conor</u>                                               |                                            | DATE: <u>07-25-17</u>                                                                                                              |  |  |

DEP-SOP-001/01: Form FD 9000-3  
**PHYSICAL/CHEMICAL CHARACTERIZATION ELECTRONIC FIELD SHEET**

EL-85

SAMPLE ID : \_\_\_\_\_ ORG ID : \_\_\_\_\_  
 COUNTY : Dutram STORET # : 50467  
 DATE : 07-25-17 TIME : 1500

Latitude : \_\_\_\_\_ Longitude : \_\_\_\_\_  
 (degrees) (minutes) (seconds) (degrees) (minutes) (seconds)

SITE NAME : Crescent Lake

SAMPLE COMPLETE ? \_\_\_\_\_

FIELD ID/NAME : \_\_\_\_\_ RECEIVING BODY OF WATER : \_\_\_\_\_

**RIPARIAN ZONE / STREAM FEATURES**

**PREDOMINANT LAND-USE IN WATERSHED** (specify relative percent in each category) :

|                          |                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Forest/Natural           | silviculture             | Field/Pasture            | Agricultural             | Residential              | Commercial               | Industry                 | Other (Specify)          |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Local Watershed Erosion (select one) : ☐ None ☐ Slight ☒ Moderate ☐ Heavy  
 Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy

**Width of Riparian Vegetation (m) on Each Buffer Side**  
 Left Bank : ☐ Right Bank : ☐

**High Water Mark:** ☐ + ☐ = ☐  
 (m) (above present water level) (present depth) (above bed)

**Artificially Impounded**  
☐ Yes ☐ No

**Artificially** ☐ No ☐ Mostly recovered, more sinuous  
**Channelized** : ☐ Some recovery ☐ Recent, severe

**Canopy Cover %** : ☒ Open ☐ Lightly Shaded (11-45%)  
☐ Heavily Shaded ☐ Moderate Shaded (46-80%)

**Typical Width (m) Depth (m)/Velocity (m/sec) Transect**

|                                 |                                 |                                 |                                 |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <input type="checkbox"/> m wide | <input type="checkbox"/> m/s    | <input type="checkbox"/> m/s    | <input type="checkbox"/> m/s    |
| <input type="checkbox"/> m deep | <input type="checkbox"/> m deep | <input type="checkbox"/> m deep | <input type="checkbox"/> m deep |

**SEDIMENT / SUBSTRATE**

**Sediment Oils**  
☒ Absent ☐ Slight  
☐ Moderate ☐ Profuse

**Sediment Odors**  
☒ Normal ☐ Sewage ☐ Petroleum  
☐ Chemical ☐ Anaerobic  
☐ Other (Specify) :

**Sediment Deposition**  
☐ Sludge Sand Smothering : None Slight Moderate Severe  
 Silt Smothering : None Slight Moderate Severe  
☐ Other (Specify) :

**SUBSTRATE TYPE**  
 Assessment Tool : ☐ SCI ☐ BioRecon  
☐ LCI ☒ LVI INVERT PERI  
 % # Times # Times  
 Coverage Sampled Sampled

|                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|
| Woody Debris (Snags)     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Undercut Banks / Roots   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Leaf Packs or Mat .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Aquatic Vegetation ..... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Rock or Shell Rubble..   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Sand.....                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Mud / Muck / Silt .....  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other .....              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other .....              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**WATER QUALITY**

|             | Depth (M)                | Temp. (°C)               | pH (SU)                  | D.O. (MG/L)              | Cond. (UMHO/CM)          | Salinity (PPT)           | SECCHI (M)                   |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|
| Top :       | <u>0.3</u>               | <u>30.8</u>              | <u>7.6</u>               | <u>7.9</u>               | <u>844</u>               | <u>0.44</u>              | <u>0.5</u>                   |
| Mid-Depth : | <u>1.0</u>               | <u>29.4</u>              | <u>7.7</u>               | <u>6.5</u>               | <u>844</u>               | <u>0.44</u>              | <input type="checkbox"/> VOB |
| Bottom :    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>     |

**Water Surface Oils** : ☒ None ☐ Sheen ☐ Globbs ☐ Slick

**Water Odors** : ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical  
☐ Other (Specify) :

**Water Sample Taken ?** ☐ Yes ☒ No

**Algae Sample Taken ?** ☐ Yes ☐ No

**Clarity**  
☐ Clear ☐ Slightly Turbid  
☒ Turbid ☐ Opaque

**Color**  
☒ Tannic ☐ Green (Algae)  
☐ Clear ☐ Other (Specify) :

**SYSTEM TYPE** ☐ Stream ☒ Lake  
☐ Wetland ☐ Estuary  
☐ Other (Specify) :

**WEATHER CONDITIONS / NOTES :**

WIND out of S/E 5-10 mph

☐ The antecedent hydrologic conditions have been met to my best knowledge.

Water samples preserved ? ☐ Yes ☐ pH<2 ☐ No Algae samples preserved ? ☐ Yes ☐ No

**SAMPLING TEAM :** A. Kalm Ochoa, P. O'Garra

**SIGNATURE :** [Signature]

**DATE :** 07-25-17



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

|                                        |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |                                                                                                                                                            |                                                                                                              |  |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--|
| STORET STATION NUMBER:<br><i>50067</i> | DATE (M/D/Y)<br><i>07-25-17</i>                                                                                                                                                                                                                                                                        | LAKE NAME<br><i>CRESCENT LAKE</i>                                                                                                          |                                                                                                                                                            | FIELD ID / NAME:                                                                                             |  |
| ECO-REGION:                            | COUNTY:<br><i>PUTNAM</i>                                                                                                                                                                                                                                                                               | SAMPLING LOCATION/DESCRIPTION:                                                                                                             |                                                                                                                                                            | LAKE SIZE:                                                                                                   |  |
| PARAMETER                              | No surface inflow or outflow present, very long water residence time, groundwater seepage dominates<br><input type="checkbox"/>                                                                                                                                                                        | Surface water inflow present, but flow is rare, moderate to long water residence time<br><input type="checkbox"/>                          | Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time<br><input checked="" type="checkbox"/> | Impounded, hydrology of system artificially controlled<br><input type="checkbox"/>                           |  |
| HYDROLOGY                              |                                                                                                                                                                                                                                                                                                        |                                                                                                                                            |                                                                                                                                                            |                                                                                                              |  |
| Color                                  | Very clear, uncolored water (benthic sampling appropriate) <input type="checkbox"/>                                                                                                                                                                                                                    | Water somewhat tannin stained (benthic sampling appropriate) <input type="checkbox"/>                                                      | Dark, discolored water (water color 20 PCU or higher) <input type="checkbox"/>                                                                             | Visibility extremely reduced due to high color <input checked="" type="checkbox"/>                           |  |
|                                        | Optimal                                                                                                                                                                                                                                                                                                | Suboptimal                                                                                                                                 |                                                                                                                                                            | Marginal                                                                                                     |  |
| Secchi                                 | Secchi > 3 m<br>Or VOB                                                                                                                                                                                                                                                                                 | Secchi (m)                                                                                                                                 |                                                                                                                                                            | Poor                                                                                                         |  |
|                                        | 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                                                                                          |  |
| Vegetation Quality                     | Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa<br><i>17</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       |  |
|                                        | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |                                                                                                                                                            | 10 9 8 7 6                                                                                                   |  |
| Stormwater Inputs                      | Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation<br><i>14</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   |  |
|                                        | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |                                                                                                                                                            | 10 9 8 7 6                                                                                                   |  |
| Bottom Substrate Quality               | Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present<br><i>14</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 |  |
|                                        | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |                                                                                                                                                            | 10 9 8 7 6                                                                                                   |  |
| Lakeside Adverse Human Alterations     | Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)<br><i>18</i>                                                                                                                                                                                                         | Moderate disturbance visible (structures, roads or other), 10%-49% lakeside affected                                                       |                                                                                                                                                            | Many structures, roads or other human disturbance visible (50%-70%) lakeside affected                        |  |
|                                        | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |                                                                                                                                                            | 10 9 8 7 6                                                                                                   |  |
| Upland Buffer Zone                     | Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer<br><i>19</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                                      |  |
|                                        | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |                                                                                                                                                            | 10 9 8 7 6                                                                                                   |  |
| Adverse Watershed Land Use             | 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>16</i> |                                                                                                                                            |                                                                                                                                                            |                                                                                                              |  |
|                                        | 20 19 18 17 16                                                                                                                                                                                                                                                                                         | 15 14 13 12 11                                                                                                                             |                                                                                                                                                            | 10 9 8 7 6                                                                                                   |  |
| TOTAL SCORE                            | <i>103</i>                                                                                                                                                                                                                                                                                             |                                                                                                                                            |                                                                                                                                                            |                                                                                                              |  |
| COMMENTS:                              | <i>SEveral DEAD cat fish</i>                                                                                                                                                                                                                                                                           |                                                                                                                                            |                                                                                                                                                            |                                                                                                              |  |
| ANALYSIS DATE:                         | ANALYST:                                                                                                                                                                                                                                                                                               |                                                                                                                                            | SIGNATURE:                                                                                                                                                 |                                                                                                              |  |
| <i>07-25-17</i>                        | <i>A. Kalmbacher, P. O'Connor</i>                                                                                                                                                                                                                                                                      |                                                                                                                                            | <i>[Signature]</i>                                                                                                                                         |                                                                                                              |  |

## Form FD9000-27 Lake Vegetation Index Data Sheet (06-21-11)

|                                                                                                                                                                                                                                                                                                                         |  |                |  |                                                                                       |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------|--|---------------------------------------------------------------------------------------|--|
| Waterbody:                                                                                                                                                                                                                                                                                                              |  | County:        |  | Date:                                                                                 |  |
| Analyst:                                                                                                                                                                                                                                                                                                                |  | Signature:     |  | STORET:                                                                               |  |
| Except where noted as "sp." species level identification required. *Genera that may require lab verification*<br>Plants in bold= FLEPPIC invasive exotic.<br>It is important to note dominant or co-dominant taxa (by areal extent) for each unit. Use "D" to denote dominant taxon, or "C" for the 2 co-dominant taxa. |  |                |  | Lake units sampled (circle one group):<br>1, 4, 7, 10      2, 5, 8, 11<br>3, 6, 9, 12 |  |
| SPECIES                                                                                                                                                                                                                                                                                                                 |  | Collected? (✓) |  | SPECIES                                                                               |  |
| 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>                                                        |  |
| * <b>Cyperus alternifolius</b> (C. involucratus)                                                                                                                                                                                                                                                                        |  |                |  | Liquidambar styraciflua                                                               |  |
| Cyperus articulatus                                                                                                                                                                                                                                                                                                     |  |                |  | *Ludwigia arcuata                                                                     |  |
| Cyperus haspan                                                                                                                                                                                                                                                                                                          |  |                |  | *Ludwigia leptocarpa                                                                  |  |
| *Cyperus lecontei                                                                                                                                                                                                                                                                                                       |  |                |  | *Ludwigia linearis                                                                    |  |
| *Cyperus polystachyos                                                                                                                                                                                                                                                                                                   |  |                |  | *Ludwigia octovalvis                                                                  |  |
| *Cyperus odoratus                                                                                                                                                                                                                                                                                                       |  |                |  | * <b>Ludwigia peruviana</b>                                                           |  |
| *Cyperus surinamensis                                                                                                                                                                                                                                                                                                   |  |                |  | *Ludwigia repens                                                                      |  |
| Cyrilla 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                                                                                                                                                                                                                                                                                                             |  |                |  | Myrica cerifera                                                                       |  |
| Eleocharis cellulosa                                                                                                                                                                                                                                                                                                    |  |                |  |                                                                                       |  |
| Eleocharis equisetoides                                                                                                                                                                                                                                                                                                 |  |                |  |                                                                                       |  |
| Eleocharis interstincta                                                                                                                                                                                                                                                                                                 |  |                |  |                                                                                       |  |
| *Eriocaulon compressum                                                                                                                                                                                                                                                                                                  |  |                |  |                                                                                       |  |
| *Eriocaulon decangulare                                                                                                                                                                                                                                                                                                 |  |                |  |                                                                                       |  |
| Eupatorium capillifolium                                                                                                                                                                                                                                                                                                |  |                |  |                                                                                       |  |
| *Fuirena                                                                                                                                                                                                                                                                                                                |  |                |  |                                                                                       |  |
| <b>Fuirena scirpoidea</b>                                                                                                                                                                                                                                                                                               |  |                |  |                                                                                       |  |
| Gordonia lasianthus                                                                                                                                                                                                                                                                                                     |  |                |  |                                                                                       |  |

Crescent lake

7/25/17

| SPECIES                                        | 3 | 6 | 9 | 12 | Collected? (✓) |
|------------------------------------------------|---|---|---|----|----------------|
| Myriophyllum aquaticum                         |   |   |   |    |                |
| *Myriophyllum heterophyllum                    |   |   |   |    |                |
| *Myriophyllum laxum                            |   |   |   |    |                |
| *Myriophyllum pinnatum                         |   |   |   |    |                |
| <b>Myriophyllum spicatum</b>                   |   |   |   |    |                |
| *Najas filifolia                               |   |   |   |    |                |
| *Najas guadalupensis                           |   |   |   |    |                |
| *Najas minor                                   |   |   |   |    |                |
| Nelumbo lutea                                  |   |   |   |    |                |
| Nitella spp.                                   |   |   |   |    |                |
| Nuphar sp.                                     |   |   |   |    |                |
| Nymphaea odorata                               |   |   |   |    |                |
| Nymphoides aquatica                            |   |   |   |    |                |
| Nyssa sylvatica var. biflora                   | P | P | P | P  |                |
| Orontium aquaticum                             |   |   |   |    |                |
| Osmunda cinnamomea                             |   |   |   |    |                |
| Osmunda regalis                                |   |   |   |    |                |
| Panicum hemitomon                              |   |   |   |    |                |
| <b>Panicum repens</b>                          |   |   |   |    |                |
| Paspalidium geminatum                          |   |   |   |    |                |
| *Paspalum repens                               |   |   |   |    |                |
| Paspalum urvillei                              |   |   |   |    |                |
| Peltandra sp.                                  |   |   |   |    |                |
| Persea sp.                                     |   |   |   |    |                |
| <b>Pennisetum purpureum</b>                    |   |   |   |    |                |
| Phragmites australis                           |   |   | P | P  |                |
| Pinus elliotii                                 |   |   |   |    |                |
| <b>Pistia stratioides</b>                      |   | P |   | P  |                |
| Pluchea sp.                                    |   |   |   |    |                |
| *Polygonum glabrum (densiflorum)               |   |   | P |    |                |
| *Polygonum hydropiperoides                     | P | P | P |    |                |
| *Polygonum punctatum                           |   |   |   |    |                |
| *Polygonum _____                               | P | P | P | P  |                |
| Pontederia cordata                             | P | P | P | P  |                |
| *Potamogeton diversifolius                     |   |   |   |    |                |
| *Potamogeton illinoensis                       |   |   |   |    |                |
| *Potamogeton pusillus                          |   |   |   |    |                |
| *Potamogeton pectinatus (Stuckenia pectinatus) |   |   |   |    |                |
| Proserpinaca pectinata                         |   |   |   |    |                |
| *Rhexia _____                                  |   |   |   |    |                |
| *Rhynchospora corniculata                      |   |   |   |    |                |
| *Rhynchospora inundata                         |   |   |   |    |                |
| Rhynchospora tracyi                            |   |   |   |    |                |
| Ricciocarpus natans                            |   |   |   |    |                |
| Sabal palmetto                                 | P | P | P | P  |                |
| Sacciolepis striata                            |   |   |   |    |                |
| *Sagittaria filiformis                         |   |   |   |    |                |
| *Sagittaria graminea                           |   |   |   |    |                |
| *Sagittaria isoetiformis                       |   |   |   |    |                |
| Sagittaria lancifolia                          | P | P |   | P  |                |
| Sagittaria latifolia                           |   |   |   |    |                |

| SPECIES                                            | 3 | 6 | 9 | 12 | Collected? (✓) |
|----------------------------------------------------|---|---|---|----|----------------|
| Salix caroliniana                                  | P | P | P | P  |                |
| <b>Salvinia minima</b>                             |   |   |   | P  |                |
| Sambucus canadensis                                | P |   |   |    |                |
| <b>Sapium sebiferum</b>                            |   | P |   |    |                |
| Saururus cernuus                                   |   |   |   |    |                |
| <b>Schinus terebinthifolius</b>                    |   |   |   |    |                |
| *Schoenoplectus californicus                       |   |   |   | P  | P              |
| *Schoenoplectus pungens                            |   |   |   |    |                |
| *Schoenoplectus tabernaemontani (Scirpus validus)  |   |   |   |    |                |
| Scirpus cubensis (Oxycaryon cubense)               |   |   |   |    |                |
| Scirpus cyperinus                                  |   |   |   |    |                |
| *Sesbania _____                                    |   |   |   |    |                |
| Solidago sp.                                       |   |   |   |    |                |
| Sparganium americanum                              |   |   |   |    |                |
| Spartina bakeri                                    |   |   |   |    |                |
| Spirodela polyrhiza                                |   |   |   |    |                |
| Taxodium sp.                                       |   |   |   |    |                |
| Thalia geniculata                                  |   |   |   |    |                |
| Thelypteris palustris                              |   |   |   |    |                |
| Triadenum virginicum                               |   |   |   |    |                |
| Typha sp.                                          |   |   |   |    |                |
| <b>Urochloa mutica (Brachiaria mutica)</b>         |   |   |   |    |                |
| *Utricularia gibba (U. biflora)                    |   |   |   |    |                |
| *Utricularia floridana                             |   |   |   |    |                |
| *Utricularia foliosa                               |   |   |   |    |                |
| *Utricularia inflata                               |   |   |   |    |                |
| *Utricularia purpurea                              |   |   |   |    |                |
| *Utricularia cornuta                               |   |   |   |    |                |
| *Utricularia radiata                               |   |   |   |    |                |
| Vallisneria americana                              |   |   |   | D  | P              |
| *Websteria confervoides                            |   |   |   |    |                |
| <b>Wedelia trilobata (Sphagneticola trilobata)</b> |   |   |   |    |                |
| Wolffiella spp.                                    |   |   |   |    |                |
| Woodwardia virginica                               |   |   |   |    |                |
| Xyris sp.                                          |   |   |   |    |                |
| Zizania aquatica                                   |   |   |   |    |                |
| Zizaniopsis milacea                                |   |   |   |    |                |
| <i>Cyperus americanus</i>                          |   |   |   |    |                |
| <i>Erechtikus Hieracit.</i>                        |   |   |   |    |                |

77913

| Waterbody: <u>Crescent Lake</u>                                                                                                                            | County: <u>Putnam</u>         | Date: <u>7/25/17</u>                                                                         |   |    |                |                                                |   |   |   |    |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------------------------------------------------------------------------|---|----|----------------|------------------------------------------------|---|---|---|----|----------------|
| Analyst: <u>AK/PO/BD/JP</u>                                                                                                                                | Signature: <u>[Signature]</u> | STORET: <u>50867</u>                                                                         |   |    |                |                                                |   |   |   |    |                |
| Except where noted as "sp." species level identification required. *Genera that may require lab verification*<br>Plants in bold = FLEPPC invasive exotic.  |                               | Lake units sampled (circle one group):<br>1, 4, 7, 10    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                                                                                                                                                    | 3                             | 6                                                                                            | 9 | 12 | Collected? (✓) | SPECIES                                        | 3 | 6 | 9 | 12 | Collected? (✓) |
| Acer rubrum                                                                                                                                                | p                             | p                                                                                            | p | p  |                | Habenaria repens                               |   |   |   |    |                |
| <b>Alternanthera philoxeroides</b>                                                                                                                         |                               |                                                                                              |   |    |                | <b>Hydrilla verticillata</b>                   |   |   |   |    |                |
| Andropogon sp.                                                                                                                                             |                               | p                                                                                            |   |    |                | Hydrocotyle sp.                                | p | p | p |    |                |
| Azolla filiculoides (A. caroliniana)                                                                                                                       |                               |                                                                                              |   |    |                | <b>Hygrophila polysperma</b>                   |   |   |   |    |                |
| Baccharis sp.                                                                                                                                              | p                             | p                                                                                            | p | p  |                | *Hypericum fasciculatum                        |   |   |   |    |                |
| Bacopa caroliniana                                                                                                                                         |                               |                                                                                              |   |    |                | *Hypericum hypericoides                        |   |   |   |    |                |
| Bacopa monnieri                                                                                                                                            |                               |                                                                                              |   |    |                | *Hypericum myrtifolium                         |   |   |   |    |                |
| Bidens laevis                                                                                                                                              |                               |                                                                                              |   |    |                | Ilex cassine                                   | p |   |   |    |                |
| Bidens mitis                                                                                                                                               |                               |                                                                                              |   |    |                | <b>Ipomoea aquatica</b>                        |   |   |   |    |                |
| Blechnum serrulatum                                                                                                                                        |                               |                                                                                              |   |    |                | Ipomoea sagittata                              |   |   |   |    |                |
| Boehmeria cylindrica                                                                                                                                       |                               | p                                                                                            |   |    |                | Itea virginica                                 |   |   |   |    |                |
| Brasenia schreberi                                                                                                                                         |                               |                                                                                              |   |    |                | Juncus effusus                                 | p |   |   |    |                |
| Cabomba caroliniana                                                                                                                                        |                               |                                                                                              |   |    |                | *Juncus marginatus                             |   |   |   |    |                |
| <b>Casuarina equisetifolia</b>                                                                                                                             |                               |                                                                                              |   |    |                | *Juncus megacephalus                           |   |   |   |    |                |
| Centella asiatica                                                                                                                                          |                               |                                                                                              |   |    |                | Juncus repens                                  |   |   |   |    |                |
| Cephalanthus occidentalis                                                                                                                                  | p                             | p                                                                                            | p | p  |                | *Juncus scirpoides                             |   |   |   |    |                |
| Ceratophyllum demersum                                                                                                                                     |                               |                                                                                              |   | p  |                | Lachnanthes caroliniana                        |   |   |   |    |                |
| Chara sp.                                                                                                                                                  |                               |                                                                                              |   |    |                | Leersia hexandra                               |   |   |   |    |                |
| Cladium jamaicense                                                                                                                                         |                               |                                                                                              |   |    |                | <b>Landoltia punctata (Spirodela punctata)</b> |   |   |   |    |                |
| Cliftonia monophylla                                                                                                                                       |                               |                                                                                              |   |    |                | Lemna sp.                                      |   |   |   |    |                |
| <b>Colocasia esculenta</b>                                                                                                                                 | p                             | p                                                                                            | p | p  |                | Leucothoe racemosa (Eubotrys racemosa)         |   |   |   |    |                |
| *Commelina                                                                                                                                                 |                               |                                                                                              |   |    |                | Limnium spongia                                | p | p |   |    |                |
| Crinum americanum                                                                                                                                          |                               |                                                                                              |   |    |                | <b>Limnophila sessiliflora</b>                 |   |   |   |    |                |
| *Cyperus alternifolius (C. involucratus)                                                                                                                   |                               |                                                                                              |   |    |                | Liquidambar styraciflua                        |   | p | p | p  |                |
| Cyperus articulatus                                                                                                                                        |                               |                                                                                              | p | p  |                | *Ludwigia arcuata                              |   |   |   |    |                |
| Cyperus haspan                                                                                                                                             |                               |                                                                                              |   |    |                | *Ludwigia leptocarpa                           | p |   |   |    |                |
| *Cyperus lecontei                                                                                                                                          |                               |                                                                                              |   |    |                | *Ludwigia linearis                             |   |   |   |    |                |
| *Cyperus polystachyos                                                                                                                                      |                               |                                                                                              |   |    |                | *Ludwigia octovalvis                           |   |   |   |    |                |
| *Cyperus odoratus                                                                                                                                          |                               | p                                                                                            |   |    |                | *Ludwigia peruviana                            |   | p | p | p  |                |
| *Cyperus surinamensis                                                                                                                                      | p                             | p                                                                                            |   |    |                | *Ludwigia repens                               |   | p | p | p  |                |
| Cyrilla racemiflora                                                                                                                                        |                               |                                                                                              |   |    |                | *Ludwigia                                      |   |   |   |    |                |
| Decodon verticillatus                                                                                                                                      |                               |                                                                                              |   |    |                | Luziola fluitans (Hydrochloa carolinensis)     |   |   |   |    |                |
| Diodia virginiana                                                                                                                                          |                               |                                                                                              |   |    |                | Lyonia lucida                                  |   |   |   |    |                |
| *Echinochloa crus-galli                                                                                                                                    | p                             |                                                                                              |   |    |                | Magnolia virginiana                            | p |   |   |    |                |
| *Echinochloa muricatum                                                                                                                                     | p                             |                                                                                              |   |    |                | 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                               | p | p | p | p  |                |
| *Eleocharis baldwinii                                                                                                                                      |                               |                                                                                              |   |    |                | <b>Mimosa pigra</b>                            |   |   |   |    |                |
| *Eleocharis                                                                                                                                                |                               |                                                                                              |   |    |                | Myrica cerifera                                | p | p | p | p  |                |
| Eleocharis cellulosa                                                                                                                                       |                               |                                                                                              |   |    |                |                                                |   |   |   |    |                |
| Eleocharis equisetoides                                                                                                                                    |                               |                                                                                              |   |    |                | <i>Kosteletzkya pentstemonifolia</i>           | p | p | p |    |                |
| Eleocharis interstincta                                                                                                                                    |                               |                                                                                              |   |    |                | <i>Cyperus matricariae</i>                     | p | p | p | p  |                |
| *Eriocaulon compressum                                                                                                                                     |                               |                                                                                              |   |    |                | <i>Hibiscus coccineus</i>                      | p | p | p | p  |                |
| *Eriocaulon decangulare                                                                                                                                    |                               |                                                                                              |   |    |                | <i>Carpinus caroliniana</i>                    | p | p | p | p  |                |
| Eupatorium capillifolium                                                                                                                                   | p                             | p                                                                                            | p | p  |                | <i>Amorpha fruticosa</i>                       | p | p | p | p  |                |
| *Fuirena                                                                                                                                                   |                               |                                                                                              |   |    |                | <i>Fraxinus pennsylvanica</i>                  | p | e | p | p  |                |
| Fuirena scirpoidea                                                                                                                                         |                               |                                                                                              |   |    |                | <i>Symphoricarpos carolinensis</i>             | p | p | p | p  |                |
| Gordonia lasianthus                                                                                                                                        |                               |                                                                                              |   |    |                | <i>Wickstroemia caryophyllata</i>              |   |   |   | p  |                |