



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

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Data Qualified?
Yes / No

Location/STORET Station Name: Lake Lowery @ Center

Date: 9/25/2017
(mm/dd/yyyy)

STORET # G1CE0074

WBID: 2890A

Latitude: 28.13027

(Decimal Degrees)

County: POLK

RQ: 2017-09-18-49

ORG ID: 21FLCEN

Longitude: -81.67819

(Decimal Degrees)

Receiving Body of Water:

Field ID: G1CE0074

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Terry Riordan		☒	☒	☒	☒	☒
M. Ke Drennan		☒	☒	☒	☒	☒

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Equipment ID		

Collection Method	
☐ Wading	☐ Via Boat
☐ From Shore	☐ Canoe/Kayak
☐ Other (note below)	☐ Electric Motor
	☒ Gasoline Motor

Water Level: Dry / Pooled / Low / <u>Normal</u> / High / Flooded						Matrix: <u>Fresh</u> / Marine / DI											
Meter ID# <u>Boop/NON</u>						Photos: Yes / No						Tide Falling: Yes / No / <u>NA</u>					
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)							
EST	1205	0.3	3.6	8.6	111	7.3	0.1	0.7	151	28.5							
CEN		3.1		7.8	98	6.9	0.1		151	27.4							

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

SBIO ID Numbers: SBIO-ID: 78064 RPS-ID: Macrophyte-ID: 10752 LIMS#: 1931470

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci ☐ qPCR	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes: Fletcher Fish Camp Boat Ramp: 28.115457 -81.670973

Signature: [Signature] Date: 9-25-17

Field Parameters Entered into LIMS: LMD 10 19 17 (Initials/Date)

Field Parameters QC in LIMS: 7R 10/26/17 (Initials/Date)

Date Migrated to STORET: _____

Field Sheets Scanned/Saved: _____

Lake Lowery @ Center

Date: 09/25/2017 RQ-2017-09-18-49

G1CE0074

Field ID ↑ STORET ↓ G1CE0074

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLEID: _____ MACROPHYTE ID: _____ LATITUDE: 28.13027
 COUNTY: POLK STORET #: GICE0074 LONGITUDE: -81.67819
 DATE: 9/25/17 TIME: _____ SAMPLING AGENCY: ZI FL CEM
 SITE NAME: Lake Lowery WBID: 2890A
 FIELD ID/NAME: GICE0074 LAKE SIZE: 362 ha RQ: 2017-09-18-49

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS): Forest/Natural <u>84</u> Silviculture _____ Field/Pasture <u>5</u> Agricultural _____ Residential <u>11</u> Commercial _____ Industrial _____ Other (Specify) _____				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: <u>1.02</u>	
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy				Artificially Impounded ☐ Yes ☒ No	
STORMWATER INPUTS <u>16</u>		Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation 20 19 18 17 16		Some direct stormwater inputs (ditches, pipes, cultivated vegetation < 10%) but good BMPs in place 15 14 13 12 11	
LAKESIDE ALTERATIONS <u>13</u>		Very few man-made structures, roads, or other disturbance adjacent to lake (<10% lakeside affected) 20 19 18 17 16		Moderate disturbance visible - structures, roads or other (10% - 49% lakeside affected) 15 14 13 12 11	
BUFFER ZONE <u>15</u>		Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer 20 19 18 17 16		89% -51% of shoreline with >18m buffer or >75% with 10m to 18m buffer 15 14 13 12 11	
				Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11% -50%) but few BMPs in place 10 9 8 7 6	
				Many structures, roads or other human disturbance visible (50% - 70% lakeside affected) 10 9 8 7 6	
				Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1	
				Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1	
				50% -30% of shoreline with >18m buffer or 50% -74% with 10m to 18m buffer 10 9 8 7 6	
				< 29% of shoreline with >18m buffer 5 4 3 2 1	

WATER / SUBSTRATE / BIOLOGICAL: SAMPLES AND OBSERVATIONS

Water: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☒ Yes ☐ No pH < 2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>SA-7093010</u> Exp. Date: <u>4/5/18</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High				Water Odors: ☒ Normal ☐ Sew age ☐ Petroleum ☐ Other _____			
				Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____			
Meter Readings: Top: <u>0.3</u> <u>28.5</u> <u>7.3</u> <u>8.6</u> <u>111</u> <u>151</u> <u>0.1</u> Mid-Depth: _____ Bottom: <u>3.1</u> <u>27.4</u> <u>6.9</u> <u>7.8</u> <u>98</u> <u>151</u> <u>0.1</u> Meter ID: <u>Boop/Non</u>				Clarity: ☐ Clear ☒ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☐ Clear ☒ Tannic ☐ Green SECCHI (M) <u>0.7</u> Total Station Depth (M) <u>3.6</u> VOB ☐			
Sediment Type: (may check more than one) ☐ Sandy ☒ Organic fibrous (peaty, CPOM) ☐ Vegetated ☒ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____				Sediment Odors: ☐ Normal ☐ Other (Specify): _____ ☒ Anaerobic			
Biological Communities: LVI Conducted? ☒ Yes ☐ No Phytoplankton Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot #: _____ Exp Date: _____ Algal Bloom/Algal ID Sample Taken? Yes No Active Vegetation Mgmt? ☐ Yes ☐ No ☒ Don't Know				Abundance: Absent Rare Common Abundant Periphyton ☐ ☒ ☐ ☐ Nuisance Plants ☐ ☒ ☐ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☒ ☐ ☐ ☐			
Weather Conditions: <u>80's, clear</u>				Additional Notes:			
SAMPLING TEAM: <u>Terry Riordan / Mike Drennan</u>				SIGNATURE: <u>[Signature]</u>		DATE: <u>9-25-17</u>	

Waterbody: <u>Lake Lowery</u>		County: <u>Lake</u>		Date: <u>9/25/17</u>							
Analyst:		Signature:		STORET: <u>61CE0074</u>							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold= FLEPPC invasive exotic. 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): 1, 4, 7, 10 2, 5, 8, 11 <u>3, 6, 9, 12</u>							
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Acer rubrum	/	/	/	/		Fuirena scirpoides					
Alternanthera philoxeroides						Gordonia lasianthus					
Amaranthus australis						Habenaria repens					
Andropogon sp.	/			/		Hibiscus coccineus					
Azolla filiculoides (A. caroliniana)						Hibiscus grandiflora					
Baccharis sp.	/					Hydrilla verticillata					
Bacopa caroliniana						Hydrocotyle sp.	/	/	/		
Bacopa monnieri						Hygrophila polysperma					
Bidens alba						Hymenocallis sp.					
Bidens laevis						*Hypericum fasciculatum					
Bidens mitis						*Hypericum hypericoides					
Blechnum serrulatum						*Hypericum myrtifolium					
Boehmeria cylindrica						Ilex cassine	/				
Brasenia schreberi						Ipomoea aquatica					
Cabomba caroliniana	/					Ipomoea sagittata					
Canna						Itea virginica					
Centella asiatica						Juncus effusus					
Cephalanthus occidentalis	/	/	/	/		*Juncus marginatus					
Ceratophyllum demersum				/		*Juncus megacephalus					
Chara sp.						Juncus repens					
Cinnamomum camphora				/		*Juncus scirpoides					
Cladium jamaicense	/	/	/	/		Lachnanthes caroliniana	/	/			
Colocasia esculenta	/	/	/	/		Leersia hexandra					
*Commelina						Landoltia punctata (Spirodela punctata)					
Crinum americanum	/					Lemna sp.		/			
*Cyperus alternifolius (C. involucratus)						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus articulatus						Limnobia spongia					
Cyperus haspan						Limnophila sessiliflora					
*Cyperus lecontei						Liquidambar styraciflua					
*Cyperus polystachyos						*Ludwigia arcuata					
*Cyperus odoratus						Ludwigia hex-grand-uruguayensis complex**					
*Cyperus surinamensis						*Ludwigia leptocarpa	/	/	/		
Cyrilla racemiflora						Ludwigia (native)					
Decodon verticillatus						*Ludwigia octovalvis	/	/	/		
Diodia virginiana						*Ludwigia peruviana	/	/	/	/	
*Echinochloa crus-galli						*Ludwigia repens	/	/	/		
*Echinochloa muricatum						Ludwigia suffruticosa	/	/	/		
Echinochloa walteri						Luziola fluitans (Hydrochloa carolinensis)					
Eclipta prostrata (E. alba)						Magnolia virginiana	/	/	/	/	
Eichhornia crassipes	/	/	/	/		Mayaca fluviatilis					
*Eleocharis <u>baldwinii</u>	/	/	/	/		Melaleuca quinquenervia		/			
Eleocharis cellulosa						Micranthemum glomeratum					
*Eleocharis elongata	/	/	/	/		Micranthemum umbrosum					
Eleocharis equisetoides						Mikania scandens	/	/			
Eleocharis interstincta						Mimosa pigra					
Eleocharis submersed viviparous	/	/	/	/		Myrica cerifera	/	/	/	/	
*Eriocaulon compressum	/	/	/	/							
*Eriocaulon decangulare	/	/	/	/							
Eupatorium capillifolium	/	/	/	/							
Fraxinus											

* No Dom. Section 9

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Lowery (Lake Lowery at Center)					Date: 9/25/17						
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Myriophyllum aquaticum						Salix caroliniana					
*Myriophyllum heterophyllum						Salvinia minima					
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						Schinus terebinthifolius					
*Najas guadalupensis						*Schoenoplectus californicus					
*Najas minor						*Schoenoplectus pungens					
Nelumbo lutea						*Schoenoplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.						Scirpus cyperinus					
Nymphaea mexicana						*Sesbania					
Nymphaea odorata						Solidago sp.					
Nymphoides aquatica						Sparganium americanum					
Nyssa sylvatica var. biflora						Spartina bakeri					
Orontium aquaticum						Spirodela polyrhiza					
Osmunda cinnamomea						Taxodium sp.					
Osmunda regalis						Thalia geniculata					
Panicum hemitomon						Thelypteris interrupta					
Panicum repens						Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.					
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia foliosa					
Pennisetum purpureum						*Utricularia inflata					
Phragmites australis						*Utricularia purpurea					
Pinus elliottii						*Utricularia radiata					
Pistia stratioides						*Utricularia resupinata					
Pluchea sp.						Vallisneria americana					
*Polygonum glabrum (densiflorum)						Vitis sp.					
Polygonum hirsutum						*Websteria confervoides					
*Polygonum hydropiperoides						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum punctatum						Wolffiella spp.					
*Polygonum						Woodwardia virginica					
Pontederia cordata						Xyris sp.					
*Potamogeton diversifolius						Zizania aquatica					
*Potamogeton illinoensis						Zizaniopsis milacea					
*Potamogeton pusillus						Saccharum giganteus					
*Potamogeton pectinatus (Stuckenia pectinatus)						Metelouca viminalis					
Proserpinaca pectinata											
*Rhexia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora nitens											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											

LVI Map for LAKE LOWERY, WBID 2890A

