

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:	Lake Lelia at Center				Sample Date:	7/11/2022	
WIN / Field ID:	G4SD0218	ORG ID:	21FLFTM	ENR:			
County:	Highlands	WBID:	1813J	LAKE			
Receiving Body of Water:	NA				RQ-	2022-07-11-49	
Latitude:	27.573889			Longitude:	-81.503056		

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Nicole Reistad		x		x	x
Thomas Baker	x		x		

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
	Syringe	Pole	
Syringe Lot# 1363442		Filter Lot# 17347262	
Secchi Equipment ID:		3312A	
Collection Method			
	Wading	Canoe/Kayak	
	From Shore	Electric Motor	
		x Gasoline Motor	
Depth Measured With Sonar			

Water Level:	Normal
Flow:	NA
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	President Camacho

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPTth)
EST	1025	6.5	0.3	7.77	104.9	31.2	7.38	1.1	155.3	0.07
	1026		2	7.71	103.8	31	7.61		155.3	0.07
	1028		6	0.33	4.7	25	6.6		164.9	0.08

Biological Samples Collected:

LVI

SBIO Visit ID:

HA ID:

RPS ID:

Macrophyte ID:

LIMS Sample ID Entered
Into The Macrophyte Module:

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type	Lot#	Expiration Date	pH Check	
Microbiology								
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
Nutrients	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			ICE				
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE				
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	131766	11/19/22	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA1105100	06/07/2023	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS		Ice				
Macroinvertebrates								
Organics (GC)	W-PSNP-TQ			Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular								
Periphyton								
Phytoplankton								
BOD								
Other(s)								
Field Comments:								
Comments on COC:								
Relinquish Date:	07/11/2022	Signature:						

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____

(Initials/Date)

QC Station ID, Field Parameters In LIMS DMT: _____

(Initials/Date)

Save Field Sheets on Network: _____

(Initials/Date)

Migrate Data to WIN: _____

(Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

Lin ID: 2340502

SAMPLE ID: 84807 MACROPHYTE ID: 12204 LATITUDE: 27.573889
 COUNTY: Highland STORET #: G4500218 LONGITUDE: -81.503056
 DATE: 07/11/22 TIME: _____ SAMPLING AGENCY: FDER SROL
 SITE NAME: Lake Lelia WBID: 18135
 FIELD ID/NAME: G4500218 LAKE SIZE: Large RQ: 2022-07-11-49

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>30%</u> Silviculture _____ Field/Pasture <u>30%</u> Agricultural <u>25%</u> Residential <u>10%</u> Commercial <u>5%</u> Industrial _____ Other (Specify) _____				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ Land Use Source & Year: _____	
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>4</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	Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place 10 9 8 7 6	Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 <u>4</u> 3 2 1	
LAKESIDE ALTERATIONS <u>7</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	Many structures, roads or other human disturbance visible (50%-70% lakeside affected) 10 9 8 <u>7</u> 6	Highly developed or disturbed (>70% of lakeside affected) 5 4 3 2 1	
BUFFER ZONE <u>6</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	50%-30% of shoreline with >18m buffer or 50%-74% with 10m to 18m buffer 10 9 8 7 <u>6</u>	< 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>131766</u> Exp. Date: <u>11/19/22</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High								Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____																																			
Meter Readings: <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat. (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.3</u></td> <td><u>31.2</u></td> <td><u>7.38</u></td> <td><u>7.77</u></td> <td><u>104.9</u></td> <td><u>155.3</u></td> <td><u>0.07</u></td> </tr> <tr> <td>Mid-Depth:</td> <td><u>2.0</u></td> <td><u>31</u></td> <td><u>7.61</u></td> <td><u>7.71</u></td> <td><u>103.8</u></td> <td><u>155.3</u></td> <td><u>0.07</u></td> </tr> <tr> <td>Bottom:</td> <td><u>6.0</u></td> <td><u>25</u></td> <td><u>6.6</u></td> <td><u>0.33</u></td> <td><u>4.7</u></td> <td><u>164.9</u></td> <td><u>0.08</u></td> </tr> </tbody> </table> Meter ID: _____									Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)	Top:	<u>0.3</u>	<u>31.2</u>	<u>7.38</u>	<u>7.77</u>	<u>104.9</u>	<u>155.3</u>	<u>0.07</u>	Mid-Depth:	<u>2.0</u>	<u>31</u>	<u>7.61</u>	<u>7.71</u>	<u>103.8</u>	<u>155.3</u>	<u>0.07</u>	Bottom:	<u>6.0</u>	<u>25</u>	<u>6.6</u>	<u>0.33</u>	<u>4.7</u>	<u>164.9</u>	<u>0.08</u>	Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____			
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Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☐ Sand/Silt ☒ Organic smooth (muck) ☐ Other (Specify): _____								Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ Green																																			
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: <table border="1"> <thead> <tr> <th></th> <th>Absent</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Nuisance Plants</td> <td>☐</td> <td>☐</td> <td>☐</td> <td>☒</td> </tr> <tr> <td>Submersed Plants</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Exotic Apple Snails</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> </tbody> </table>					Absent	Rare	Common	Abundant	Periphyton	☒	☐	☐	☐	Nuisance Plants	☐	☐	☐	☒	Submersed Plants	☐	☐	☒	☐	Exotic Apple Snails	☐	☐	☒	☐							
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Submersed Plants	☐	☐	☒	☐																																							
Exotic Apple Snails	☐	☐	☒	☐																																							
Weather Conditions: <u>Sunny</u>								Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____																																			
SAMPLING TEAM: <u>Nicole Reistad, Thomas Bake</u>								SIGNATURE: <u>[Signature]</u>																																			
DATE: <u>07/11/22</u>								Additional Notes:																																			

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Lelia</u>		County: <u>Highland</u>		Date: <u>07/11/2022</u>					
Analyst: <u>NICOLE REISTAD, THOMAS BAKER</u>		Signature: <u>[Signature]</u>		STORET: <u>GASD0218</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				Collected? (✓)	SPECIES				Collected? (✓)
Acer rubrum					Habenaria repens				✓
Alternanthera philoxeroides					Hydrilla verticillata				
Andropogon sp.					Hydrocotyle sp.	✓		✓	✓
Azolla filiculoides (A. caroliniana)					Hygrophila polysperma				
Baccharis sp.					*Hypericum fasciculatum				
Bacopa caroliniana					*Hypericum hypericoides				
Bacopa monnieri					*Hypericum myrtifolium				
Bidens laevis					Ilex cassine				
Bidens mitis					Ipomoea aquatica				
Blechnum serrulatum					Ipomoea sagittata				
Boehmeria cylindrica					Itea virginica				
Brasenia schreberi					Juncus effusus				
Cabomba caroliniana					*Juncus marginatus				✓
Casuarina equisetifolia					*Juncus megacephalus				✓
Centella asiatica					Juncus repens				
Cephalanthus occidentalis	✓	✓	✓	✓	*Juncus scirpoides				
Ceratophyllum demersum					Lachnanthes caroliniana	✓	✓		
Chara sp.					Leersia hexandra				
Cladium jamaicense	✓				Landoltia punctata (Spirodela punctata)				
Cliftonia monophylla					Lemna sp.				
Colocasia esculenta					Leucothoe racemosa (Eubotrys racemosa)				
*Commelina					Limnium spongia				
Crinum americanum					Limnophila sessiliflora				
*Cyperus alternifolius (C. involucratus)					Liquidambar styraciflua				
Cyperus articulatus					*Ludwigia arcuata				
Cyperus haspan			✓	✓	*Ludwigia leptocarpa				
*Cyperus lecontei				✓	*Ludwigia linearis				
*Cyperus polystachyos				✓	*Ludwigia octovalvis				
*Cyperus odoratus		✓	✓	✓	*Ludwigia peruviana			✓	✓
*Cyperus surinamensis					*Ludwigia repens	✓	✓		
Cyrtilla racemiflora					*Ludwigia				
Decodon verticillatus					Luziola fluitans (Hydrochloa carolinensis)				
Diodia virginiana					Lyonia lucida				
*Echinochloa crus-galli					Magnolia virginiana				
*Echinochloa muricatum					Mayaca fluviatilis				
Echinochloa walteri					Melaleuca quinquenervia			✓	✓
Eclipta prostrata (E. alba)					Micranthemum glomeratum				
Egeria densa					Micranthemum umbrosum				
Eichhornia crassipes					Mikania scandens				
*Eleocharis baldwinii				✓	Mimosa pigra				
*Eleocharis					Myrica cerifera	✓	✓		
Eleocharis cellulosa	✓	✓	✓	✓					
Eleocharis equisetoides					Juncus articulatus? TB				
Eleocharis interstincta					Sagittaria arifolia				
*Eriocaulon compressum									
*Eriocaulon decangulare					Lachnocaulon anceps	✓			✓
Eupatorium capillifolium	✓		✓	✓					
*Fuirena									
Fuirena scirpoidea	D	✓		✓					
Gordonia lasianthus									

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Lelia GASD0218

Date: 07/11/2022

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 odorata						*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon						Thalia geniculata					
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 floridana					
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii	✓					*Utricularia purpurea	✓				
Pistia stratioides	✓	✓	✓	✓		*Utricularia cornuta					
Pluchea sp.	✓	✓	✓	✓		*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides						*Websteria confervoides					
*Polygonum punctatum						Wedelia trilobata (Sphagneticola trilobata)					
*Polygonum						Wolffiella spp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis	✓	✓	✓			Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis milacea					
*Potamogeton pectinatus (Stuckenia pectinatus)						Vitis	✓				
Proserpinaca pectinata						Quercus virginiana	✓				
*Rhexia mariana	✓					(cow pea) Vigna luteola	✓				
*Rhynchospora corniculata						Rhynchospora Hibiscus grandiflorus	✓				
*Rhynchospora inundata						Utricularia gibba	✓	✓	✓	NR	
Rhynchospora tracyi						Thalictrum triflorum	✓	✓	✓	NR	
Ricciocarpus natans						Cicuta maculata					
Sabal palmetto						Sagittaria	✓				NR
Sagittaria filiformis	✓					Rhynchospora microcephala	✓				
*Sagittaria graminea						Potamogeton ? 9/13 m	✓				
*Sagittaria isoetiformis						Rhynchospora nitens	✓				
Sagittaria lancifolia						Potamogeton Blechnum serrulatum					
Sagittaria latifolia	✓					Thelypteris interrupta					