

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

REFERENCE LAKES Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:		Lake Annie				Sample Date:		9/22/2022	
WIN / Field ID:	26011159	ORG ID:	21FLFTM	ENR:	-	Latitude:	27.20972		
County:	Highlands	WBID:	1938H	LAKE	3F	Longitude:	-81.34917		
Receiving Body of Water:						-	RQ-	2022-08-22-12	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Thomas Baker	x	x	x		
William Mullen		x		x	x

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
	Syringe	Pole	
Syringe Lot# 1363442		Filter Lot# 17441866	
Secchi Equipment ID:		3312A	
Collection Method			
	Wading	x	Canoe/Kayak
	From Shore		Electric Motor
			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	925	9.3	0.3	6.79	88.5	29.1	5.58	1.9	38.7	0.02
	927		2	5.41	69.9	28.5	5.51		39.7	0.02
	929		8.8	0.42	4.9	20.1	5.57		42.8	0.02

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	Syring Lot#:1363442; Filter Lot#:17441866			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	SA2145160	06/02/23	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA1286110	11/16/22	HNO3 pH<2
Organics (LC)								
Macroinvertebrates								
Organics (GC)					*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular								
Periphyton								
Phytoplankton	DTY-QN-C	PKD-QN-BV		Ice				
BOD								
DOC					SyringLot#		FilterLot#	
Other(s)								
Field Comments:								
Comments on COC:	Please log in PKD-QN-BV & DTY-QN-C under a separate event with priority 12, Bottle Group - A.							
Relinquish Date:	09/22/2022	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

SAMPLE ID: 2022-08-22-12
COUNTY: Highlands
DATE: 09/22/22
SITE NAME: Lake Anne
FIELD ID/NAME: Lake Anne Reference Lake

MACROPHYTE ID: 12309
STORET #: 2601159
TIME: _____

LATITUDE: 27.20972
LONGITUDE: -81.34917
SAMPLING AGENCY: SOROL
WBID: 1938H
LAKE SIZE: Small RQ: 2B

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>100</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industrial _____ Other (Specify) _____				LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ Land Use Source & Year: _____	
Local Watershed Erosion (select one) : ☒ None ☐ Slight ☐ Moderate ☐ Heavy				Artificially Impounded ☐ Yes ☒ No	
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy					
STORMWATER INPUTS <u>20</u>		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	
LAKESIDE ALTERATIONS <u>19</u>		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)	
BUFFER ZONE <u>17</u>		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	
		Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11%-50%) but few BMPs in place		Many structures, roads or other human disturbance visible (50%-70% lakeside affected)	
		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place		Highly developed or disturbed (>70% of lakeside affected)	

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>SA2145160</u> Exp. Date: <u>06/02/23</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High				Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____			
Meter Readings: Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat. (%) Cond. (UMHO/CM) Salinity (PPT) Top: <u>0.3</u> <u>29.1</u> <u>5.58</u> <u>6.79</u> <u>88.5</u> <u>38.7</u> <u>0.02</u> Mid-Depth: <u>2.0</u> <u>28.5</u> <u>5.51</u> <u>5.41</u> <u>69.9</u> <u>39.7</u> <u>0.02</u> Bottom: <u>8.8</u> <u>22.1</u> <u>5.57</u> <u>0.42</u> <u>4.9</u> <u>42.8</u> <u>0.02</u>				Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____			
Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green				SECCHI (M) <u>1.9</u> Total Station Depth (M) <u>9.3</u>			
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Vegetated ☒ Sand/Silt ☐ Organic smooth (muck) ☐ Other (Specify): _____				Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____			
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>Sunny</u>				Additional Notes:			
SAMPLING TEAM: <u>William Muller, Thomas Baker</u>				SIGNATURE: <u>Thomas Baker</u>		DATE: <u>09/22/22</u>	

LMSTO: 2359283 LMSTO Phyto: 2359294 VISIT ID: 85738

Macro ID: 72309

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Annie</u>		County: <u>Highlands</u>		Date: <u>09/22/22</u>							
Analyst: <u>William Miller Thomas Baker</u>		Signature: <u>[Signature]</u>		STORET: <u>2601159</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			X			Habenaria repens					
Alternanthera philoxeroides						Hydrilla verticillata					
Andropogon sp.						Hydrocotyle sp.					
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.						*Hypericum fasciculatum	X	X	X	X	
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum	X	X	X	X		Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi						Juncus effusus					
Cabomba caroliniana						*Juncus marginatus					
						*Juncus megacephalus					
						Juncus repens					
Cephalanthus occidentalis				X		*Juncus scirpoides					
Ceratophyllum demersum						Lachnanthes caroliniana					
Chara sp.						Leersia hexandra					
Cladium jamaicense		X				Landoltia punctata (Spirodela punctata)					
						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	X	X	X	X	
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis					
*Cyperus odoratus						*Ludwigia peruviana	X	X	X	X	
*Cyperus surinamensis						*Ludwigia repens	X				
Cyperus difformis		X				*Ludwigia					
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana					
*Echinochloa muricatum						Mayaca fluviatilis	X	X	X	X	
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens	X	X	X	X	
*Eleocharis baldwinii						Mimosa pigra					
*Eleocharis						Myrica cerifera	X	X	X	X	
Eleocharis cellulosa						Hypochaeris	X	X	X	X	
Eleocharis equisetoides											
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium	X			X							
*Fuirena scirpoides	X	X	X	X							
Fuirena scirpoidea											
Gordonia lasianthus				X							

Event: 50-NIS-202209-26-01, 02

RA-2022-08-22-12

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Lake Anne</u>					Date: <u>09/22/22</u>						
SPECIES	3	6	9	12	Collected? (✓)	SPECIES	3	6	9	12	Collected? (✓)
Myriophyllum aquaticum						Salix caroliniana	X				
*Myriophyllum heterophyllum						Salvinia minima		X			
*Myriophyllum laxum						Sambucus canadensis					
*Myriophyllum pinnatum						Sapium sebiferum					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						Schinus terebinthifolius	X	X	X	X	
*Najas guadalupensis						*Schoeroplectus californicus					
*Najas minor						<u>Sesuvia repens</u>	X	X	X	X	
Nelumbo lutea						*Schoeroplectus tabernaemontani (Scirpus validus)					
Nitella spp.						Scirpus cubensis (Oxycaryon cubense)					
Nuphar sp.	X	X	X	X		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	X	X	X	X		Thalia geniculata					
Panicum repens				X		Thelypteris palustris					
Paspalidium geminatum	X	X				Triadenum virginicum					
*Paspalum repens						Typha sp.					
Peltandra sp.						Urochloa mutica (Brachiaria mutica)					
Persea sp.						*Utricularia gibba (U. biflora)					
Pennisetum purpureum						*Utricularia floridana					
Phragmites australis						*Utricularia foliosa					
Pinus elliotii	X	X	X	X		*Utricularia inflata					
Pistia stratioides						*Utricularia purpurea					
Pluchea sp.						*Utricularia cornuta					
Polygonum glabrum (densiflorum)						*Utricularia radiata	X	X	X	X	
*Polygonum hydropiperoides						Vallisneria spiralis					
*Polygonum punctatum						*Websteria confertifolia					
*Polygonum						Wedelia trilobata (Sphagnetocola trilobata)					
Pontederia cordata						Wolffiella spp.					
*Potamogeton diversifolius						Woodwardia virginica					
*Potamogeton illinoensis						Xyris sp.					
*Potamogeton pusillus						Zizania aquatica					
*Potamogeton pectinatus (Stuckenia pectinatus)						Zizaniopsis milacea					
						<u>D. vine Smit</u>	X	X	X	X	
*Rhexia						<u>from Thelypteris interrupta</u>	X				
*Rhynchospora corniculata						<u>Nymphaea fraxinifolia</u>	X	X		X	
*Rhynchospora inundata											
Rhynchospora tracyi											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											