

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name:	Lake Martha NE of Center				Sample Date:	9/20/2022		
WIN / Field ID:	G3CE0057	ORG ID:	21FLCEN	ENR:	-		Latitude:	28.03017
County:	Polk	WBID:	1488P	LAKE			Longitude:	-81.7208
Receiving Body of Water:	-					RQ-	2022-06-06-37	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Matt Bearden		x		x	x
Leif Boman	x		x		

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
x	Syringe	Pole	
Syringe Lot# 2090604		Filter Lot# 17413308	
Secchi Equipment ID:		Light	
Collection Method			
	Wading	Canoe/Kayak	
	From Shore	Electric Motor	
		x	Gasoline Motor
Depth Measured With Secchi			

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

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	1326	5.6	0.3	7.67	103	30.9	7.41	1.6	142.6	0.07
	1331		2	7.33	97.2	30.1	7.4		142	0.07
	1333		5.1	4.45	58.7	29.8	7.13		142.3	0.07

Biological Samples Collected:

LVI

SBIO Visit ID: 85797

HA ID:

RPS ID:

Macrophyte ID:

12320

LIMS ID:

2358247

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type	Lot#	Expiration Date	pH Check	
Microbiology								
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate Nutrients	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
	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*	132683	12/18/2022	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						
Macroinvertebrates								
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R		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:	Sunny, clear							
Comments on COC:								
Relinquish Date:	09/20/2022	Signature:						

LIMS EVENT ID: CEN-DIST-2022-09-21-02

WIN Import ID: 36905

Enter Field Parameters, Verify Station ID in LIMS DMT: KWM 11/18/22

QC Station ID, Field Parameters in LIMS DMT: VLS 11/22/22

Save Field Sheets on Network: KWM 11/30/22 (Initials/Date)

Migrate Data to WIN: KWM 11/30/22 (Initials/Date)

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ **MACROPHYTE ID:** _____ **LATITUDE:** _____
COUNTY: Polk **STORET #:** _____ **LONGITUDE:** _____
DATE: 9/20/22 **TIME:** _____ **SAMPLING AGENCY:** _____
SITE NAME: LAKE Martha **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>75</u>	<u>20</u>		<u>5</u>			Land Use Source & Year: _____	
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy						Artificially Impounded					
Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy						☐ Yes ☒ No					
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>4</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>4</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>3</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: Nutrient Sample Taken? ☒ Yes ☐ No Preserved? ☒ Yes ☐ No pH<2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # _____ Exp. Date: _____ 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: _____ Mid-Depth: _____ Bottom: _____ Meter ID: _____						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
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 Cloudy</u>						Additional Notes:					
SAMPLING TEAM: <u>M. Bearden, L. Boman</u>						SIGNATURE: <u>[Signature]</u> DATE: <u>9/20/22</u>					

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Lake

Waterbody: *Marquette* County: *Polk* Date: *7/20/22*

Analyst: *Leif Boman, Matt Beards* Signature: *Leif Boman* STORET:

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**
3, 6, 9, 12

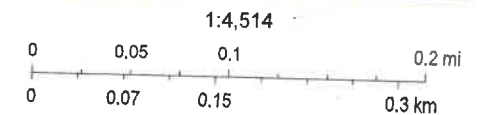
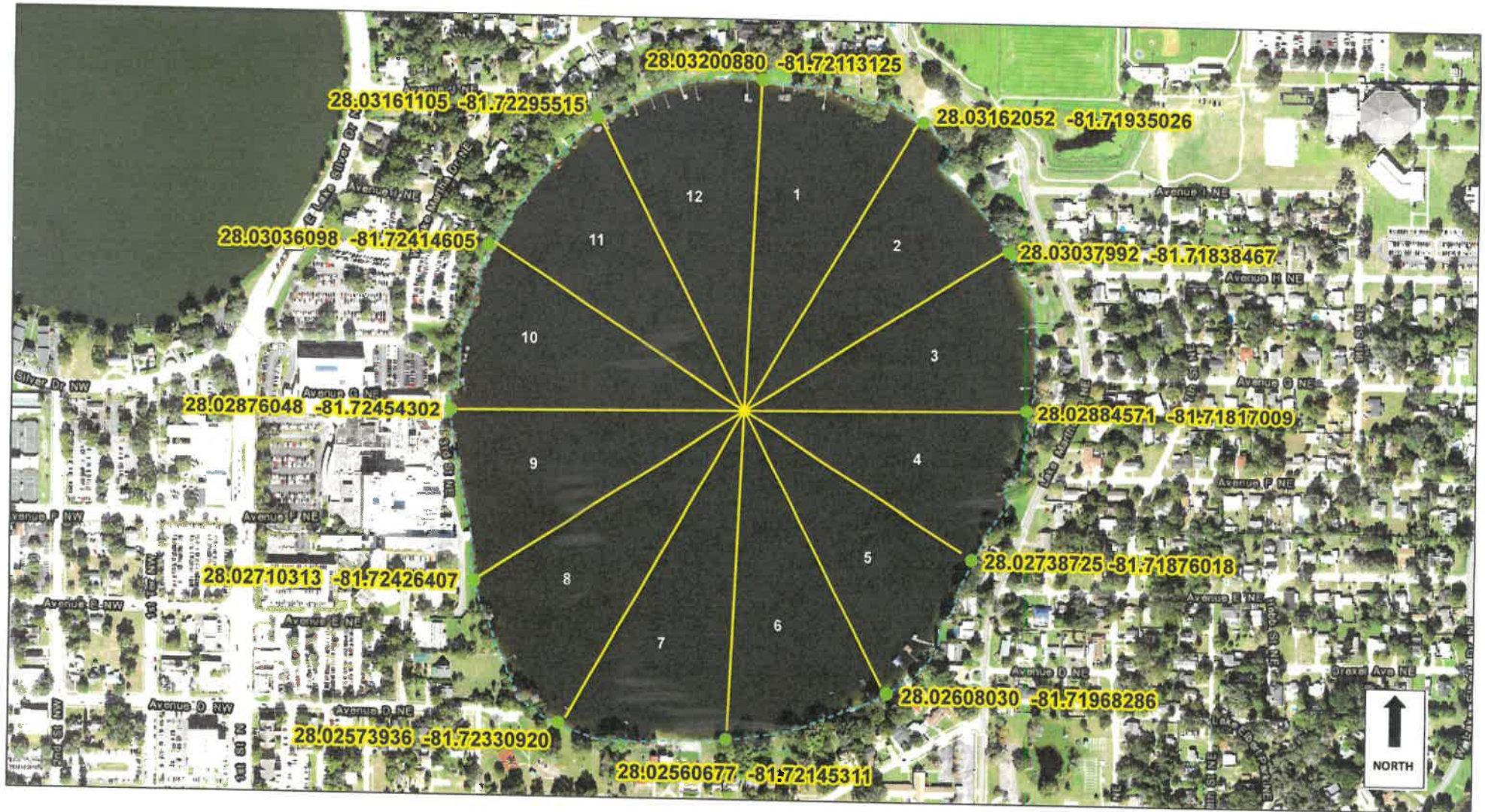
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Acer rubrum						Fuirena scirpoides					
Alternanthera philoxeroides						Gordonia lasianthus					
Amaranthus australis						Habenaria repens					
Andropogon sp.						Hibiscus coccineus					
Azolla filiculoides (A. caroliniana)						Hibiscus 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 (<i>red</i>)						Itea virginica					
Centella asiatica						Juncus effusus					
Cephalanthus occidentalis						*Juncus marginatus					
Ceratophyllum demersum						*Juncus megacephalus					
Chara sp.						Juncus repens					
Cladium jamaicense						*Juncus scirpoides					
Colocasia esculenta						Lachnanthes caroliniana					
*Commelina						Leersia hexandra					
Crinum americanum						Landoltia punctata (Spirodela punctata)					
*Cyperus alternifolius (C. involucratus)						Lemna sp.					
Cyperus articulatus <i>papyrus</i>						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus haspan						Limnium spongia					
*Cyperus lecontei						Limnophila sessiliflora					
*Cyperus polystachyos						Liquidambar styraciflua					
*Cyperus odoratus						*Ludwigia arcuata					
*Cyperus surinamensis						*Ludwigia grandiflora					
Cyrtilla racemiflora						*Ludwigia hexapetala					
Decodon verticillatus						*Ludwigia leptocarpa					
Diodia virginiana						Ludwigia (native)					
*Echinochloa crus-galli						*Ludwigia octovalvis					
*Echinochloa muricatum						*Ludwigia peruviana					
Echinochloa walteri						*Ludwigia repens					
Eclipta prostrata (E. alba)						Ludwigia suffruticosa					
Eichhornia crassipes						Luziola fluitans (Hydrochloa carolinensis)					
*Eleocharis						Magnolia virginiana					
Eleocharis cellulosa						Mayaca fluviatilis					
*Eleocharis elongata						Melaleuca quinquenervia					
Eleocharis equisetoides						Micranthemum glomeratum					
Eleocharis interstincta						Micranthemum umbrosum					
Eleocharis submersed viviparous						Mikania scandens					
*Eriocaulon compressum						Mimosa pigra					
*Eriocaulon decangulare						Myrica cerifera					
Eupatorium capillifolium											
Fraxinus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Lake Martha</u>				Date: <u>09/20/2022</u>			
SPECIES			Collected? (✓)	SPECIES			Collected? (✓)
Myriophyllum aquaticum				<i>Salix caroliniana</i>			
* <i>Myriophyllum heterophyllum</i>				Salvinia minima			
* <i>Myriophyllum laxum</i>				<i>Sambucus canadensis</i>			
* <i>Myriophyllum pinnatum</i>				Sapium sebiferum			
Myriophyllum spicatum				<i>Saururus cernuus</i>			
* <i>Najas filifolia</i>				Schinus terebinthifolius			
* <i>Najas guadalupensis</i>				* <i>Schoenoplectus californicus</i>			
* <i>Najas minor</i>				* <i>Schoenoplectus pungens</i>			
<i>Nelumbo lutea</i>				* <i>Schoenoplectus tabernaemontani</i> (<i>Scirpus validus</i>)			
<i>Nitella</i> spp.				<i>Scirpus cubensis</i> (<i>Oxycaryon cubense</i>)			
<i>Nuphar</i> sp.				<i>Scirpus cyperinus</i>			
<i>Nymphaea mexicana</i>				* <i>Sesbania</i>			
<i>Nymphaea odorata</i>				<i>Solidago</i> sp.			
<i>Nymphoides aquatica</i>				<i>Sparganium americanum</i>			
<i>Nyssa sylvatica</i> var. <i>biflora</i>				<i>Spartina bakeri</i>			
<i>Orontium aquaticum</i>				<i>Spirodela polyrhiza</i>			
<i>Osmunda cinnamomea</i>				<i>Taxodium</i> sp.			
<i>Osmunda regalis</i>				<i>Thalia geniculata</i>			
<i>Panicum hemitomon</i>				<i>Thelypteris interrupta</i>			
Panicum repens				<i>Thelypteris palustris</i>			
<i>Paspalidium geminatum</i>				<i>Triadenum virginicum</i>			
* <i>Paspalum repens</i>				<i>Typha</i> sp.			
<i>Paspalum urvillei</i>				Urochloa mutica (<i>Brachiaria mutica</i>)			
<i>Peltandra</i> sp.				* <i>Utricularia foliosa</i>			
<i>Persea</i> sp.				* <i>Utricularia gibba</i> (<i>U. biflora</i>)			
Pennisetum purpureum				* <i>Utricularia inflata</i>			
<i>Phragmites australis</i>				* <i>Utricularia purpurea</i>			
<i>Pinus elliotii</i>				* <i>Utricularia radiata</i>			
Pistia stratioides				* <i>Utricularia resupinata</i>			
<i>Pluchea</i> sp.				<i>Vallisneria americana</i>			
* <i>Polygonum glabrum</i> (<i>densiflorum</i>)				<i>Vigna luteola</i>			
<i>Polygonum hirsutum</i>				<i>Vitis</i> sp.			
* <i>Polygonum hydropiperoides</i>				* <i>Websteria confervoides</i>			
* <i>Polygonum punctatum</i>				Wedelia trilobata (<i>Sphagneticola trilobata</i>)			
* <i>Polygonum</i>				<i>Wolffiella</i> spp.			
<i>Pontederia cordata</i>				<i>Woodwardia virginica</i>			
* <i>Potamogeton diversifolius</i>				<i>Xyris</i> sp.			
* <i>Potamogeton illinoensis</i>				<i>Zizania aquatica</i>			
* <i>Potamogeton pusillus</i>				<i>Zizaniopsis milacea</i>			
* <i>Potamogeton pectinatus</i> (<i>Stuckenia pectinatus</i>)				<i>Quercus</i> (cannel)			
<i>Proserpinaca pectinata</i>				<i>Sabal</i>			
* <i>Rhexia</i>							
* <i>Rhynchospora corniculata</i>							
* <i>Rhynchospora inundata</i>							
<i>Rhynchospora nitens</i>							
<i>Ricciocarpus natans</i>							
<i>Sabal palmetto</i>							
<i>Sacciolepis striata</i>							
* <i>Sagittaria filiformis</i>							
* <i>Sagittaria graminea</i>							
* <i>Sagittaria isoetiformis</i>							
<i>Sagittaria lancifolia</i>							
<i>Sagittaria latifolia</i>							

upland plant- KM

LVI MAP FOR WBID 1488P LAKE MARTHA



Esri, HERE, Garmin, (c) OpenStreetMap contributors, FDOT