FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter Passed End of Day CCV: (Yes) / No

WIN Station Name:	Lake Alma NW of Center					**Sample Date:**	6/30/2022
WIN / Field ID:	G2CE0237	**ORG ID:**	21FLCEN	**ENR:**	-	**Latitude:**	28.718
County:	SEMINOLE	**WBID:**	2986D	LAKE		**Longitude:**	-81.3537
Receiving Body of Water:	-					**RQ-**	2022-05-02-30

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Katie March		x		x	x
Victoria Schwartz	x		x		

Sampling Equipment					
x	Sample Container			Carboy	
	Dipper			Van Dorn	
x	Syringe			Pole	
Syringe Lot#	*1335260*		**Filter Lot#**	*17413308*	
Secchi Equipment ID:	*Knothead*				

Collection Method			
	Wading	x	**Canoe/Kayak**
	From Shore		**Electric Motor**
			Gasoline Motor
Depth Measured With	*Secchi*		

Water Level:	*Normal*
Flow:	*NA*
Matrix:	*Fresh*
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	*Yes*
Meter ID:	*Craw Daddy*

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 (PPTh)
EST	1215	2.1	0.3	4.08	54.5	30.6	6.28	1.1	108.5	0.05
	1217		1.6	0.35	4.5	27.5	5.67		128.2	0.06

Biological Samples Collected: LVI

SBIO Visit ID: 85048 **HA ID:** **RPS ID:** **Macrophyte ID:** 12222 **LIMS ID:** 2338605

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***	*SA130873*	*11/22*	*H2SO4 pH<2*
Metals	**W-ICPMS**	**W-ICP**	**W-HARD**	**ICE**	**HNO3****	NA1286110	11/16/22	HNO3 pH<2
Organics (LC)	**W-E8321-DI**	**W-E8321-MS**						
Macroinvertebrates								
Organics (GC)				**Ice**				
	W-PSNP-TQ	**W-TR-SQ-R**						
Molecular								
Periphyton								
Phytoplankton								
BOD								
Other(s)								

*2.0 ml of H2SO4 Used Unless Noted Otherwise
**2.0 ml of HNO3 Used Unless Noted Otherwise

Field Comments:	Sunny with light rain		
Comments on COC:			
Relinquish Date:	06/30/2022	**Signature:**	

LIMS EVENT ID: CEN-DIST-2022-07-01-01 **WIN Import ID:** 35049

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 7/8/22 (Initials/Date)

QC Station ID, Field Parameters In LIMS DMT: EB 7/29/22 (Initials/Date)

Save Field Sheets on Network: KWM 8/29/22 (Initials/Date)

Migrate Data to WIN: KWM 8/29/22 (Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 28.718

COUNTY: Seminole STORET #: _____ LONGITUDE: -81.3537

DATE: 6/30/22 TIME: 12:15 SAMPLING AGENCY: 21FLCEN

SITE NAME: Lake Alma NW of Center WBID: 2986D

FIELD ID/NAME: G2CE0237 LAKE SIZE: _____ RQ: 2022-05-02-30

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) :

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential (Rural)	Commercial	Industrial	Other (Specify)
10		5		~~100~~ 85			

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 8	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				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
LAKESIDE ALTERATIONS 10	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)				
	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
BUFFER ZONE 7	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				
	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 ☑ pH<2 ☐ No

Color Sample Taken? ☑ Yes ☐ No Lot # SA130873 Exp. Date: 11/22

Alkalinity Sample Taken? ☑ Yes ☐ No

Water Level ☐ Low ☑ Normal ☐ High

Water Odors: ☑ Normal ☐ Sewage ☐ Petroleum ☐ Other _____

Water Surface Oils: ☑ None ☐ Sheen/Slick ☐ Glob ☐ Other _____

Meter Readings:	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat. (%)	Cond. (UMHO/CM)	Salinity (PPT)
Top:	0.3	30.6	6.28	4.08	54.5	108.5	0.05
Mid-Depth:							
Bottom :	1.6	27.5	5.67	0.35	4.5	128.2	0.06

Meter ID: Craw Daddy

Clarity: ☐ Clear ☐ Opaque ☑ ~~Turbid~~ ☑ Slightly Turbid

Color: ☐ Clear ☑ Tannic ☐ Green

SECCHI (M) 1.1 VOB ☐

Total Station Depth (M) 2.1

Sediment Type: (may check more than ~~one~~)

☐ Sandy ☑ Organic fibrous (peaty, CPOM) ☐ Vegetated

☐ Sand/Silt ☑ Organic smooth (muck) ☐ Other (Specify): _____

Sample Taken? ☐ Yes ☑ No

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	☑	☐	☐	☐

Additional Notes:

Weather Conditions : Sunny w/ light rain

SAMPLING TEAM: Katie March, Victoria Schwartz **SIGNATURE:** [signature] **DATE:** 6/30/22

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: Lake Alma | Date: 6/30/22

SPECIES	1	4	7	10	Collected? (√)
Myriophyllum aquaticum					
*Myriophyllum heterophyllum					
*Myriophyllum laxum					
*Myriophyllum pinnatum					
Myriophyllum spicatum					
*Najas filifolia					
*Najas guadalupensis					
*Najas minor					
Nelumbo lutea					
Nitella spp.					
Nuphar sp.					
Nymphaea mexicana					
Nymphaea odorata					
Nymphoides aquatica					
Nyssa sylvatica var. biflora					
Orontium aquaticum					
Osmunda cinnamomea					
Osmunda regalis					
Panicum hemitomon					
Panicum repens	/	/	C	/	
Paspalidium geminatum					
*Paspalum repens					
Paspalum urvillei					
Peltandra sp.					
Persea sp.					
Pennisetum purpureum					
Phragmites australis					
Pinus elliottii					
Pistia stratioides					
Pluchea sp.					
*Polygonum glabrum (densiflorum)					
Polygonum hirsutum	/	/	/		
*Polygonum hydropiperoides					
*Polygonum punctatum					
*Polygonum					
Pontederia cordata					
*Potamogeton diversifolius					
*Potamogeton illinoensis					
*Potamogeton pusillus					
*Potamogeton pectinatus (Stuckenia pectinatus)					
Proserpinaca pectinata					
*Rhexia					
*Rhynchospora corniculata					
*Rhynchospora inundata					
Rhynochospora nitens					
Ricciocarpus natans					
Sabal palmetto	/				
Sacciolepis striata	C	/			
*Sagittaria filiformis					
*Sagittaria graminea					
*Sagittaria isoetiformis					
Sagittaria lancifolia					
Sagittaria latifolia					

SPECIES	1	4	7	10	Collected? (√)
Salix caroliniana	/				
Salvinia minima					
Sambucus canadensis					
Sapium sebiferum	/		/		
Saururus cernuus					
Schinus terebinthifolius					
*Schoenoplectus californicus					
*Schoenoplectus pungens					
*Schoenoplectus tabernaemontani (Scirpus validus)					
Scirpus cubensis (Oxycaryon cubense)	C	C	C	/	
Scirpus cyperinus					
*Sesbania					
Solidago sp.					
Sparganium americanum					
Spartina bakeri					
Spirodela polyrhiza		/	/		
Taxodium sp.				/	
Thalia geniculata					
Thelypteris interrupta					
Thelypteris palustris					
Triadenum virginicum					
Typha sp.					
Urochloa mutica (Brachiaria mutica)					
*Utricularia foliosa					
*Utricularia gibba (U. biflora)					
*Utricularia inflata					
*Utricularia purpurea					
*Utricularia radiata					
*Utricularia resupinata					
Vallisneria americana					
Vigna luteola					
Vitis sp.					
*Websteria confervoides					
Wedelia trilobata (Sphagneticola trilobata)					
Wolffiella spp.					
Woodwardia virginica					
Xyris sp.			/		
Zizania aquatica					
Zizaniopsis milacea					
Thorn plant → Hydrolea quadrivalvis		/			✓
Purple flower Rhexia ~~Sebatia~~ cubensis			/		✓
other			/		✓
Juncus scirpoides			/		✓

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

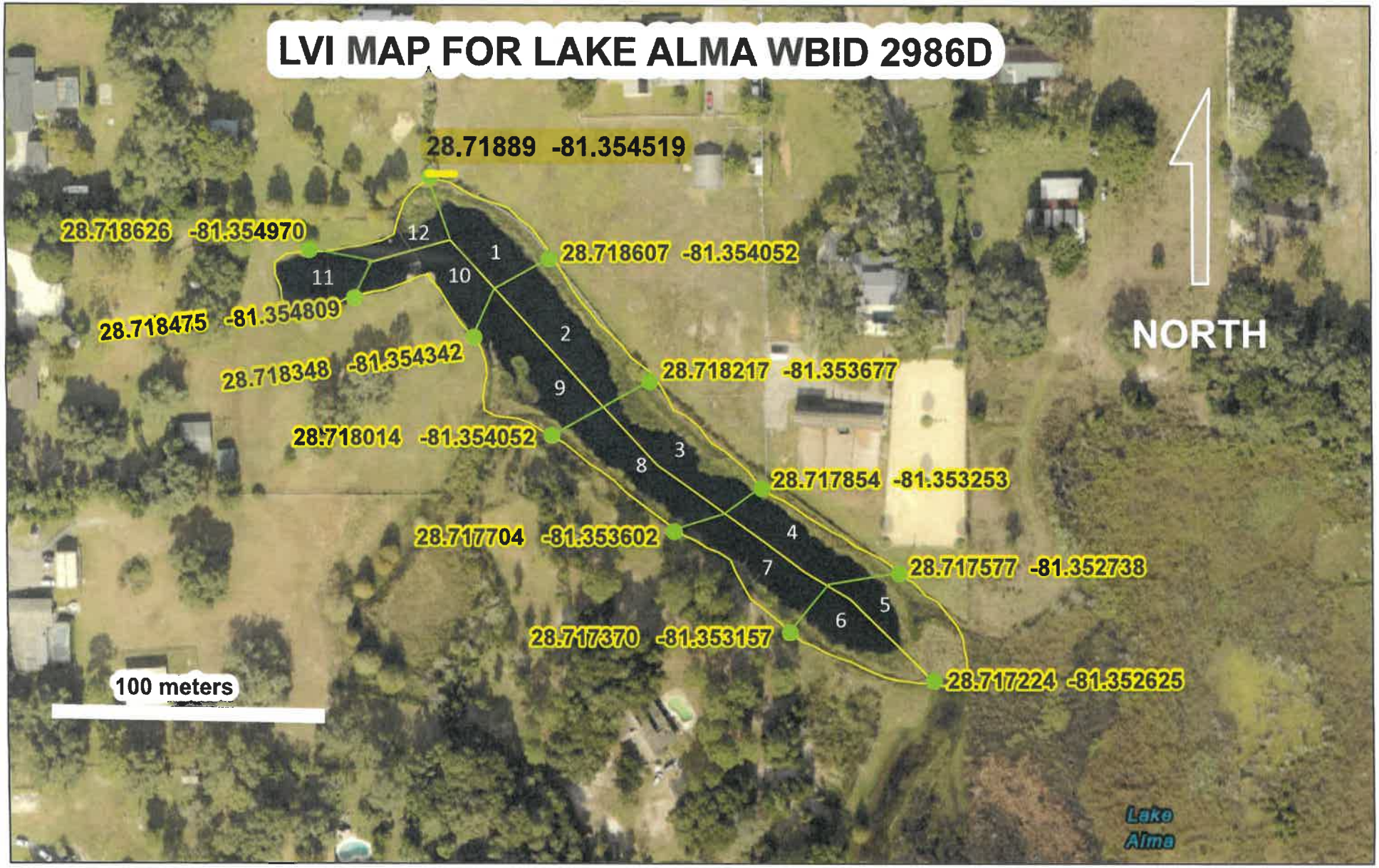
Waterbody: Lake Alma	County: Seminole	Date: 6/30/22
Analyst: Katie March / Victoria Schuch	Signature:	DIN STORET: G2CE0237

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	1	4	7	10	Collected? (√)	SPECIES	1	4	7	10	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					
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						Leucothoe racemosa (Eubotrys racemosa)					
Cyperus haspan						Limnobium spongia					
*Cyperus lecontei						**Limnophila sessiliflora**					
*Cyperus polystachyos	/		/			Liquidamber styraciflua					
*Cyperus odoratus						*Ludwigia arcuata					
*Cyperus surinamensis			/			*Ludwigia grandiflora					
Cyrilla racemiflora						*Ludwigia hexapetala					
Decodon verticillatus						*Ludwigia leptocarpa					
Diodia virginiana						Ludwigia (native)					
*Echinochloa crus-galli						*Ludwigia octovalvis	/	C	/		
*Echinochloa muricatum						***Ludwigia peruviana**		C			
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	/		/	D		Mikania scandens		/	/		
*Eriocaulon compressum						**Mimosa pigra**					
*Eriocaulon decangulare						Myrica cerifera			/		
Eupatorium capillifolium	/	/	/								
Fraxinus											



April 14, 2022

1:2,257

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Esri, HERE,

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