



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:	7/24/2023	
WIN / Field ID:	G2CE0237	ORG ID:	21FLCEN	ENR:	-	Latitude:	28.718
County:	SEMINOLE	WBID:	2986D	LAKE		Longitude:	-81.3537
Receiving Body of Water:	-				RQ-	2023-07-10-14	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Terry Riordan	x		x		
Denver Bourassa		x		x	x

Sampling Equipment			
x	Sample Container		Carboy
	Dipper		Van Dorn
	Syringe		Pole
Syringe Lot# 2327923		Filter Lot# 17769663	
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
Depth Gauge ID:	depth_gauge

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	1204	2.3	0.3	0.73	10.5	29.8	5.77	0.7	99.7	0.05
	1210		1.8	0.18	2.3	26	5.46		139.9	0.06

Biological Samples Collected:

LVI

SBIO Visit ID:	HA ID:	RPS ID:	Macrophyte ID:	LIMS Sample ID
87502			12522	In The Macrophyte Module: 2426422

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	Syringe Lot#:2327923 ; Filter Lot#:17769663				
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	ICE	H2SO4*	SA3013020	01/25/2024	H2SO4 pH<2		
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA2230040	09/01/2023	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS		Ice	MCAA***			
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								
DOC					SyringeLot#		FilterLot#	
Other(s)								
Field Comments:	90s partly cloudy							
Comments on COC:								
Relinquish Date:	07/24/2023	Signature:						

LIMS EVENT ID: CEN-DIST-2023-07-25-02

WIN Import ID: 42374

Enter Field Parameters, Verify Station ID in LIMS DMT: KWM 8/3/23

QC Station ID, Field Parameters in LIMS DMT: VLS 8/7/23

Save Field Sheets on Network: KWM 8/29/23 (Initials/Date)

Migrate Data to WIN: KWM 8/29/23 (Initials/Date)

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Alma</u>		County: <u>Seminole</u>		Date: <u>7/24/23</u>	
Analyst: <u>D. Bouessa T. Riordan</u>		Signature: <u>[Signature]</u>		STORET: <u>G2CE0237</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.					
SPECIES		DB	1 4 7 10 2 5 8 11	Collected? (✓)	SPECIES
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					Linnophila 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
Cyrilla 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 bipartita <u>bipartita</u>					Myrica cerifera
Eleocharis cellulosa					Fireweed
Eleocharis equisetoides					Erechtites hieracifolius
Eleocharis interstincta					
*Eriocaulon compressum					
*Eriocaulon decangulare					
Eupatorium capillifolium					
*Fuirena					
Fuirena scirpoidea					
Gordonia lasianthus					

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: LAKE ALMA					Date: 7/24/23								
SPECIES	DB	1	4	7	10	Collected? (✓)	SPECIES	DB	1	4	7	10	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 comuta						
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)							Polygonum hirsutum 2K						
Proserpinaca pectinata							↑ hirsuta						
*Rhexia													
*Rhynchospora corniculata													
*Rhynchospora inundata													
Rhynchospora tracyi													
Ricciocarpus natans													
Sabal palmetto													
Sacciolepis striata													
*Sagittaria filiformis													
*Sagittaria graminea													
*Sagittaria isoetiformis													
Sagittaria lancifolia													
Sagittaria latifolia													

LVI MAP FOR LAKE ALMA WBID 2986D

NORTH

100 meters

Map showing Lake Alma with LVI points 1 through 12 marked. The lake is surrounded by residential areas and trees. A scale bar indicates 100 meters. A north arrow points towards the top of the map.

Coordinates for LVI points (Easting, Northing):

- 1: 28.71889 -81.354519
- 2: 28.718607 -81.354052
- 3: 28.718217 -81.353677
- 4: 28.717854 -81.353253
- 5: 28.717577 -81.352738
- 6: 28.717224 -81.352625
- 7: 28.717370 -81.353157
- 8: 28.717704 -81.353602
- 9: 28.718014 -81.354052
- 10: 28.718348 -81.354342
- 11: 28.718475 -81.354809
- 12: 28.718626 -81.354970

1:2,257

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

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Map created by Map Direct, powered by ESRI.

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 28.718
COUNTY: SEMINOLE STORET #: _____ LONGITUDE: -81.3537
DATE: 07/24/23 TIME: 1204 SAMPLING AGENCY: CEROC
SITE NAME: LAKE ALMA WBID: 2986D
FIELD ID/NAME: G2CE0237 LAKE SIZE: 2.6 RQ: 2023-07-10-14

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)														
<u>50</u>		<u>35</u>	<u>572</u>	<u>71015</u>																	
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy						Artificially Impounded				LDI:											
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy						☐ Yes ☐ No				Land Use Source & Year:											
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>16</u>		20	19	18	17	<u>16</u>	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>11</u>		20	19	18	17	16	15	14	13	12	<u>11</u>	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>5</u>		20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	<u>5</u>	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>SA3013020</u> Exp. Date: <u>01/25/24</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☒ Normal ☐ High										Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____									
Meter Readings: Top: <u>0.3</u> <u>29.8</u> <u>5.77</u> <u>0.73</u> <u>10.5</u> <u>99.7</u> <u>0.05</u> Mid-Depth: _____ Bottom: <u>1.8</u> <u>26.0</u> <u>5.46</u> <u>0.18</u> <u>2.3</u> <u>139.9</u> <u>0.06</u> Meter ID: <u>CRAW DADDY</u>										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): _____										Clarity: ☐ Clear ☒ Turbid ☐ Opaque ☐ Slightly Turbid Color: ☐ Clear ☒ Tannic ☐ Green SECCHI (M) <u>0.7</u> Total Station Depth (M) <u>2.3</u> VOB ☐									
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 ☒ No Active Vegetation Mgmt? ☐ Yes ☐ No ☒ Don't Know										Sediment Odors: ☐ Normal ☐ Other (Specify): _____ ☒ Anaerobic									
Abundance: Absent Rare Common Abundant Periphyton ☐ ☒ ☐ ☐ Nuisance Plants ☐ ☐ ☒ ☐ Submersed Plants ☐ ☒ ☐ ☐ Exotic Apple Snails ☒ ☐ ☐ ☐										Additional Notes:									
Weather Conditions : <u>90's partly Cloudy</u>																			
SAMPLING TEAM: <u>Terry Riordan / Penver Bourassa</u>										SIGNATURE: <u>[Signature]</u> DATE: <u>7/24/23</u>									