

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV☒ Yes / ☐ No

WIN Station Name:	Lake Echo @ Center				Sample Date:	8/18/2022	
WIN / Field ID:	G3CE0060	ORG ID:	21FLCEN	ENR:	-		
County:	Polk	WBID:	1488Z	LAKE			
Receiving Body of Water:	-				RQ-	2022-07-11-29	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Leif Boman	x		x		
Terry Riordan		x		x	x

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
x	Syringe	Pole	
Syringe Lot# 2090604		Filter Lot# 17413308	
Secchi Equipment ID:		Knothead	
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:	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 (PPTth)
EST	1309	5	0.3	7.78	106	31.8	8.09	2.4	222.7	0.1
	1315		2	7.87	106.4	31.2	8.01		221.2	0.1
	1317		4.5	7.01	94.1	30.8	7.73		222.6	0.1

Biological Samples Collected:

LVI

SBIO Visit ID: 85663

HA ID:

RPS ID:

Macrophyte ID: 12289

LIMS ID: 2350892

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			
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA1105100	06/07/2023			
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:	Clear and sunny									
Comments on COC:										
Relinquish Date:	08/18/2022	Signature:								

LIMS EVENT ID: CEN-DIST-2022-08-19-01

WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 8/29/22

QC Station ID, Field Parameters In LIMS DMT: VS 10/13/22

(Initials/Date)

(Initials/Date)

Save Field Sheets on Network:

Migrate Data to WIN: KWM 10/14/22

(Initials/Date)

(Initials/Date)

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 28.08247
 COUNTY: Polk STORET #: 43CE0000 LONGITUDE: -81.73428
 DATE: 08/18/2022 TIME: _____ SAMPLING AGENCY: DEP - CORAL
 SITE NAME: Lake Echo WBID: 14882
 FIELD ID/NAME: Lake Echo @ Center LAKE SIZE: _____ RQ: 2022-07-11-29

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☒ 40 Residential ☒ 60 Commercial ☐ Industrial ☐ Other (Specify) ☐						LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI:			
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>7</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 <u>7</u> 6		Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1	
LAKESIDE ALTERATIONS <u>5</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 7 6		Highly developed or disturbed (>70% of lakeside affected) <u>5</u> 4 3 2 1	
BUFFER ZONE <u>9</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 <u>9</u> 8 7 6		< 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 # _____ Exp. Date: _____ Alkalinity Sample Taken? ☐ Yes ☐ No Water Level ☐ Low ☐ Normal ☐ High						Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____					
Meter Readings: Top: <u>3</u> <u>31.8</u> <u>8.09</u> <u>7.78</u> <u>106</u> <u>222.7</u> <u>0.1</u> Mid-Depth: <u>2.0</u> <u>31.2</u> <u>8.01</u> <u>7.87</u> <u>106.4</u> <u>221.2</u> <u>0.1</u> Bottom: <u>4.5</u> <u>30.8</u> <u>7.73</u> <u>7.01</u> <u>94.1</u> <u>222.4</u> <u>0.1</u>						Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____					
Meter ID: <u>CRAN DADDY</u>						Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid					
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>Sunny + clear</u>						Additional Notes:					
SAMPLING TEAM: <u>Leif Bonan, Terry Randon</u>						SIGNATURE: <u>[Signature]</u>					
DATE: <u>08/18/2022</u>											

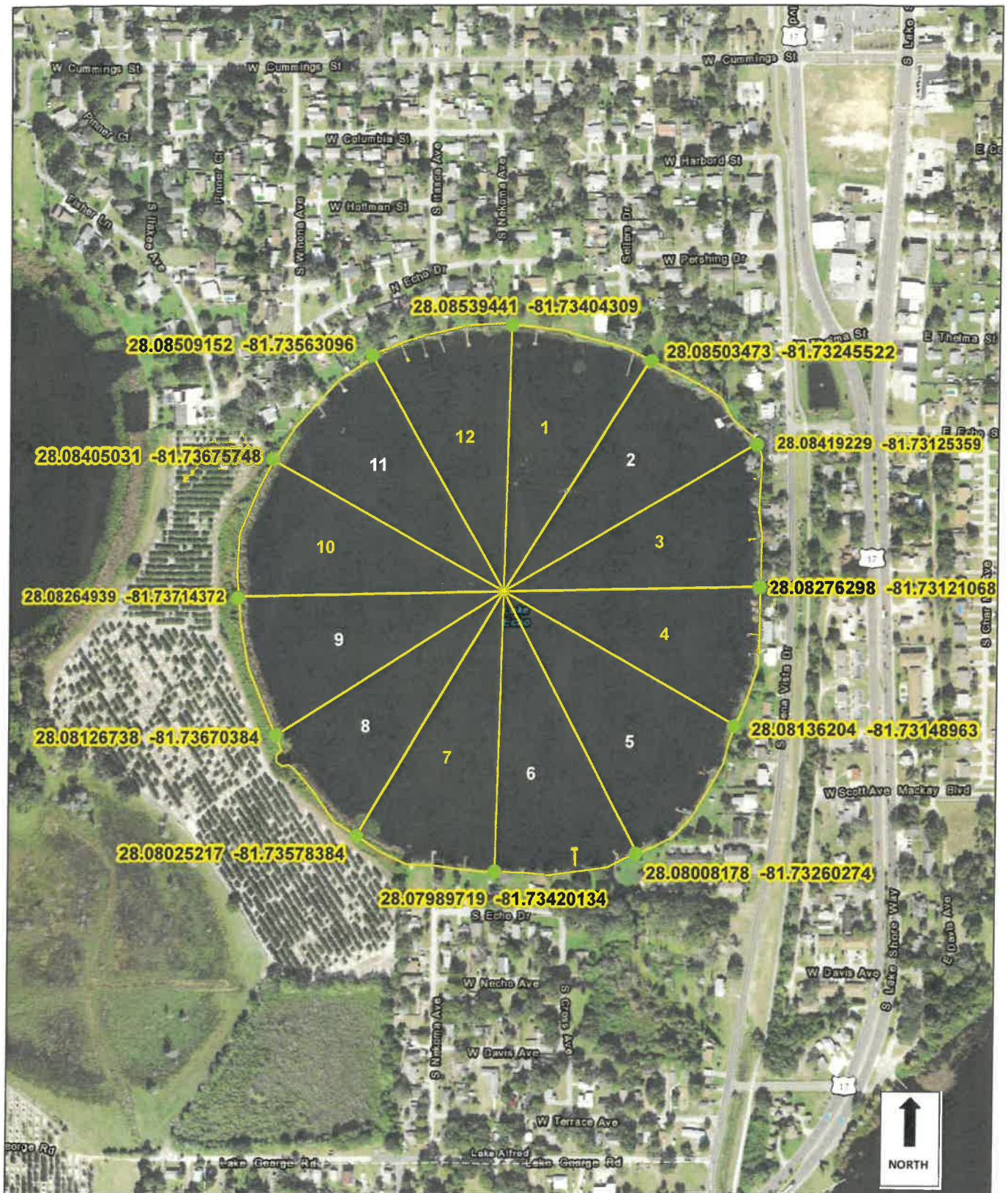
DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Echo</u>		County: <u>Polk</u>		Date: <u>8/18/22</u>							
Analyst: <u>Terry Riordan, Leif Boman</u>		Signature: <u>[Signature]</u>		STORET: <u>G3CE00</u> 60							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* Plants in bold = FLEPPC invasive exotic.				Lake units sampled (circle one group): 1, 4, 7, 10 2, 5, 8, 11 3, 6, 9, 12							
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	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						Limnium spongia					
*Cyperus lecontei						Limnophila sessiliflora					
*Cyperus polystachyos						Liquidambar 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	/	/	/	/	
*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: Lake Echo					Date: 8/18/22						
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	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 mexicana						*Sesbania					
Nymphaea odorata						Solidago sp.					
Nymphoides aquatica						Sparganium americanum					
Nyssa sylvatica var. biflora						Spartina bakeri					
Orontium aquaticum						Spirodela polyrhiza					
Osmunda cinnamomea						Taxodium sp.	/	/			
Osmunda regalis						Thalia geniculata					
Panicum hemitomon	/	/	/			Thelypteris interrupta					
Panicum repens	/	/				Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.	/	/	/	/	
Paspalum urvillei						Urochloa mutica (Brachiaria mutica)	/	/	/		
Peltandra sp.						*Utricularia foliosa					
Persea sp.						*Utricularia gibba (U. biflora)					
Pennisetum purpureum						*Utricularia inflata					
Phragmites australis						*Utricularia purpurea					
Pinus elliotii						*Utricularia radiata					
Pistia stratioides						*Utricularia resupinata					
Pluchea sp.						Vallisneria americana	/	/	/	/	
*Polygonum glabrum (densiflorum)						Vigna luteola					
Polygonum hirsutum						Vitis sp.			/	/	
*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)						not LVI taxa not LVI taxa- KM	/				
Proserpinaca pectinata						<i>Cyperus papyrus</i>			/	/	
*Rhaxia											
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora nitens											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia	/										
Sagittaria latifolia											

LVI MAP FOR WBID 1448Z LAKE ECHO



1:4,514

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