



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

PAGE 1 OF

Data Qualified?

Yes / No

Location/STORET Station Name: Lake Minnehaha @ Center of Lake (+ LVI 12)

Date: 9/19/2017

(mm/dd/yyyy)

STORET # G1CE0072

WBID: 2839N

Latitude: 28.5312119

(Decimal Degrees)

County: Lake RQ - 2017-08-28-26

ORG ID: 21FL CEN

Longitude: -81.76444704

(Decimal Degrees)

Receiving Body of Water:

Field ID: G1CE0072

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
TERRY RIORDAN				☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole	
NATHALIE AYALA									☐ Carboy	☒ Syringe		
LEIF BURNARD									☐ Dipper	☐ Other		
									Equipment ID			
									Collection Method			
									☐ Wading	☐ Via Boat		
									☐ From Shore	☐ Canoe/Kayak		
									☐ Other (note below)	☐ Electric Motor		
										☒ Gasoline Motor		
Water Level: Dry / Pooled / Low / Normal / <u>High</u> / Flooded				Matrix: <u>Fresh</u> / Marine / DI								
Meter ID# BETTY/67				Photos: Yes / <u>No</u>				Tide Falling: <u>Yes</u> / No / <u>NA</u>				
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)		
<u>EST</u>	1232	0.3	4.9	7.6	41	5.8	0.03	0.7	78	28.2		
CEN		4.4		6.7	39	5.5	0.03		76	27.4		

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other

SBIO ID Numbers: SBIO-ID: 77920 RPS-ID: Macrophyte-ID: 10719 LIMS#: 1929848

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4			☐ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci ☐ qPCR	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Other			

Notes: Bottle Group A

RQ-2017-08-28-26
Lake Minnehaha @
Center of Lake
Date: 09/19/2017
Time:

G1CE0072
Field ID ↑
STORET ↓
G1CE0072

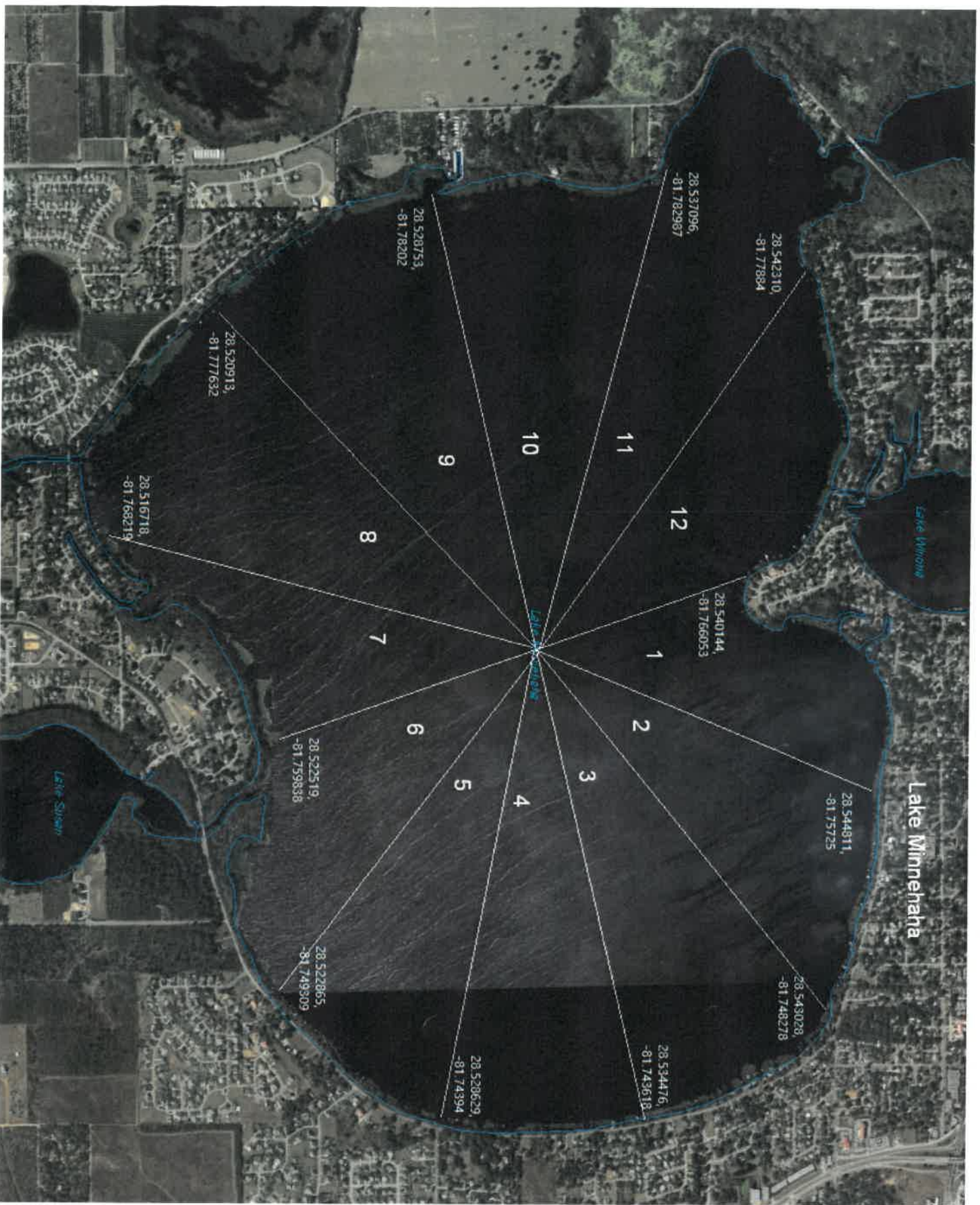
Signature: JM Date: 9/19/17

Field Parameters Entered into LIMS: 28 9/20/17 (Initials/Date)

Field Parameters QC in LIMS: (Initials/Date)

Date Migrated to STORET: Field Sheets Scanned/Saved:

WBID 2839N



8, 11, 2, 5

DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLEID: _____ MACROPHYTE ID: _____ LATITUDE: _____
 COUNTY: LAK STORET #: GICE0072 LONGITUDE: _____
 DATE: 9/19/17 TIME: _____ SAMPLING AGENCY: 21 FLCEM
 SITE NAME: LAKE MINNEHAHA WBID: 2839N
 FIELD ID/NAME: GICE0072 LAKE SIZE: _____ RQ: 2017-08-28-26

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS): Forest/Natural <u>10</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>90</u> 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 Land Use Source & Year: _____	
STORMWATER INPUTS <u>6</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	
LAKESIDE ALTERATIONS <u>3</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	
BUFFER ZONE <u>3</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	
				Moderate direct inputs of stormwater (ditches, pipes, cultivated vegetation 11% -50%) but few BMPs in place 10 9 8 7 6	
				Many structures, roads or other human disturbance visible (50% - 70% lakeside affected) 10 9 8 7 6	
				Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1	
				50% -30% of shoreline with >18m buffer or 50% -74% with 10m to 18m buffer 10 9 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 # <u>5A-7093010</u> Exp. Date: <u>4/3/18</u> Alkalinity Sample Taken? ☒ Yes ☐ No Water Level ☐ Low ☐ Normal ☒ High				Water Odors: ☒ Normal ☐ Sew age ☐ 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>28.2</u> <u>5.8</u> <u>7.4</u> <u>41</u> <u>78</u> <u>0.03</u> Mid-Depth: _____ _____ _____ _____ _____ _____ _____ Bottom: <u>4.4</u> <u>27.4</u> <u>5.5</u> <u>39</u> <u>39</u> <u>76</u> <u>0.03</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): _____				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, cldy, light wind</u>				Additional Notes: _____	
SAMPLING TEAM: <u>Terry Riordan, Leif Boman</u>				SIGNATURE: <u>[Signature]</u> DATE: <u>9-19-17</u>	

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>LAKE MINNEHAHA</u>		County: <u>LAKE</u>		Date: <u>9/19/17</u>							
Analyst: <u>Terry R. Jordan / Lef Boman</u>		Signature: <u>[Signature]</u>		STORET: <u>GICE0072</u>							
Except where noted as "sp." species level identification required. *Genera that may require lab verification*				Lake units sampled (circle one group):							
Plants in bold = FLEPPC invasive exotic.				1, 4, 7, 10 <u>2, 5, 8, 11</u>							
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.				3, 6, 9, 12							
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	Collected? (✓)
Acer rubrum	/	/	/	/		Fraxinus					
Alternanthera philoxeroides			/	/		Fuirena scirpoides					
Amaranthus australis			/	/		Gordonia lasianthus					
Andropogon sp.						Habenaria repens					
Azolla filiculoides (A. caroliniana)						Hibiscus coccineus					
Baccharis sp.	/			/		Hibiscus grandiflora					
Bacopa caroliniana						Hydrilla verticillata					
Bacopa monnieri						Hydrocotyle sp.					
Bidens alba	/					Hygrophila polysperma					
Bidens laevis						Hymenocallis sp.					
Bidens mitis						*Hypericum fasciculatum	/		/	/	
Blechnum serrulatum						*Hypericum hypericoides					
Boehmeria cylindrica						*Hypericum myrtifolium					
Brasenia schreberi						Ilex cassine				/	
Cabomba caroliniana						Ipomoea aquatica					
Canna						Ipomoea sagittata					
Centella asiatica						Itea virginica					
Cephalanthus occidentalis	/		/	/		Juncus effusus					
Ceratophyllum demersum						*Juncus marginatus					
Chara sp.						*Juncus megacephalus					
Cicuta maculata						Juncus repens					
Cinnamomum camphora				/		*Juncus scirpoides					
Cladium jamaicense				/		Lachnanthes caroliniana					
Colocasia esculenta	/	/	/	/		Leersia hexandra					
*Commelina						Landoltia punctata (Spirodela punctata)					
Crinum americanum						Lemna sp.					
*Cyperus alternifolius (C. involucratus)						Leucothoe racemosa (Eubotrys racemosa)	/			/	
Cyperus articulatus						Limnium spongia	/			/	
Cyperus haspan						Limnophila sessiliflora					
*Cyperus lecontei						Liquidambar styraciflua					
*Cyperus polystachyos						*Ludwigia arcuata					
*Cyperus odoratus						*Ludwigia grandiflora					
*Cyperus surinamensis						*Ludwigia hexapetala					
Cyrtilla racemiflora						*Ludwigia leptocarpa	/				
Decodon verticillatus						Ludwigia (native)					
Diodia virginiana						*Ludwigia octovalvis					
*Echinochloa crus-galli						*Ludwigia peruviana	/	/	/	/	
*Echinochloa muricatum						*Ludwigia repens					
Echinochloa walteri						Ludwigia suffruticosa					
Eclipta prostrata (E. alba)				/		Luziola fluitans (Hydrochloa carolinensis)					
Eichhornia crassipes			/	/		Magnolia virginiana					
*Eleocharis						Mayaca fluviatilis	/		/	/	
Eleocharis cellulosa						Melaleuca quinquenervia	/		/	/	
*Eleocharis elongata						Micranthemum glomeratum					
Eleocharis equisetoides						Micranthemum umbrosum					
Eleocharis interstincta						Mikania scandens					
Eleocharis submersa viviparous						Mimosa pigra					
*Eriocaulon compressum						Myrica cerifera	/	/	/	/	
*Eriocaulon decangulare											
Eupatorium capillifolium	/										

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site:						Date: 9/19/17					
						3 4 1 2					
SPECIES	2	5	8	11	Collected? (✓)	SPECIES	2	5	8	11	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 gibba (U. biflora)					
Persea sp.						*Utricularia foliosa					
Pennisetum purpureum						*Utricularia inflata					
Phragmites australis						*Utricularia purpurea					
Pinus elliotii						*Utricularia radiata					
Pistia stratioides			/	/		*Utricularia resupinata					
Pluchea sp.						Vallisneria americana					
*Polygonum glabrum (densiflorum)						Vitis sp.	/	/		/	
Polygonum hirsutum						*Websteria confervoides					
*Polygonum hydropiperoides						Wedelia trilobata (Sphagneticola trilobata)	/	/	/	/	
*Polygonum punctatum						Wolffiella spp.					
*Polygonum						Woodwardia virginica					
Pontederia cordata	/	/	/			Xyris sp.					
*Potamogeton diversifolius						Zizania aquatica					
*Potamogeton illinoensis						Zizaniopsis milacea					
*Potamogeton pusillus						<i>Sesbania purpurea</i>				/	
*Potamogeton pectinatus (Stuckenia pectinatus)						<i>Cogon grass impetrate cyclin.</i>	/	/	/	/	
Proserpinaca pectinata						<i>Styvinatum</i>	/	/	/	/	
*Rhexia						<i>Xanthoxon</i>		/			
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora nitens											
Ricciocarpus natans											
Sabal palmetto											
Sacciolepis striata	/			/							
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia	/	/	/	/							
Sagittaria latifolia											

(Section)
2 = 5
5 = 2