



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes / No

WIN Station Name:	LAKE MARIAN AT CENTER				Sample Date:	6/24/2024	
WIN / Field ID:	G4CE0255	ORG ID:	21FLCEN	ENR:	-	Latitude:	27.87733
County:	OSCEOLA	WBID:	3184	LAKE		Longitude:	-81.09007
Receiving Body of Water:	-				RQ-	2024-05-06-45	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Terry Riordan		x		x	x
Katie March	x		x		

Sampling Equipment			
x	Sample Container		Carboy
	Dipper		Van Dorn
	Syringe		Pole
Syringe Lot#	3066762	Filter Lot#	17769663
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
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	1110	4.1	0.3	10.53	138.5	29.5	9.3	0.3	154.8	0.07
	1112		2	5.54	71.4	28.5	8.23		152.6	0.07
	1115		3.6	5.3	68.2	28.4	7.66		152.4	0.07

Biological Samples Collected: None

SBIO Visit ID: HA ID: RPS ID: Macrophyte ID: LIMS Sample ID 2496840
In The Macrophyte Module:

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type		Lot#	Expiration Date	pH Check
Microbiology				ICE				
Chlorophyll	CHLSUITE-W							
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS							
Nutrients	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS							
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE		Syring Lot#:3066762; Filter Lot#:17769663		
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	SA3340020	12/11/2024	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	3193130	07/27/2024	HNO3 pH<2
Organics (LC)					MCAA***			
Macroinvertebrates								
Organics (GC)	W-CT-CI-R W-PSNP-TQ	W-PCL-TQ-R 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								
					SyringLot#		FilterLot#	
Other(s)								

Field Comments:

Comments on COC: SMP samples to go along with LVI, done prior

Relinquish Date:	06/24/2024	Signature:	
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LIMS EVENT ID: CEN-DIST-2024-06-25-03

WIN Import ID: 49629

Enter Field Parameters, Verify Station ID in LIMS DMT: KWM 7/22/24

QC Station ID, Field Parameters in LIMS DMT: VLS 8/5/24

Save Field Sheets on Network: KWM 8/12/24 (Initials/Date)

Migrate Data to WIN: KWM 8/12/24 (Initials/Date)

(Initials/Date)

(Initials/Date)

27°53'18.6431007" 81°7'10.037098
DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: 27.888512
COUNTY: Oseola STORET #: _____ LONGITUDE: -81.119455
DATE: 05/29/2024 TIME: 12:21 SAMPLING AGENCY: 21PCEN
SITE NAME: Lake Marian WBID: 3184
FIELD ID/NAME: 25-LL-18003 LAKE SIZE: _____ RQ: 2024-05-06-20

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>90</u>		<u>8</u>		<u>2</u>						Land Use Source & Year:							
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy										Artificially Impounded ☐ Yes ☒ No							
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy																	
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>19</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>19</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>19</u>		20 18 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 # <u>SA 3193140</u> Exp. Date: _____ 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: Top: <u>0.3</u> <u>29.9</u> <u>8.88</u> <u>8.21</u> <u>112.0</u> <u>151.5</u> <u>n/a</u> Mid-Depth: _____ Bottom: <u>3.2</u> <u>29.0</u> <u>7.4</u> <u>3.65</u> <u>53.8</u> <u>151.5</u> <u>n/a</u> Meter ID: <u>Crow Daddy</u>								Clarity: ☐ Clear ☐ Opaque ☐ Turbid ☒ Slightly Turbid Color: ☐ Clear ☐ Tannic ☒ Green SECCHI (M) <u>0.6</u> Total Station Depth (M) <u>3.7</u> VOB ☐							
Sediment Type: (may check more than one) ☐ Sandy ☐ Organic fibrous (peaty, CPOM) ☐ Sand/Silt ☒ Organic smooth (muck) Sample Taken? ☒ Yes ☐ No ☐ Vegetated ☐ Other (Specify): _____								Sediment Odors: ☒ Normal ☐ Anaerobic ☐ Other (Specify): _____							
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: Redawning algal bloom entire lake - currently being HAB sampled/monitored															

Weather Conditions: Sunny & clear *HAB kit also collected from HABCE0242 site (27.86839, -81.04628)
 SAMPLING TEAM: Kif Boman, Victoria Schwartz SIGNATURE: [Signature] DATE: 05/29/2024

25-LL-18003

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Marian</u>		County: <u>Osceola</u>		Date: <u>5/29/24</u>							
Analyst: <u>Leif Boman + Victoria Schwartz</u>		Signature: <u>[Signature]</u>		STORET:							
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 2, 5, 8, 11							
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	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Acer rubrum	/	/	/	/		Fraxinus sp.					
Alternanthera philoxeroides				/		Fuirena scirpoidea					
Amaranthus australis				/		Gordonia lasianthus					
Andropogon sp.				/		Habenaria repens					
Azolla filiculoides				/		Hibiscus coccineus					
Baccharis sp.				/		Hibiscus grandiflorus	/	/	/	/	
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 sp.				/		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				/		Kosteletzkya pentacarpos					
Colocasia esculenta				/		Lachnanthes caroliniana					
*Commelina				/		Leersia hexandra					
Crinum americanum				/		Landoltia punctata (Spirodela punctata)					
Cyperus articulatus	/			/		Lemna sp.	/	/	/	/	
Cyperus haspan	/			/		Leucothoe racemosa (Eubotrys racemosa)					
*Cyperus involucratus				/		Limnium spongia					
*Cyperus lecontei				/		Limnophila sessiliflora					
*Cyperus odoratus				/		Liquidambar styraciflua					
*Cyperus polystachyos				/		*Ludwigia arcuata					
*Cyperus surinamensis				/		*Ludwigia grandiflora					
Cyrilla racemiflora				/		*Ludwigia hexapetala					
Decodon verticillatus				/		*Ludwigia leptocarpa					
Diodia virginiana				/		*Ludwigia octovalvis					
*Echinochloa crus-galli				/		*Ludwigia peruviana	/	/	/	/	
*Echinochloa muricata				/		*Ludwigia repens					
Echinochloa walteri				/		Ludwigia suffruticosa					
Eclipta prostrata				/		Ludwigia					
Eichhornia crassipes				/		Luziola fluitans					
*Eleocharis				/		Magnolia virginiana					
Eleocharis cellulosa				/		Mayaca fluviatilis					
*Eleocharis elongata				/		Melaleuca quinquenervia					
Eleocharis equisetoides				/		Melaleuca viminalis					
Eleocharis interstincta				/		Micranthemum glomeratum					
Eleocharis submersa viviparous				/		Micranthemum umbros					
*Eriocaulon compressum				/		Mikania scandens					
*Eriocaulon decangulare				/		Myrica cerifera (Morella cerifera)	/	/	/	/	
Eupatorium capillifolium				/							

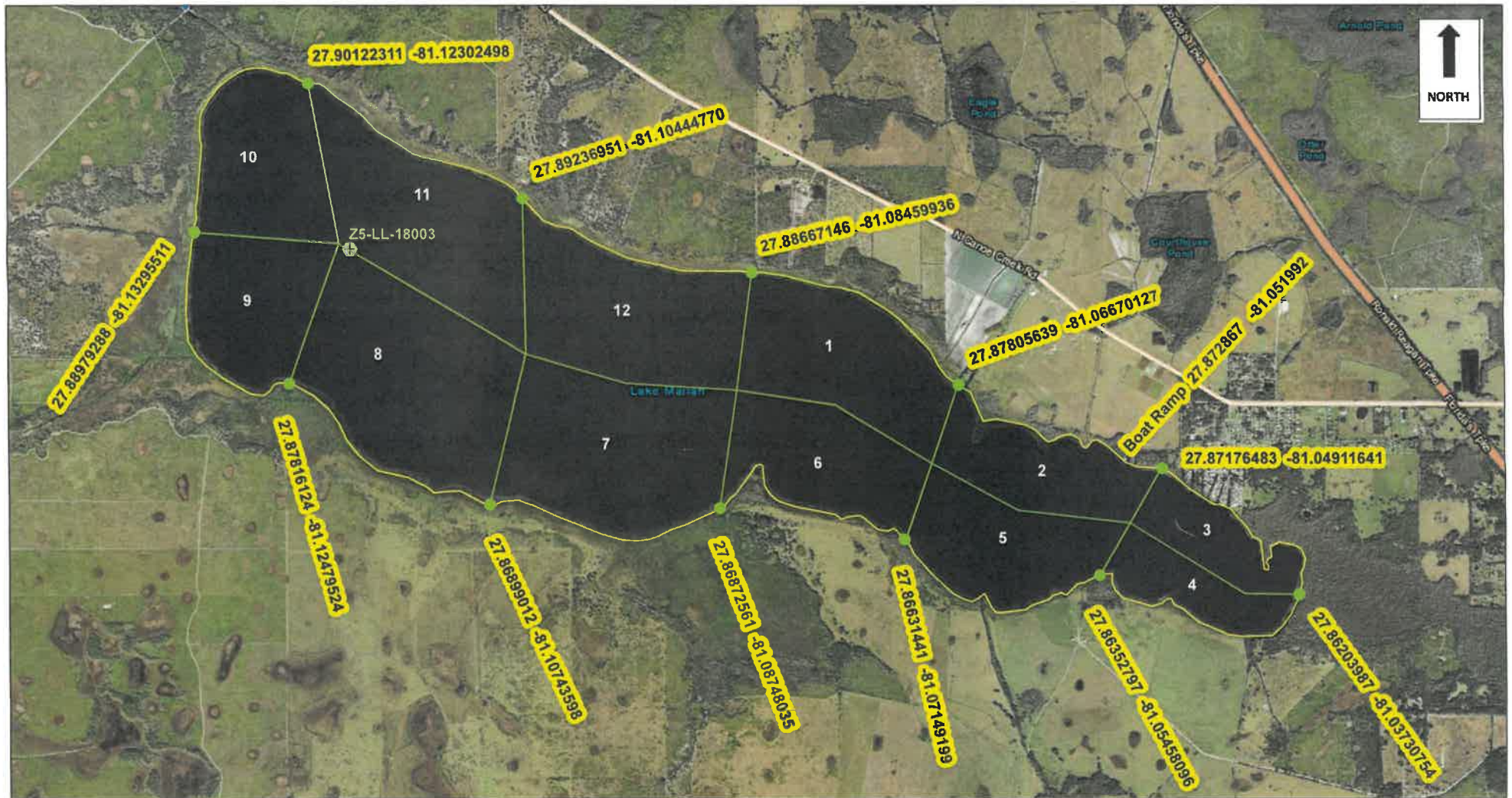
FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: 25-LL-18003

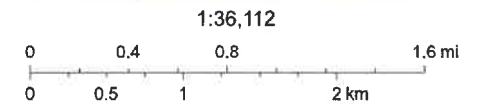
Date: 05/29/2024

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 (Triadica sebifera)					
Myriophyllum spicatum						Saururus cernuus					
*Najas filifolia						Schinus terebinthifolia					
*Najas guadalupensis						*Schoenoplectus californicus					
Nelumbo lutea						*Schoenoplectus pungens					
Nitella spp.						*Schoenoplectus tabernaemontani					
Nuphar advena						Scirpus cubensis (Cyperus blepharoleptos)					
Nymphaea mexicana						Scirpus cyperinus					
Nymphaea odorata						*Sesbania					
Nymphoides aquatica						Solidago sp.					
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri					
Osmunda cinnamomea (Osmundastrum cinnamomeum)						Spirodela polyrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon						Thalia geniculata					
Panicum repens						Thelypteris interrupta					
Paspalidium geminatum						Thelypteris palustris					
*Paspalum repens						Triadenum virginicum (Hypericum virginicum)					
Paspalum urvillei						Typha sp.					
Peltandra sp.						Urochloa mutica					
Persea sp.						*Utricularia foliosa					
*Persicaria glabra (densiflora)						*Utricularia floridana					
Persicaria hirsuta						*Utricularia gibba					
*Persicaria hydropiperoides						*Utricularia inflata					
*Persicaria punctata						*Utricularia purpurea					
*Persicaria						*Utricularia radiata					
Pennisetum purpureum (Cenchrus purpureus)						*Utricularia resupinata					
Phragmites australis (P. berlandieri)						Vallisneria americana					
Pinus elliotii						*Websteria confervoides (Eleocharis confervoides)					
Pistia stratiotes						Wedelia trilobata (Sphagneticola trilobata)					
Pluchea sp.						Wolffiella sp.					
Pontederia cordata						Woodwardia virginica					
*Potamogeton diversifolius						Xyris sp.					
*Potamogeton illinoensis						Zizania aquatica					
*Potamogeton pusillus						Zizaniopsis miliacea					
*Potamogeton pectinatus (Stuckenia pectinatus)											
Proserpinaca pectinata											
*Rhexia											
*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 Lake Marian, WBID 3184 (Z5-LL-18003)



 Large Lake Site
 Florida Dams



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