



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

☒ Yes / ☐ No

WIN Station Name:		MILLSITE LAKE AT CENTER				Sample Date:		5/16/2023	
WIN / Field ID:	G3SW0120	ORG ID:	21FLTPA	ENR:		Latitude:	27.969062		
County:	POLK	WBID:	1623M2	LAKE	3F	Longitude:	-81.775786		
Receiving Body of Water:						-	RQ-	2023-04-17-14	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Ben Paswater	x		x		
Devin Mathias		x		x	x

Sampling Equipment			
☒ Sample Container		☒ Carboy	
☐ Dipper		☐ Van Dorn	
☐ Syringe		☐ Pole	
Syringe Lot#	1723287 3	Filter Lot#	17232873
Secchi Equipment ID:		Secchi #3	
Collection Method			
☐ Wading		☒ 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:	Leia
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	1310	3.1	0.3	7.38	97.3	29.8	7.39	1.2	255.8	0.12
	1310		2	7.51	97.2	29.2	7.42		256	0.12
	1310		2.6	6.93	88.8		7.28		254	0.12

Biological Samples Collected:

LVI

SBIO Visit ID: 86756 HA ID: 18382 RPS ID: Macrophyte ID: 12435 LIMS Sample ID Entered Into The Macrophyte Module: 2410311

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 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#:17232873; Filter Lot#:17232873			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	ICE	H2SO4*	SA3013020	1/25/24	H2SO4 pH<2
Metals	W-ICPMS W-ICP W-HARD	ICE	HNO3**	NA2230040	9/1/23	HNO3 pH<2
Organics (LC)	W-E8321-DI W-E8321-MS					
Macroinvertebrates						
Organics (GC)	W-PSNP-TQ W-PCL-TQ-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						
Other(s)			SyringeLot#		FilterLot#	
Field Comments:						
Comments on COC:						
Relinquish Date:	05/16/2023	Signature:				

LIMS EVENT ID: SW-DIST-2023-05-17-01

WIN Import ID: 40974

Enter Field Parameters, Verify Station ID in LIMS DMT: KT 05/18/2023

QC Station ID, Field Parameters in LIMS DMT: MM 6/15/2023

Save Field Sheets on Network: MM 7/11/2023 (Initials/Date)

Migrate Data to WIN: MM 7/11/2023 (Initials/Date)

(Initials/Date)

(Initials/Date)

G3SW0120

Site Name:

Millsite Lake @ Center

COUNTY:

Polk

LAKE SIZE:

Large

WBID:

1623 ms

MACROPHYTE ID:

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)														
20		10	20	50																	
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy										Artificially Impounded ☒ Yes ☐ No											
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy										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										
10		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)										
15		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										
13		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 ☐ No pH < 2 ☐ No Color Sample Taken? ☒ Yes ☐ No Lot # <u>see Field Sheet</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: Depth (M) <u>0.3</u> Temp. (°C) <u>29.8</u> pH (SU) <u>7.38</u> D.O. (MG/L) <u>7.38</u> D.O. Sat. (%) <u>97.3</u> Cond. (UMHO/CM) <u>255.8</u> Salinity (PPT) <u>0.12</u> Mid-Depth: _____ Bottom: _____ Meter ID: <u>Leia</u>							Clarity: ☐ Clear ☒ Slightly Turbid ☐ Opaque ☐ Turbid Color: ☐ Clear ☒ Tannic ☐ Green SECCHI (M) <u>1.2</u> Total Station Depth (M) <u>3.1</u> VOB ☐						
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>Hot > 90</u>							Additional Notes: <u>Had been recently sprayed lots of dead plants</u>						
SAMPLING TEAM: <u>Ben Paswater, Devin Mathias</u>							SIGNATURE: <u>Ben Paswater</u>						
DATE: <u>5/16/2023</u>							DATE: <u>5/16/2023</u>						

G3SW0120

DEP Form FD 9000-6: Lake Habitat Assessment Field Sheet

Site Name:

Millsite Lake @ Center

LAKE NAME

ECO-REGION:

SAMPLING LOCATION/DESCRIPTION:

COUNTY:

Impounded, hydrology of system artificially controlled

Visibility extremely reduced due to high color

PARAMETER

HYDROLOGY

No surface inflow or outflow present, very long water residence time, groundwater seepage dominates

☐

Surface water inflow present, but flow is rare, moderate to long water residence time

☒

Surface water inflow and outflow present (or outflow only), sometimes with visible flow, short water residence time

☐

Color

Very clear, uncolored water (benthic sampling appropriate)

☐

Water somewhat tannin stained (benthic sampling appropriate)

☒

Dark, discolored water (water color 20 PCU or higher)

☐

Optimal

Suboptimal

Marginal

Poor

Secchi

10

Secchi >3 m

Secchi(m)

Or VOB

20

19

18

17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

Vegetation Quality

13

Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa

Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants

Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats

Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed)

Stormwater Inputs

10

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

Bottom Substrate Quality

8

Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present

Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present

Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom

Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom

Lakeside Adverse Human Alterations

15

Very few man-made structures, roads, or other disturbance adjacent to lake (<10%)

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)

Upland Buffer Zone

13

Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer

85%-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

Adverse Watershed Land Use

15

Score the potential effects from adverse human land uses, based on a continuum of amount and type, with least to most adverse as follows: Native vegetation, Silviculture, Pasture or Citrus, Low Density Residential, Row Crops, Commercial, High Density Residential, Urban, Industrial

20

19

18

17

16

15

14

13

12

11

10

9

8

7

6

5

4

3

2

1

TOTAL SCORE

84

COMMENTS:

ANALYSIS DATE:

5/16/2023

ANALYST:

Ben Paswater

SIGNATURE:

Ben Paswater



Site Name:

Millsite Lake @ Center

Waterbody: ←County: PolkSignature: [Signature]Date: 5/16/2022

required. *Genera that may require lab verification*

Lake units sampled (circle one group):

1, 4, 7, 10 (2, 5, 8, 11)
3, 6, 9, 12

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 (A-F)	2	5	8	11	Collected? (✓)	SPECIES (G-L)	2	5	8	11	Collected? (✓)
Acer rubrum	✓	✓		✓		Gordonia lasianthus	✓				
Alternanthera philoxeroides						Habenaria repens					
Andropogon sp.						Hymenachne amplexicaulis					
Azolla filiculoides (A. caroliniana)						Hydrilla verticillata					
Baccharis sp.						Hydrocotyle sp.	✓	✓			✓
Bacopa caroliniana						Hygrophila polysperma					
Bacopa monnieri						*Hypericum fasciculatum					
Bidens laevis						*Hypericum hypericoides					
Bidens mitis						*Hypericum myrtifolium					
Blechnum serrulatum						Ilex cassine					
Boehmeria cylindrica		✓				Ipomoea aquatica					
Brasenia schreberi						Ipomoea sagittata					
Cabomba caroliniana						Itea virginica		✓			
Casuarina equisetifolia						Juncus effusus		✓			
Centella asiatica						*Juncus marginatus					
Cephalanthus occidentalis		✓				*Juncus megacephalus					
Ceratophyllum demersum		✓				Juncus repens					
Chara sp.						*Juncus scirpoides					
Cladium jamaicense						Lachnanthes caroliniana	✓				
Cliftonia monophylla						Leersia hexandra					
Colocasia esculenta						Landoltia punctata (Spirodela punctata)					
*Commelina		✓				Lemna sp.					
Crinum americanum						Leucothoe racemosa (Eubotrys racemosa)					
*Cyperus alternifolius (C. involucratus)						Limnium spongia					
Cyperus articulatus						Limnophila sessiliflora					
Cyperus haspan						Liquidambar styraciflua	✓	✓			✓
*Cyperus lecontei						*Ludwigia arcuata					
*Cyperus polystachyos						*Ludwigia leptocarpa					
*Cyperus odoratus	✓	✓				*Ludwigia linearis					
*Cyperus surinamensis						*Ludwigia octovalvis	✓	✓			✓
Cyrilla racemiflora						*Ludwigia peruviana	✓		✓		✓
Decodon verticillatus						*Ludwigia repens					
Diodia virginiana						*Ludwigia					
*Echinochloa crus-galli						Luziola fluitans (Hydrochloa carolinensis)					
*Echinochloa muricatum						Lyonia lucida					
Echinochloa walteri											
Eclipta prostrata (E. alba)											
Egeria densa											
Eichhornia crassipes	✓	✓	✓	✓							
*Eleocharis baldwinii		✓		✓							
*Eleocharis				✓							
Eleocharis cellulosa											
Eleocharis equisetoides											
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium	✓	✓									
*Fuirena											
Fuirena scirpoidea											



Site Name:

Millsite Lake @ Center

Date:

5/16/2023

SPECIES (M-P)					Collected? (✓)	SPECIES (R-Z)					Collected? (✓)
Magnolia virginiana	✓					*Rhaxia					
Mayaca fluviatilis						*Rhynchospora corniculata					
Melaleuca quinquenervia	✓					*Rhynchospora inundata					
Micranthemum glomeratum						Rhynchospora tracyi					
Micranthemum umbrosum						Ricciocarpus natans					
Mikania scandens						Sabal palmetto					
Mimosa pigra						Sacciolepis striata					
Myrica cerifera	✓	✓	✓	✓		*Sagittaria filiformis					
Myriophyllum aquaticum						*Sagittaria graminea					
*Myriophyllum heterophyllum						*Sagittaria isoetiformis					
*Myriophyllum laxum						Sagittaria lancifolia	✓	✓	✓	✓	
*Myriophyllum pinnatum						Sagittaria latifolia					
Myriophyllum spicatum						Salix caroliniana	✓	✓	✓	✓	
*Najas filifolia						Salvinia minima	✓	✓	✓	✓	
*Najas guadalupensis						Sambucus canadensis					
*Najas minor						Sapium sebiferum					
Nelumbo lutea						Saururus cernuus					
Nitella spp.						Schinus terebinthifolius					
Nuphar sp.	✓	✓	✓	✓		*Schoenoplectus californicus (Cali bulrush)					
Nymphaea odorata	✓					*Schoenoplectus pungens (three square)					
Nymphoides aquatica						*Schoenoplectus tabernaemontani (softstem)					
Nyssa sylvatica var. biflora						Scirpus cubensis (Oxycaryon cubense)	✓	✓	✓	✓	
Orontium aquaticum						Scirpus cyperinus					
Osmunda cinnamomea						*Sesbania					
Osmunda regalis						Solidago sp.					
Panicum hemitomon						Sparganium americanum					
Panicum repens						Spartina bakeri					
Paspalidium geminatum						Sphagneticola trilobata (Wedelia)					
*Paspalum repens						Spirodela polyrrhiza					
Paspalum urvillei						Taxodium sp.	✓	✓		✓	
Peltandra sp.						Thalia geniculata					
Persea sp.						Thelypteris palustris					
Pennisetum purpureum						Triadenum virginicum	✓	✓	✓	✓	
Phragmites australis						Typha sp.	✓	✓	✓	✓	
Pinus elliotii	✓	✓				Urochloa mutica (Brachiaria mutica)					
Pistia stratioides						*Utricularia gibba (U. biflora)					
Pluchea sp.	✓					*Utricularia floridana	✓				
*Polygonum glabrum (densiflorum)						*Utricularia foliosa					
*Polygonum hydropiperoides						*Utricularia inflata					
*Polygonum punctatum						*Utricularia purpurea					
*Polygonum sp.						*Utricularia cornuta					
Pontederia cordata	✓					*Utricularia radiata					
*Potamogeton diversifolius						Vallisneria americana	✓			✓	
*Potamogeton illinoensis						*Websteria confervoides					
*Potamogeton pusillus						Wolffiella spp.					
*Potamogeton pectinatus						Woodwardia virginica					
Proserpinaca pectinata						Xyris sp.					
						Zizania aquatica					
						Zizaniopsis milacea					
						Potellum					
						Thelypteris interrupta	✓	✓	✓	✓	

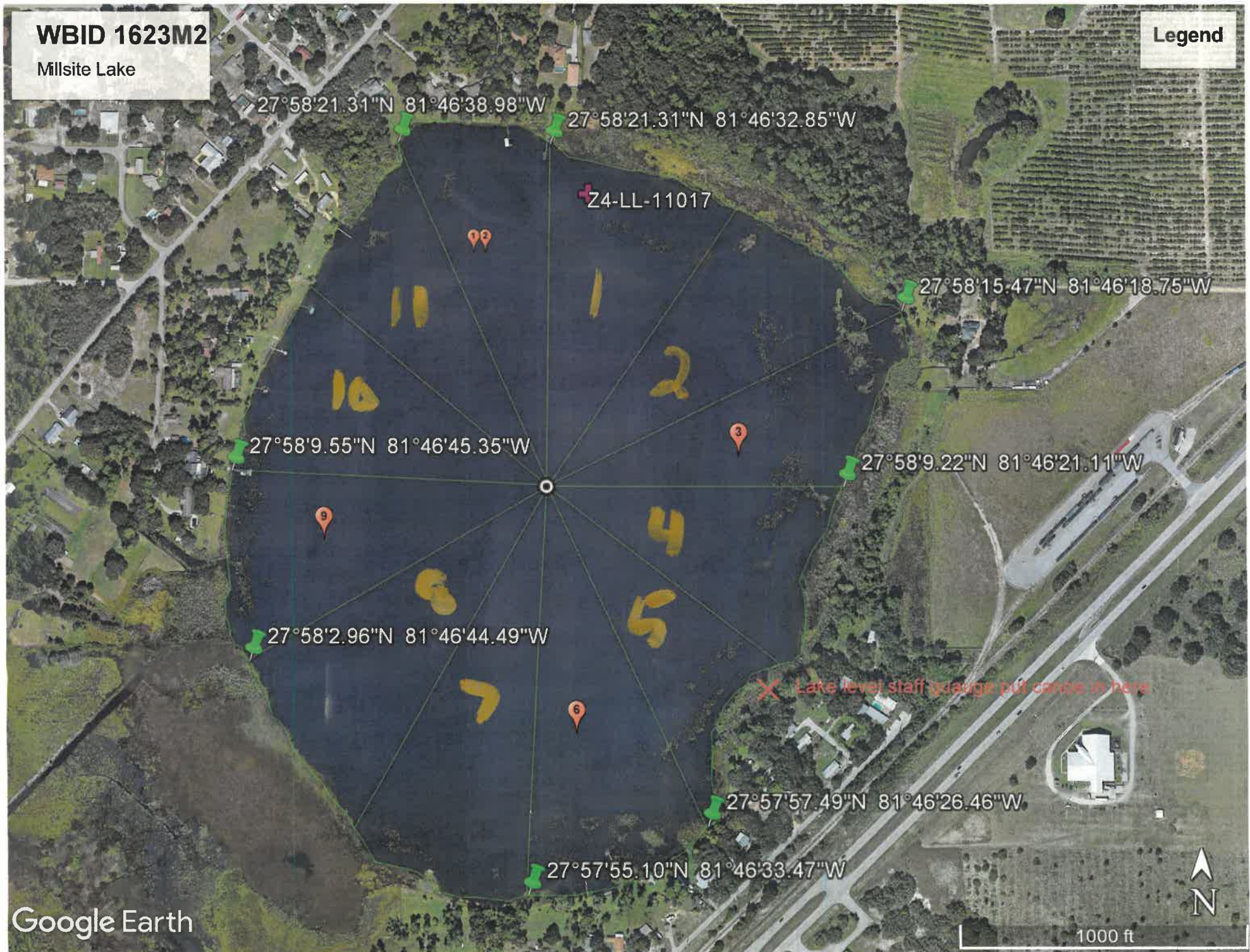
2) Nuphar + Cypress Od.
 3) Co. Dom. Nuphar + Salix

11) Co. Dom. Val. Od.
 8) Dom. Salix

WBID 1623M2

Millsite Lake

Legend



Google Earth