



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes / No

WIN Station Name:	PINE LAKE AT CENTER					Sample Date:	5/31/2023
WIN / Field ID:	G2SW0084	ORG ID:	21FLTPA	ENR:	-	Latitude:	28.0607
County:	HILLSBOROUGH	WBID:	1523G	LAKE	3F	Longitude:	-82.4722
Receiving Body of Water:	-					RQ-	2023-05-29-06

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Megan Maloney	x		x		x
Devin Mathias		x		x	

Sampling Equipment			
x	Sample Container		Carboy
	Dipper		Van Dorn
	Syringe		Pole
Syringe Lot#	1145497	Filter Lot#	17232873
Secchi Equipment ID:	Secchi #2		
Collection Method			
	Wading	x	Canoe/Kayak
	From Shore		Electric Motor
			Gasoline Motor
Depth Measured With	Secchi		

Water Level:	Low
Flow:	NA
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	Chewy
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 (PPT)
EST	1130	1.4	0.3	7.52	96.6	28.4	7.4	1.4	201.7	0.09
								VOB (s)		

Biological Samples Collected:

LVI

SBIO Visit ID:	HA ID:	RPS ID:	Macrophyte ID:	LIMS Sample ID Entered Into The Macrophyte Module:
86904	18492		12445	2413916

Parameter Suite	Parameter Methods (LIMS Test Codes)	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	Syringe Lot#:1145497; Filter Lot#:17232873	
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	ICE	H2SO4*	SA3013020	1/25/24
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**
Organics (LC)	W-E8321-DI	W-E8321-MS		NA2230040	9/1/23
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					
Other(s)			SyringeLot#	FilterLot#	
Field Comments:	Hot and sunny				
Comments on COC:					
Relinquish Date:	05/31/2023	Signature:			

LIMS EVENT ID: SW-DIST-2023-06-01-01

WIN Import ID: 41697

Enter Field Parameters, Verify Station ID In LIMS DMT: DM 6/5/2023

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

Save Field Sheets on Network: MM 7/24/2023 (Initials/Date)

Migrate Data to WIN: MM 7/24/2023 (Initials/Date)

(Initials/Date)

(Initials/Date)



Site Name: Pine lake @ Center

COUNTY: _____

LAKE SIZE: _____

WBID: _____

MACROPHYTE ID: _____

WATERSHED / LAKE / LAKE / LAKE

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: _____													
15				90				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										
15		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)										
3		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										
2		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 form</u> Exp. Date: _____ Alkalinity Sample Taken? ☐ Yes ☐ No Water Level ☒ Low ☐ Normal ☐ High								Water Odors: ☒ Normal ☐ Sewage ☐ Petroleum ☐ Other _____							
Meter Readings: Top: Depth (M) <u>0.3</u> Temp. (°C) <u>28.4</u> pH (SU) <u>7.40</u> D.O. (MG/L) <u>7.52</u> D.O. Sat. (%) <u>96.6</u> Cond. (UMHO/CM) <u>201.7</u> Salinity (PPT) <u>0.09</u> Mid-Depth: _____ Bottom: _____								Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ Other _____							
Meter ID: <u>Chewy</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): _____								Color: ☒ Clear ☐ Tannic ☐ Green							
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								SECCHI (M) <u>1.4</u> Total Station Depth (M) <u>1.4</u> VOB ☒							
Abundance: Absent Rare Common Abundant Periphyton ☐ ☐ ☐ ☒ Nuisance Plants ☐ ☐ ☒ ☐ Submersed Plants ☐ ☐ ☐ ☒ Exotic Apple Snails ☒ ☐ ☐ ☐								Sediment Odors: ☐ Normal ☒ Other (Specify): <u>Sewage</u> ☐ Anaerobic							
Additional Notes:															

Weather Conditions: Partly cloudy, sunnySAMPLING TEAM: Ben Mathias, Megan MabreySIGNATURE: [Signature]DATE: 5/31/23



Site Name: Pine lake @ Center

LAKE NAME

ECO-REGION:

SAMPLING LOCATION/DESCRIPTION:

COUNTY:

PARAMETER	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	Impounded, hydrology of system artificially controlled
HYDROLOGY	☒	☐	☐	☐
Color	Very clear, uncolored water (benthic sampling appropriate) ☒	Water somewhat tannin stained (benthic sampling appropriate) ☐	Dark, discolored water (water color 20 PCU or higher) ☐	Visibility extremely reduced due to high color ☐
	Optimal	Suboptimal	Marginal	Poor
Secchi ☐ 11	Secchi >3 m Or VOB 20 19 18 17 16	3 2.6 2.2 1.8 1.4 15 14 13 12 11	1.0 0.9 0.8 0.7 0.6 10 9 8 7 6	0.5 0.4 0.3 0.2 0.1 5 4 3 2 1
Vegetation Quality ☐ 12	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa 20 19 18 17 16	Mostly expected native plants, but moderate growths (6%-20% of lake) of nuisance macrophytes, or more than 50% of lake covered with plants 15 14 13 12 11	Large masses (21%-40%) of nuisance macrophytes (e.g., Hydrilla, hyacinth, cattail, etc.) or algal mats 10 9 8 7 6	Lake choked (>40%) with nuisance macrophytes (duckweed, hyacinth, etc.) or algal mats, or few plants present at all (e.g., plants removed) 5 4 3 2 1
Stormwater Inputs ☐ 10	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 7 6	Much direct input of stormwater (ditches, pipes, cultivated vegetation > 51%) and no or ineffective BMPs in place 5 4 3 2 1
Bottom Substrate Quality ☐ 6	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present 20 19 18 17 16	Mixture of sand or clay and detritus with higher % CPOM/mud/muck content. SAV may be present 15 14 13 12 11	Moderate layer of CPOM/mud/muck, or hardpacked sand only, or moderate algal growth (mats or Chara) on bottom 10 9 8 7 6	Thick deposits of CPOM, or fine detritus and anaerobic muck/mud/silt, or algal growth or nuisance plants (Hydrilla) cover bottom 5 4 3 2 1
Lakeside Adverse Human Alterations ☐ 3	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) 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) 5 4 3 2 1
Upland Buffer Zone ☐ 2	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 9 8 7 6	< 29% of shoreline with >18m buffer 5 4 3 2 1
Adverse Watershed Land Use ☐ 6	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			

TOTAL SCORE

56

COMMENTS:

ANALYSIS DATE:

5/31/23

ANALYST:

Devlin Mathias, Megan Maloney

SIGNATURE:

Field ID/WIN

G2SW0084

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET



Site Name: Pine lake @ Center

aterbody:

County:

gnature:

Date:

d. *Genera that may require lab verification*

Lake units sampled (circle one group):

1, 4, 7, 10 2, 5, 8, 11
3, 6, 9, 12Extent for each unit. Use "D" to denote dominant
dominant taxa.

SPECIES (A-F)	1	4	7	10	Collec ted? (✓)	SPECIES (G-L)	1	4	7	10	Collec ted? (✓)
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					
Cyrtilla racemiflora						*Ludwigia peruviana		✓	✓	✓	
Decodon verticillatus						*Ludwigia repens					
Diodia virginiana						*Ludwigia					
*Echinochloa crus-galli						Luziola fluitans (Hydrochloa carolinensis)					
*Echinochloa muricata						Lyonia lucida					
Echinochloa walteri											
Eclipta prostrata (E. alba)						Eleocharis acicularis	✓		✓		
Egeria densa						umbrella sedge?		✓	✓	✓	x
Eichhornia crassipes						Cyperus prolifer		✓			
*Eleocharis baldwinii	✓	✓	✓	✓							
*Eleocharis											
Eleocharis cellulosa											
Eleocharis equisetoides											
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium											
*Fuirena											
Fuirena scirpoidea	✓		✓	✓							



Site Name: Pine lake @ Center

Date:

Name: Pine lake @ Center					Collec ted? (✓)						Collec ted? (✓)
SPECIES (M-P)	1	4	7	10		SPECIES (R-Z)	1	4	7	10	
Magnolia virginiana						*Rhexia					
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 polyrhiza					
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.					



LVI Map for , WBID 1523G

