



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes / No

WIN Station Name:		LAKE BROOKLYN CENTER				Sample Date:		7/27/2023	
WIN / Field ID:	G2NE1197	ORG ID:	21FLA	ENR:	-	Latitude:	29.80326		
County:	CLAY	WBID:	2509I	LAKE		Longitude:	-82.02395		
Receiving Body of Water:						-	RQ-	2023-06-19-18	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jeremy Parrish		x		x	x
Katrin Villinger	x		x		

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
	Syringe	Pole	
Syringe Lot#		Filter Lot#	0000175533
Secchi Equipment ID:			
Collection Method			
	Wading	Canoe/Kayak	
	From Shore	Electric Motor	
		x Gasoline Motor	
Depth Measured With Meter			

Water Level:	Normal
Flow:	NA
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	Desi
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	1025	6.1	0.3	6.77	90.7	30.7	4.92	5	37.3	0.02
	1026		2	6.75	90.2	30.6	4.97		37.3	0.02
	1028		5.6	0.41	5.4	29.8	5.63		38.1	0.02

Biological Samples Collected: None

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

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type	Lot#	Expiration Date	pH Check	
Microbiology								
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
Nutrients	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#; Filter Lot#:0000175533			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	SA2229010	08/30/2023	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	NA2230040	09/01/2023	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS		Ice				
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:								
Comments on COC:								
Relinquish Date:	07/27/2023	Signature:						

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ QC Station ID, Field Parameters In LIMS DMT: _____
(Initials/Date) (Initials/Date)

Save Field Sheets on Network: _____ Migrate Data to WIN: _____
(Initials/Date) (Initials/Date)

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

STORET STATION NUMBER:	DATE (M/D/Y) 7/27/2023	LAKE NAME Lake Brooklyn Center		FIELD ID / NAME:
ECO-REGION:	COUNTY: clay	SAMPLING LOCATION/DESCRIPTION:		LAKE SIZE:
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	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	Diverse, expected native vegetation (emergent or submersed), less than 5% nuisance taxa ☒ 13	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	Stormwater enters system via sheet flow over non-cultivated and/or natural vegetation ☒ 10	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	Diverse mixture of sand, detritus, with small amounts of CPOM/mud/muck. SAV may be present ☒ 19	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	Very few man-made structures, roads, or other disturbance adjacent to lake (<10%) ☒ 6	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	Expected native vegetation between uplands and littoral zone, greater than 90% of shore with >18 m buffer ☒ 9	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
Adverse Watershed Land Use	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 ☒ 12			
TOTAL SCORE	89			
COMMENTS:				

ANALYSIS DATE: 7/27/2023	ANALYST: jeremy parrot	SIGNATURE: jeremy parrot
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DEP FORM FD 9000-31: LAKE OBSERVATION FIELD SHEET

SAMPLE ID: _____ MACROPHYTE ID: _____ LATITUDE: _____
COUNTY: Clay STORET #: 62NE1197 LONGITUDE: _____
DATE: 7/27/23 TIME: 1025 SAMPLING AGENCY: _____
SITE NAME: Lake Brooklyn Center WBID: 2509I
FIELD ID/NAME: _____ LAKE SIZE: _____ RQ: _____

WATERSHED / LAKESIDE FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category – from GIS) : Forest/Natural <u>5</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>95</u> Commercial _____ Industrial _____ Other (Specify) _____										LANDSCAPE DEVELOPMENT INTENSITY (100 m buffer) LDI: _____ 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 <u>10</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 <u>10</u> 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			
LAKESIDE ALTERATIONS <u>6</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 <u>10</u>			Highly developed or disturbed (>70% of lakeside affected) 5 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 _____							
								Water Surface Oils: ☒ None ☐ Sheen/Slick ☐ Glob ☐ 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>30.7</u> <u>4.92</u> <u>6.77</u> <u>90.7</u> <u>37</u> <u>0.02</u> Mid-Depth: <u>2</u> <u>30.6</u> <u>4.97</u> <u>6.75</u> <u>90.2</u> <u>37</u> <u>0.02</u> Bottom: <u>5.6</u> <u>29.8</u> <u>5.63</u> <u>0.41</u> <u>5.4</u> <u>38</u> <u>0.02</u>								Clarity: ☒ Clear ☐ Opaque ☐ Turbid ☐ Slightly Turbid Color: ☒ Clear ☐ Tannic ☐ Green							
Meter ID: _____								SECCHI (M) <u>5.0</u> Total Station Depth (M) <u>6.1</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 ☒ ☐ ☐ ☐							
								Additional Notes: <u>YMC A</u> <u>camp</u> <u>Immersed</u> <u>launched</u> <u>swimming</u> <u>area</u>							

Weather Conditions :

overcast

SAMPLING TEAM:

Jeremy Pank / Katrin Villiger

SIGNATURE:

Jeremy Pank

DATE:

7/27/23

DEP FORM FD 9000-27 LAKE VEGETATION INDEX FIELD SHEET

Waterbody: <u>Lake Brooklyn Center</u>		County: <u>CLAY</u>		Date: <u>7/27/2023</u>							
Analyst: <u>J. Parish</u>		Signature: <u>gerry Paul</u>		STORET:							
Except where noted as "sp." species level identification required. *Genera that may require lab verification* 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.				Lake units sampled (circle one group): <u>1, 4, 7, 10</u> 2, 5, 8, 11 3, 6, 9, 12							
SPECIES	1	4	7	10	Collected? (✓)	SPECIES	1	4	7	10	Collected? (✓)
Acer rubrum		P				Habenaria repens					
Alternanthera philoxeroides						Hydrilla verticillata					
Andropogon sp.	P	P	P	P		Hydrocotyle sp.					
Azolla filiculoides (A. caroliniana)						Hygrophila polysperma					
Baccharis sp.	P					*Hypericum fasciculatum					
Bacopa caroliniana						*Hypericum hypericoides					
Bacopa monnieri						*Hypericum myrtifolium					
Bidens laevis						Ilex cassine					
Bidens mitis						Ipomoea aquatica					
Blechnum serrulatum						Ipomoea sagittata					
Boehmeria cylindrica						Itea virginica					
Brasenia schreberi		P		P		Juncus effusus					
Cabomba caroliniana						*Juncus marginatus					
Casuarina equisetifolia						*Juncus megacephalus					
Centella asiatica						Juncus repens					
Cephalanthus occidentalis	P	P	P	P		*Juncus scirpoides	P	P	P	P	
Ceratophyllum demersum						Lachnanthes caroliniana					
Chara sp.						Leersia hexandra	P	P	P	P	
Cladium jamaicense						Landoltia punctata (Spirodela punctata)					
Cliftonia monophylla						Lemna sp.					
Colocasia esculenta						Leucothoe racemosa (Eubotrys racemosa)					
*Commelina						Limnolobos spongia					
Crinum americanum						Limnophila sessiliflora					
*Cyperus alternifolius (C. involucratus)						Liquidambar styraciflua					
Cyperus articulatus						*Ludwigia arcuata					
Cyperus haspan						*Ludwigia leptocarpa					
*Cyperus lecontei						*Ludwigia linearis					
*Cyperus polystachyos						*Ludwigia octovalvis					
*Cyperus odoratus						*Ludwigia peruviana					
*Cyperus surinamensis						*Ludwigia repens					
Cyrilla racemiflora						*Ludwigia <u>suff.</u>	P	P	P	P	
Decodon verticillatus						Luziola fluitans (Hydrochloa carolinensis)					
Diodia virginiana						Lyonia lucida					
*Echinochloa crus-galli						Magnolia virginiana					
*Echinochloa muricatum						Mayaca fluviatilis					
Echinochloa walteri						Melaleuca quinquenervia					
Eclipta prostrata (E. alba)						Micranthemum glomeratum					
Egeria densa						Micranthemum umbrosum					
Eichhornia crassipes						Mikania scandens					
*Eleocharis baldwinii						Mimosa pigra					
*Eleocharis						Myrica cerifera			P	P	
Eleocharis cellulosa											
Eleocharis equisetoides											
Eleocharis interstincta											
*Eriocaulon compressum											
*Eriocaulon decangulare											
Eupatorium capillifolium	P	P	P	P							
*Fuirena		P									
Fuirena scirpoidea	P	P	P	P							
Gordonia lasianthus											

FORM FD 9000-27: LAKE VEGETATION INDEX FIELD SHEET

Site: <u>Lake Brophy in Cule</u>						Date: <u>7/27/23</u>					
SPECIES	1	4	T	10	Collected? (✓)	SPECIES	1	4	T	10	Collected? (✓)
Myriophyllum aquaticum						Salix caroliniana		P	P		
*Myriophyllum heterophyllum						Salvinia minima					
*Myriophyllum laxum						Sambucus canadensis				P	
*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.	P	P				Scirpus cyperinus					
Nymphaea odorata	P	P	P	P		*Sesbania <u>herbacea</u>		P			
Nymphoides aquatica						Solidago sp.		P			
Nyssa sylvatica var. biflora						Sparganium americanum					
Orontium aquaticum						Spartina bakeri	P	P	P	P	
Osmunda cinnamomea						Spirodela polyrrhiza					
Osmunda regalis						Taxodium sp.					
Panicum hemitomon	P	P	P	P		Thalia geniculata					
Panicum repens	P	P	P	P		Thelypteris palustris					
Paspalidium geminatum						Triadenum virginicum					
*Paspalum repens						Typha sp.					
Paspalum urvillei			P			Urochloa mutica (Brachiaria mutica)					
Peltandra sp.						*Utricularia gibba (U. biflora)					
Persea sp.						*Utricularia floridana	P	P	P	P	✓ 92
Pennisetum purpureum						*Utricularia foliosa					
Phragmites australis						*Utricularia inflata					
Pinus elliotii						*Utricularia purpurea					
Pistia stratioides						*Utricularia cornuta					
Pluchea sp.						*Utricularia radiata					
*Polygonum glabrum (densiflorum)						Vallisneria americana					
*Polygonum hydropiperoides	P	P				*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)						SES herb		P			
Proserpinaca pectinata						<u>Sabotia sp.</u>	P			P	
*Rhexia <u>virginiana</u>	P		P								
*Rhynchospora corniculata											
*Rhynchospora inundata											
Rhynchospora tracyi											
Ricciocarpus natans											
Sabal palmetto			P	P	92						
Sagittaria striata											
*Sagittaria filiformis											
*Sagittaria graminea											
*Sagittaria isoetiformis											
Sagittaria lancifolia											
Sagittaria latifolia											