

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End

of Day CCV

☒ Yes / No

WIN Station Name: Johns Lake @ conservation area dock

Date: 6/1/2022

WIN/Field ID: G1CE0111

WBID: 2873

ENR: -

Latitude: 28.53105

County: ORANGE

Org ID: 21FLCEN

Longitude: -81.61289

Receiving Body of Water: Johns Lake

RQ: 2022-05-30-40

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Leif Boman		☒		☒	☒
☒	Elizabeth Bates	☒		☒		
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: Light	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☒ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# SHRIMP TRAP					
Photos: YES		Flow:		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:											
SBIO ID Numbers: SBIO: 84487 RPS: 9940 MacroID: 12183						LIMS:2331267					
Notes: SUNNY, SCATTERED STORMS											

Duplicate Sample

Time Zone: EST	Time: _____	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID: _____			

Blank

Time Zone: _____	Time: _____	Field ID: _____	(Blank Type_DDDMMYYYY)
DI Source: _____	Location: _____		
DI Type: _____	Equipment ID: _____		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: CEN-DIST-2022-06-02-01

WIN Import ID: 33939

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 6/14/22

QC Station ID, Field Parameters In LIMS DMT: EB 6/17/22

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets KWM 7/1/22

Migrate Data to WIN: KWM 7/1/22

Verify Data In WIN: _____

(Initials/Date)

(Initials/Date)

(Initials/Date)



RQ-2022-05-30-40
Customer: CEN-DIST
Project ID: STRATEGIC MONITORING PLAN

Collected By: Leif Boman, Elizabeth Bates
Field Report Prepared By: Leif Boman
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID: G1CE0111 Location: Johns Lake @ conservation area dock						Comments:					
Matrix: Fresh						(Check one) ☒ GRAB ☐ COMPOSITE					
Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTH)	
6/1/2022	1156 EST	4.79	62.7	29.3	6.89	0.3	0.9 ☐ VOB (S)	2.1	210	0.1	
	1201 EST	3.41	43.7	28	6.72	1.6	Central Lab please use top row for login purposes		210.7	0.1	
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group	
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☐ <2	1	A	
		Lot #	130873		Exp:	11/17/22					
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☐ HNO3*		☒ <2	1	A	
		Lot #	NA1286110		Exp:	11/16/22					
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☐ Ice			1	A	
		Filter Lot #				Syringe Lot #	1335260				
BOD (BP-1L)		☐ OV-BODUNIN				☐ Ice					
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A	
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	A	
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-F / W-TSS / TURBIDITY				☐ Ice					
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC				☐ Formalin					
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice					
Microbiology (Contract Lab Bottle)		☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab				☐ Ice					
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐				☐ Ice					
Tracers (BG-500ML)		☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice		MCAA Exp.			
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI		☒ WE8321-MS		☒ W-PSNP-TQ		☒ W-CT-CL-R		5	A
		☐ W-PCL-TQ-R		☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)		☐ W-TR-SQ-R					
		☐ W-PCB-TQ-R									
Phytoplankton/Periphyton				DTY-QN-C		PKD-QN-C		☐ Ice			
Name: Leif Boman Elizabeth Bates					Signature:					Date: 06/01/2022	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>FDAP - CERO</u>		STORET STATION NUMBER: <u>G1000111</u>	DATE (MM/DD/YY): <u>06/01/22</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>ORANGE</u>	LOCATION: <u>Johns Lake @ Conservation</u>	FIELD ID/NAME:	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered ★
Substrate Diversity <u>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>2</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>10</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>5</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.
Primary Score <u>20</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>5</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability <u>10 (EB)</u> Right Bank <u>20</u> Left Bank <u>5</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. 5 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>10</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>5</u> Left Bank <u>4</u> Secondary Score <u>5+41 (EB)</u>	10 9	8 7 6	5 4	3 2 1

71 61 (EB) TOTAL SCORE

Date: <u>06/01/2022</u>	Analyst: <u>Mike Bonner, Liz Bates</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY ORANGE STORET # GICE0111 LONGITUDE _____
 DATE 06/01/2022 TIME _____ SAMPLING AGENCY FWP - COROL
 SITE NAME John's Lake @ conservation area dock
 FIELD ID/NAME GICE0111 RECEIVING BODY OF WATER _____

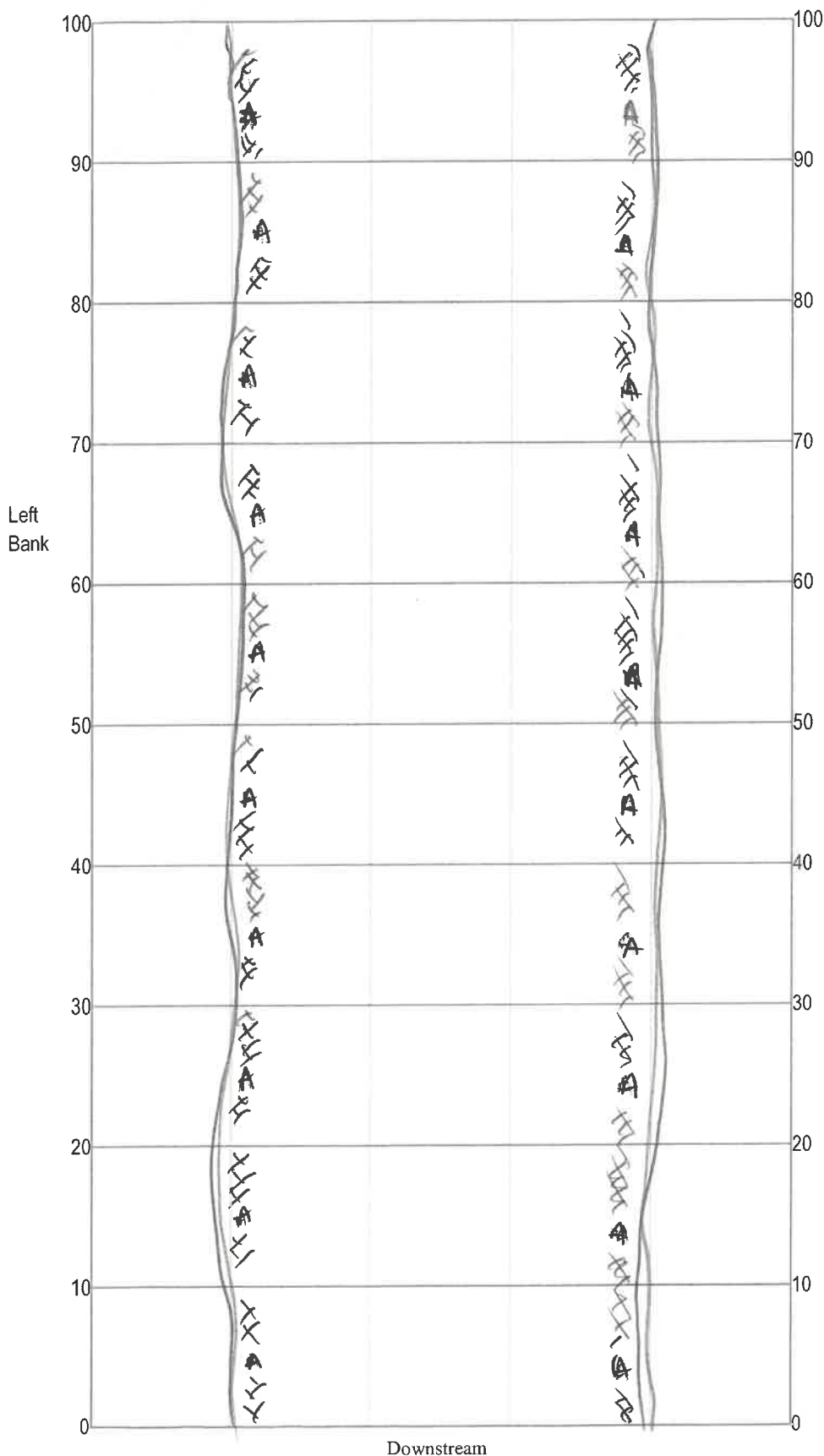
RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>60.98</u> Silviculture _____ Field/Pasture _____ Agricultural <u>15</u> Residential <u>25</u> Commercial _____ Industry _____ Other (Specify) _____								Landscape Development Intensity Index (LDI) _____
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy						Typical Width (m) Depth (m)/Velocity (m/sec) Transect _____ m wide _____ m/s _____ m/s _____ m/s		
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>2</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101) <u>5/6</u>		_____ m/s _____ m/s _____ m/s		
High Water Mark: <u>.1</u> + <u>2.1</u> = <u>2.2</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		_____ m deep _____ m deep _____ m deep		
Artificially ☐ NO ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☒ Recent, severe				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)				

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse		Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify): _____		Smothering of Substrates Sand Smothering: None ☒ Slight ☐ Moderate ☐ Severe Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe Algae Smothering: None ☐ Slight ☒ Moderate ☐ Severe	
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon % Coverage INVERT PERI # Times Sampled # Times Sampled			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.3</u> <u>29.3</u> <u>6.89</u> <u>4.79</u> <u>62.7</u> <u>210</u> <u>0.1</u> <u>0.9</u> Mid: _____ Bottom: <u>1.6</u> <u>28.0</u> <u>6.72</u> <u>3.41</u> <u>43.7</u> <u>210.7</u> <u>0.1</u> <u>2.1</u> Meter ID: <u>SHRIMP TRAP</u>		
Woody Debris (Snags) _____ Undercut Banks / Roots _____ Leaf Packs or Mat _____ Aquatic Vegetation _____ Rock or Shell Rubble.. _____ Sand..... _____ Mud / Muck / Silt _____ Other _____ Other _____			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____ Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.		
SAMPLING TEAM <u>Leif Boman, Liz Bates</u>			SIGNATURE: <u>Leif Boman</u>		DATE: <u>06/01/2022</u>

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

Location: John's Lake @ conservation area dock
Date: 06/01/2022
Sampler: Liz Boman, Liz Bates

100 m: Latitude _____	
Longitude _____	
0 m: Latitude _____	
Longitude _____	
Substrates: Code key, draw proportionate habitat abundance. %	
☐ Snags	_____ %
☐ Roots/undercut banks	_____ %
☐ Leaf Packs (or mats)	_____ %
☒ Aquatic Macrophytes	<u>.8181</u> %
☐	_____ %
☐	_____ %
☒ Pools	total # observed = <u>0</u> # range expected = _____
Average width <u>22</u> m	
Average depth _____ m	
Velocity measured at <u>0.50</u> meter mark.	
WQ & chemistry taken at <u>0</u> meter mark.	
Habitat Smothering: Note areas (on map) where sand or silt is smothering substrates, limiting habitability.	
Bank Stability: Note areas (on map) with unstable, eroding banks.	
Riparian Buffer Width: Note areas (on map) where natural vegetation is altered or eliminated.	

Plants observed / other notes:

WIN ID / Field ID

Johns Lake @ conservation
area dock

G1CE0111



DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET																								
Waterbody: <u>John's Lake Conservation area dock</u>										Date: <u>06/01/22</u>					County: <u>ORANGE</u>					Storet Number:				
Analyst: <u>Liz Bonan, Liz Bates</u>										Signature: <u>[Signature]</u>														
Comments:																								
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m ² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.																								
HERBACEOUS SPECIES										HERBACEOUS SPECIES														
Meter Mark										Meter Mark														
0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)			
Alternanthera philoxeroides	/	/	/	/	/	/	/	/	/		Micranthemum glomeratum													
Bacopa caroliniana											Micranthemum umbrosum													
Bacopa monnieri											Myriophyllum aquaticum													
Bidens mitis											Najas guadelupensis													
Boehmeria cylindrica											Nuphar luteum													
Centella asiatica											Orontium aquaticum													
Ceratophyllum demersum	/		/			/		/			Panicum hemitomon													
Chara											Panicum repens <u>Paspalum</u>					/								
Cicuta maculata											Panicum rigidulum													
Cladium jamaicense											Pistia stratioides								/	/				
Colocasia esculenta											Polygonum glabra													
Commelina diffusa											Polygonum hydropiperoides													
Commelina virginica											Polygonum punctatum						/			✓				
Crinum americanum											Pontedaria cordata													
Diodia virginiana											Potamogeton illinoensis													
Eichhornia crassipes											Ruellia simplex								/	/				
Eleocharis (wispy viviparous)											Sacciolepis striata													
Hydrilla verticillata	/	/	/	/	/	/	/	/	/		Sagittaria kurziana													
Hydrocotyle											Sagittaria lancifolia													
Hygrophila polysperma											Sagittaria latifolia													
Hymenocallis											Salvinia minima													
Lachnanthes caroliniana											Samolus parviflora													
Landoltia punctata											Saururus cernuus													
Lemna											Sparganium americanum													
Limnophila sessiflora											Typha								/	/				
Ludwigia leptocarpa											Vallisneria americana													
Ludwigia palustris											Zizania aquatica													
Ludwigia peruviana																								
Ludwigia repens																								
Luziola fluitans																								
If no Dominant or Co-Dominant were selected, indicate with "X"																								
Indicate % cover macrophytes per section																								
0-5% Macrophyte Coverage</																								

Johns Lake @ conservation
area dock

Revision Date: January 2017

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: John's Lake @ conservation area dock

County: ORANGE

Date: 6/22/2022

Investigators: Leif Boman / Liz Bates

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	3			60	1	2		
	2	2				2	3		
	3		✓			3		✓	
	4		✓			4	2	✓	
	5		✓	0		5	2	✓	0
	6		✓			6	2	✓	
	7		✓			7		✓	
	8					8	2		
	9					9	2		
10	1	2			70	1	2		
	2					2	2		
	3		✓			3	2	✓	
	4		✓			4	2	✓	
	5		✓	0		5	2	✓	0
	6		✓			6	2	✓	
	7		✓			7	2	✓	
	8					8	2		
	9					9	2		
20	1	2			80	1	2		
	2					2	2		
	3		✓			3	2	✓	
	4		✓			4	2	✓	
	5		✓	0		5	2	✓	0
	6		✓			6	2	✓	
	7		✓			7	2	✓	
	8					8	2		
	9					9	2		
30	1	2			90	1	2		
	2					2	2		
	3		✓			3	2	✓	
	4		✓			4	2	✓	
	5		✓	0		5	2	✓	0
	6		✓			6	2	✓	
	7		✓			7	2	✓	
	8					8	2		
	9					9	2		
40	1	2			100	1	2		
	2					2	2		
	3		✓			3	2	✓	
	4		✓			4	2	✓	
	5		✓	0		5	2	✓	0
	6		✓			6	2	✓	
	7		✓			7	2	✓	
	8					8	2		
	9					9	2		
50	1	2			Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.				
	2				Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.				
	3		✓		Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.				
	4		✓		Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.				
	5		✓	0					
	6		✓						
	7		✓						
	8								
	9								

STORET Station Number: GICED011

Secchi depth 0.9
Estimated?

points ranked 4-6 9
total points assessed 99
% points ranked 4-6 9

Check accompanying data collected at same site/date.

Algal mat sample ☐
Linear Veg Survey ☒
Habitat Assessment ☒
SCI/Biorecon ☐
Water sample ☒

RQ 2022-05-30-40

Algal Thickness Rank

N	
1	rough, no algae, slimy, algae up to 1mm
2	>1mm - 6mm
3	>6mm - 20mm
4	>20mm - 10 cm
5	>10 cm