

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End

of Day CCV

☒ Yes / No

WIN Station Name: Helena Run @ 0.45 mi upstream of Hwy 27

Date: 5/19/2022

WIN/Field ID: G1CE0035

WBID: 2832

ENR: -

Latitude: 28.7628

County: LAKE

Org ID: 21FLCEN

Longitude: -81.88762

Receiving Body of Water: Lake Harris

RQ: 2022-04-04-32

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Katie March		☒		☒	☒
☒	Victoria Schwartz	☒		☒		
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# CRAW DADDY	
Photos: YES	Flow: FLOW			Tide:		Tide Times: High: Low:	
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☒ Algae ID ☒ LVS ☐ LVI Other:							
SBIO ID Numbers: SBIO 84214		MACROPHYTE 12144		RPS 9935		LIMS 2328702	
Notes: SUNNY. SITE NOT SCI APPROPRIATE / ALGAL ID COLLECTION TIME: 1140							

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_DDMMYYYY)
DI Source:	Location:		
DI Type:	Equipment ID:		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: CEN-DIST-2022-05-20-02

WIN Import ID: 33838

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 5/27/22

(Initials/Date)

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

(Initials/Date)

Scan/Save Field Sheets KWM 6/28/22

(Initials/Date)

Migrate Data to WIN: KWM 6/28/22

(Initials/Date)

Verify Data In WIN:

(Initials/Date)



RQ-2022-04-04-32
Customer: CEN-DIST
Project ID: STRATEGIC MONITORING PLAN

Collected By: Katie March, Victoria Schwartz
Field Report Prepared By: Katie March
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID: G1CE0035 Location: Helena Run @ 0.45 mi upstream of Hwy 27						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 (PPT _h)
5/19/2022	1206 EST	5.87	74.9	27.9	7.18	0.3	0.7 ☐ VOB (S)	1.4	298	0.14
	EST						Central Lab please use top row for login purposes			
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 #	SA1308030		Exp:	12/1/22				
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 #	17413308			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-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice				
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC				☐ Formalin				
Periphyton (PT-50ML)		☒ ALGAE-ID				☒ Ice			1	B
Microbiology (Contract Lab Bottle)		☐ Coli ☐ 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	☒ Ice	MCAA Lot#	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: Katie March Victoria Schwartz				Signature:					Date: 05/19/2022	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID _____ LATITUDE 28.7628
 COUNTY Lake STORET # GICE0035 LONGITUDE -81.88762
 DATE 5/19/22 TIME 12:06 SAMPLING AGENCY 219LCEV
 SITE NAME Holera Run @ 0.45 mi upstream of Hwy 27
 FIELD ID/NAME GICE0035 RECEIVING BODY OF WATER Lake Harris

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>80</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>20</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 <u>20 sec.</u> <u>20</u> m wide _____ m/s <u>0.05</u> m/s _____ m/s _____ m deep <u>1.4</u> m deep _____ m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101) _____			
High Water Mark: <u>0.3</u> + <u>1.4</u> = <u>1.7</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No			
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 # Times Sampled PERI # Times Sampled Woody Debris (Snags) _____ Undercut Banks / Roots _____ Leaf Packs or Mat <u>5</u> _____ Aquatic Vegetation <u>5</u> _____ Rock or Shell Rubble.. _____ Sand..... _____ Mud / Muck / Silt _____ Other _____ Other _____			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>27.9</u> <u>7.18</u> <u>5.87</u> <u>74.9</u> <u>298</u> <u>0.14</u> <u>0.7</u> Mid: _____ Bottom: _____ Meter ID: <u>Craw Daddy</u> TOTAL DEPTH <u>1.4</u>					
			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐		
			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SA1308030</u> Exp: <u>12/1/22</u>			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐		
			Algae Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____			Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☒ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☒ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐					
			AMBIENT FIELD CONDITIONS / NOTES: <u>Site not SCI Appropriate</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.					
SAMPLING TEAM <u>Katie March + Victoria Schwarz</u>			SIGNATURE: <u>KMarch / VSchwarz</u>			DATE: <u>5/19/22</u>		

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

SAMPLING AGENCY: 21PLCEN	STORED STATION NUMBER: G1CE0035	DATE (MM/DD/YY): 5/19/22	RECEIVING BODY OF WATER: Lake Harris
REMARKS:	COUNTY: Lake	LOCATION: Helena Run @ 0.45 mi upstream of Hwy 27	FIELD ID/NAME: G1CE0035

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 6	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 6	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 6	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 10 Primary Score 28	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components Artificial Channelization 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability Right Bank 10 Left Bank 10	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 Right Bank 10 Left Bank 10	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities 3 2 1
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 10 Secondary Score 80	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. 10 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

TOTAL SCORE

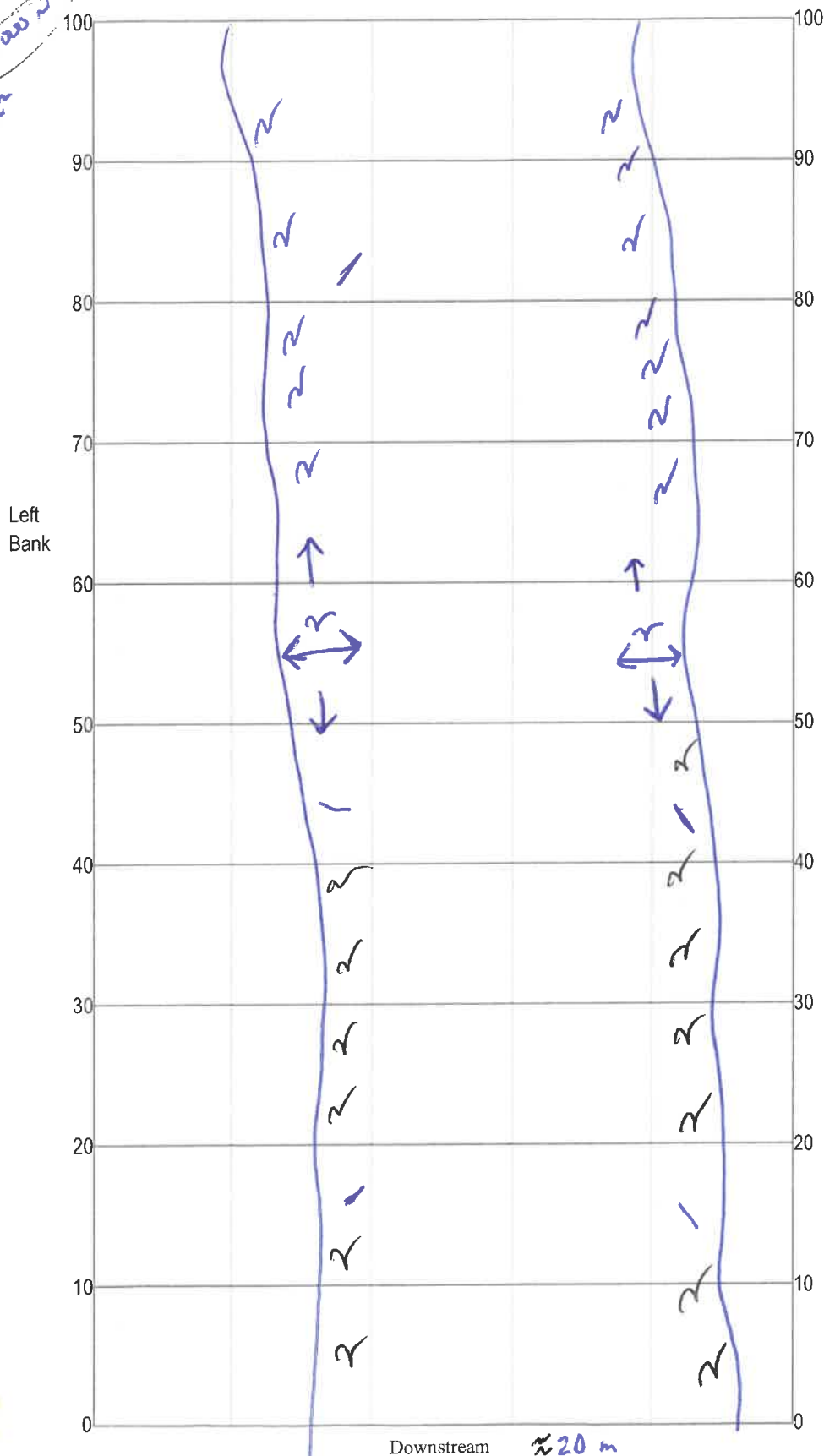
108

Date: 5/19/22	Analyst: Katie March / Victoria Schwartz	Signature: KMarch / Kat Sch
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

GICE0035

Location: Helena Run
 Date: 5/19/22
 Sampler: Victoria Schwarz



100 m: Latitude	
Longitude	
0 m: Latitude	<u>28.7628</u>
Longitude	<u>-81.88762</u>
Substrates: Code key, draw proportionate habitat abundance. %	
☒ Snags	<u>2-5</u>
☐ Roots/undercut banks	
☐ Leaf Packs (or mats)	
☒ Aquatic Macrophytes	<u>5-10</u>
☐	
☐	
☐ Pools	total # observed = <u> </u> # range expected = <u> </u>
Average width	<u>20</u> m
Average depth	<u>1.4</u> m
Velocity measured at <u> </u> meter mark.	
WQ & chemistry taken at <u> </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:

- Dark water / slow flow
 - 1.5-2 m aquatic veg along each shoreline (including woody)
 - SAV + tiny floaters

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

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Helena River

Date: 5/19/22

County: Lake

Storet Number: 616E0035

Analyst: Katie March

Signature: K. M. A. S.

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m² 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.

	Meter Mark										Meter Mark												
HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)	HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
<i>Alternanthera philoxeroides</i>												<i>Micranthemum glomeratum</i>											
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>	/	//	/								
<i>Bidens pinnatis</i> laevis	/	/			/		/	/				<i>Najas guadelupensis</i>											
<i>Boehmeria cylindrica</i>												<i>Nuphar luteum</i>									/	/	
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>											
<i>Ceratophyllum demersum</i>	/	/	/									<i>Panicum hemitomon</i>											
<i>Chara</i>												<i>Panicum repens</i>											
<i>Cicuta maculata</i>		/										<i>Panicum rigidulum</i>											
<i>Cladium jamaicense</i>	/	/	/	/	/	X	/	/				<i>Pistia stratioides</i>			/	/						/	
<i>Colocasia esculenta</i>												<i>Polygonum glabra</i>				/	/						
<i>Commelina diffusa</i>												<i>Polygonum hydropiperoides</i>											
<i>Commelina virginica</i>												<i>Polygonum punctatum</i>											
<i>Crinum americanum</i>												<i>Pontedaria cordata</i>	/	X	X								
<i>Diodia virginiana</i>												<i>Potamogeton illinoensis</i>											
<i>Eichhornia crassipes</i>												<i>Ruellia simplex</i>											
<i>Eleocharis (wispy viviparous)</i>												<i>Sacciolepis striata</i>											
<i>Hydrilla verticillata</i>	/	/	/									<i>Sagittaria kurziana</i>											
<i>Hydrocotyle</i>	/	X	/	/	/	X	/	X				<i>Sagittaria lancifolia</i>		/	/								
<i>Hygrophila polysperma</i>												<i>Sagittaria latifolia</i>											
<i>Hymenocallis</i>												<i>Salvinia minima</i>	/	/	/	/	/	/	/	/	/	/	
<i>Lachnanthes caroliniana</i>												<i>Samolus parviflora</i>											
<i>Landoltia punctata</i>												<i>Saururus cernuus</i>											
<i>Lemna</i>	/	/	/	/	/	/	/	/	/			<i>Sparganium americanum</i>											
<i>Limnophila sessiflora</i>												<i>Typha</i>											
<i>Ludwigia leptocarpa</i>												<i>Vallisneria americana</i>											
<i>Ludwigia palustris</i>												<i>Zizania aquatica</i>											
<i>Ludwigia peruviana</i>												<i>Peltandra</i>	/	/	/	/	/	/	/	/	/	/	
<i>Ludwigia repens</i>												<i>Weinmannia</i>	/	/	/	/	/	/	/	/	/	/	
<i>Luziola fluitans</i>												<i>U. imitata</i>	/	/	/	/	/	/	/	/	/	/	
					</																		

Lots of woody veg (salix, cephalanthus) so higher % coverage than HA

WBID: 2832
GICE0035

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Investigators: <u>Victoria Schwarz</u>					County: <u>Lake</u>				
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	4		
	2	↑	↑			2	↑	↑	
	3					3			
	4					4			
	5	N	✓	0		5	N	✓	0
	6					6			
	7					7			
	8	↓	↓			8	↓	↓	
	9	4				9	4		
10	1	4			70	1	5		
	2	↑	↑			2	↑	↑	
	3					3			
	4					4			
	5	N	✓	0		5	N	✓	0
	6					6			
	7					7			
	8	↓	↓			8	↓	↓	
	9	5				9	5		
20	1	5			80	1	4		
	2	↑	↑			2	↑	↑	
	3					3			
	4					4			
	5	N	✓	0		5	N	✓	0
	6					6			
	7					7			
	8	↓	↓			8	↓	↓	
	9	5				9	5		
30	1	4			90	1	5		
	2	↑	↑			2	↑	↑	
	3					3			
	4					4			
	5	N	✓	0		5	N	✓	0
	6					6			
	7					7			
	8	↓	↓			8	↓	↓	
	9	5				9	5		
40	1	4			100	1	4		
	2	↑	↑			2	↑	↑	
	3					3			
	4					4			
	5	N	✓	0		5	N	✓	0
	6					6			
	7					7			
	8	↓	↓			8	↓	↓	
	9	4				9	5		
50	1	5			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. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank. 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. 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%.				
	2	↑	↑						
	3								
	4								
	5	N	✓	0					
	6								
	7								
	8	↓	↓						
	9	4							

Station Number: GICE0035

Secchi depth 0.7
Estimated?

points ranked 4-6 21
total points assessed 22
% points ranked 4-6 21%

Check accompanying data collected at same site/date.
Algal mat sample ☒
Linear Veg Survey ☒
Habitat Assessment ☒
SCI/Biorecon ☐
Water sample ☒

RQ- 2022-04-04-32

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

- water deep/dark
- sampling from canoe