



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Horseshoe Creek 100m upstream from Intercoastal/Lake Wimico **Date:** 4/25/2022

WIN/Field ID: G2TLHR0033 **WBID:** 1272 **ENR:** - **Latitude:** 29.84398

County: GULF **Org ID:** 21FLTLHR **Longitude:** -85.2123

Receiving Body of Water: Searcy Creek / Lake Wimico **RQ:** 2022-01-03-58

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Jonathan Woods	x		x		
☒	Jade Burtchett		x		x	x
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded		Meter ID# 21K100690	
Photos: NO	Flow: FLOW	Tide: RISING	Tide Times: High: 1427 Low: 724
Biological Samples Collected: ☒ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:			
SBIO ID Numbers:			
Notes:			

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: _____ **WIN Import ID:** _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ **QC Station ID, Field Parameters In LIMS DMT:** _____

(Initials/Date) (Initials/Date)

Scan/Save Field Sheets _____ **Migrate Data to WIN:** _____ **Verify Data In WIN:** _____

(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2022-01-03-58
Customer: TLH-DIST
Project ID: STRATEGIC MONITORING PLAN

Collected By: Jonathan Woods, Jade Burtchett
Field Report Prepared By: Jonathan Woods
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID: G2TLHR0033 Location: Horseshoe Creek 100m upstream from Intercoastal/Lake Wimico						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)	
4/25/2022	1300 EST	7.68	93.3	24.9	7.06	0.3	1 ☐ VOB (S)	3.1	108.7	0.05	
	1303 EST	6.25	72.8	22.9	6.81	2.6	Central Lab please use top row for login purposes		116.1	0.05	
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 #	1308030		Exp:	12/1/22					
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☐ HNO3*		☒ <2	1	A	
		Lot #	1105100		Exp:	6/7/22					
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☐ Ice			1	A	
		Filter Lot #	17347261			Syringe Lot #	1091364				
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					
Microbiology (Contract Lab Bottle)		☒ Coli ☐ Coli ☐ Enterococci ☐ Contract Lab				☒ Ice			1	A	
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 or 3	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: Jonathan Woods Jade Burtchett					Signature:					Date: 04/25/2022	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

84031

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

SAMPLE ID 02TLHR0033 ORG ID ATFCHLR LATITUDE _____
 COUNTY Gulf STORET # _____ LONGITUDE _____
 DATE 4/25/22 TIME 1300 SAMPLING AGENCY _____
 SITE NAME Hocheshoe Creek
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Lake Ulinico

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>50</u> Silviculture <u>50</u> Field/Pasture _____ Agricultural _____ Residential _____ 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>15</u> m wide				
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) _____				
High Water Mark: <u>0.5</u> + <u>3.1</u> = <u>3.6</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 ☐
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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		
Aquatic Vegetation	<u>24.3</u>	
Rock or Shell Rubble..		
Sand.....		
Mud / Muck / Silt		
Other	<u>75.7</u>	
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>1.0</u>
Mid:							☐ VOB
Bottom							TOTAL DEPTH
Meter ID: <u>21K100690</u>							<u>3.1</u>

Water Odors Normal ☐ Petroleum ☐
 Sewage ☐ Chemical ☐ Other ☐

 Water Sample Taken? ☒ Yes ☐ No
 Sample Preserved? ☒ Yes ☐ No
 Lot Number: 1304030 Exp: 12/1/22

 Algae Sample Taken? ☐ Yes ☒ No
 Sample Preserved? ☐ Yes ☐ No
 Lot Number: _____ Exp: _____

Water Surface Oils Normal ☒ Sheen ☐
 Globbs ☐ Slick ☐ Other ☐

 Color Tannic ☒ Green (Algae) ☐
 Clear ☐ Other (Specify) ☐

 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:

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

Woods / Butchett

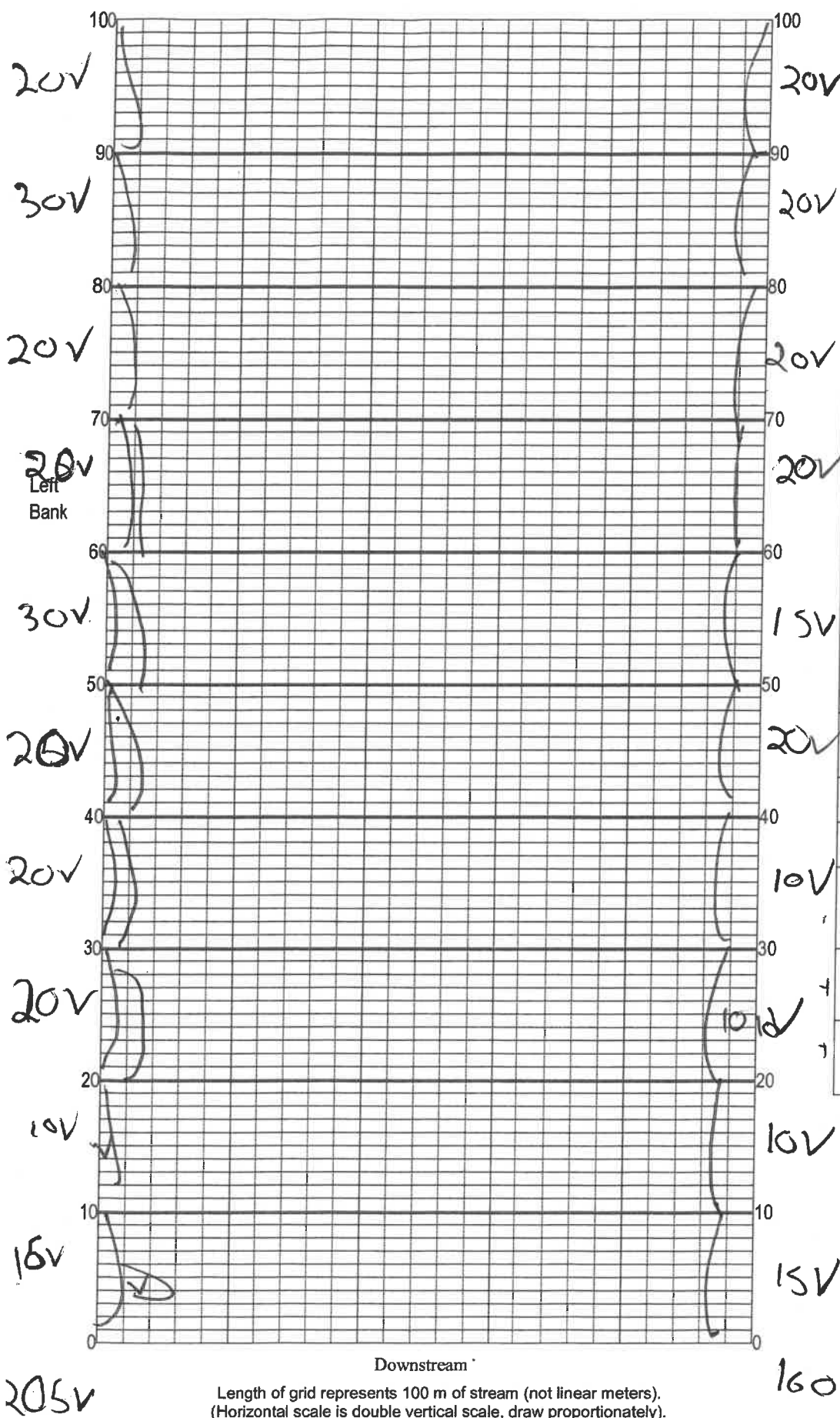
SIGNATURE:

[Signature]

DATE:

4/25/22

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



G2K1H0033

Location: Horse shoe Crk loom

Date: 04/25/22

Sampler: J. Butcher J. Woods

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 24.3
☐ _____
☐ Pools total # observed = _____
range expected = _____

Average width 15 m
Average depth 3.1 m

Velocity measured at 0 meter mark.

WQ & chemistry taken at 0 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:

363v = 24.3

17327

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

SAMPLING AGENCY: <u>21 FLTLHR</u>		STORET STATION NUMBER: <u>GATLHR0033</u>	DATE (MM/DD/YYYY): <u>04/25/22</u>	RECEIVING BODY OF WATER: <u>Lake Winioco</u>
REMARKS:	COUNTY: <u>Ouift</u>	LOCATION: <u>Horseshoe creek</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>5</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>13</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>13</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>14</u> Primary Score <u>49</u>	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	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>20</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	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.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.
Right Bank <u>10</u> Left Bank <u>10</u>	10 9	8 7 6	5 4	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>10</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>10</u> Left Bank <u>10</u> Secondary Score <u>80</u>	10 9	8 7 6	5 4	3 2 1

125 **TOTAL SCORE**

Date: <u>4/25/22</u>	Analyst: <u>Wood</u>	Signature:
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: GATLWR0033 County: Chalf Date: 4/25/22 Investigators: Woods/Bertchett

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	N	✓		60	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5			0		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
50	1					1				
	2					2				
	3					3				
	4					4				
	5			0		5				
	6					6				
	7					7				
	8					8				
	9					9				

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%.

STORET Station Number:

Secchi depth: 1.0
Estimated?: N

points ranked 4-6:
total points assessed:
% points ranked 4-6:

Check accompanying data collected at same site/date.

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

RQ-

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

12171

Storet Number:

Signature:

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

Species for additional taxa names:		Meter Mark										Specimen collected (check)	Species for additional taxa names:		Meter Mark										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		HERBACEOUS SPECIES		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
Alternanthera philoxeroides													Micranthemum glomeratum												
Bacopa caroliniana													Micranthemum umbrosum												
Bacopa monneri													Myriophyllum aquaticum												
Bidens mitis													Najas guadelupensis												
Boehmeria cylindrica													Nuphar luteum												
Centella asiatica													Orontium aquaticum												
Ceratophyllum demersum													Panicum hemitomon												
Chara													Panicum repens												
Cicuta maculata													Panicum rigidulum												
Cladium jamaicense		D	D	D	D	D	D	D	D	D	D		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													Utricularia foliosa		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Ludwigia repens																									
Luziola fluitans																									
If no Dominant or Co-Dominant were selected, indicate with "X"																									
Indicate % cover macrophytes per section																									
0-5% Macrophyte Coverage		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓														
>5 and ≤10% Macrophyte Coverage																									
>10 and ≤25% Macrophyte Coverage																									
>25 and ≤50% Macrophyte Coverage																									
> 50% Macrophyte Coverage																									