



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End

of Day CCV

☒ Yes / ☐ No

WIN Station Name: Bass Slough 10m N of Neptune Rd

Date: 6/28/2021

WIN/Field ID: G4CE0219

WBID: 3173A1

ENR:

Latitude: 28.279552

County: Osceola

Org ID: 21FLCEN

Longitude: -81.364769

Receiving Body of Water: Fish Lake

RQ: 2021-07-05-42

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒ Terry Riordan		x	x			
☒ Victoria Schwartz				x	x	x
☐						
☐						

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: NO		Flow: FLOW		Tide:		Tide Times: High: Low:	
Biological Samples Collected:		☐ None	☒ HA	☐ SCI	☒ RPS	☐ Algae ID	☒ LVS ☐ LVI Other:
SBIO ID Numbers:		SBIO 82551	MACROPHYTE 11839	RPS 9727	HA 16880	LIMS 2257572	
Notes: SCI NOT APPROPRIATE FOR SITE AND HA <80							

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

LIMS EVENT ID: CEN-DIST-2021-06-29-01

WIN Import ID: 27983

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 7/2/21

(Initials/Date)

QC Station ID, Field Parameters In LIMS DMT: EB 7/13/21

(Initials/Date)

Scan/Save Field Sheets KWM 8/6/21

(Initials/Date)

Migrate Data to WIN: KWM 8/6/21

(Initials/Date)

Verify Data In WIN:

(Initials/Date)



RQ-2021-07-05-42

Customer: WQAP

Project ID: SMP

Collected By: Terry Riordan, Victoria Schwartz

Field Report Prepared By: Terry Riordan

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G4CE0219

Location: Bass Slough 10m N of Neptune Rd

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)			
	1045 EST	5.97	76	27.7	6.78	0.15	0.3 ☒ VOB (S)	0.3	161.1	0.07			
6/28/2021							Central Lab please use top row for login purposes						
	EST												
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 #	SA1105060		Exp:	4/30/22							
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A			
		Lot #	NA0344060		Exp:	1/4/22							
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A			
		Filter Lot #	17135566										
		Syringe Lot #	1091364										
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 Lot #			☐ Formalin							
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice							
Microbiology (Contract Lab Bottle)		☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab				☒ Ice			2	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			1	A			
Pesticides (BG-500ML) (BG-1L)		☐ W-E8321-DI	☐ WE8321-MS	☒ W-PSNP-TQ	☐ W-CT-CL-R	☒ Ice			4	A			
		☐ W-PCL-TQ-R	W-CARB-AA (5 ml of MCAA** Buffer Solution)										
Phytoplankton/Periphyton		☐ DTY-QN-C ☐ PKD-QN-BV				☐ Ice							
Name: Terry Riordan Victoria Schwartz					Signature: <i>Victoria Schwartz</i>					Date: 6/28/21			

*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 21PLCEN LATITUDE 28.279552
 COUNTY Osceola STORET # G4CE0219 LONGITUDE -81.364769
 DATE 06/28/21 TIME 10:45 SAMPLING AGENCY 21PLCEN
 SITE NAME Bass Slough 10m N of Neptune Rd
 FIELD ID/NAME G4CE0219 RECEIVING BODY OF WATER Fish Lake

RIPARIAN ZONE / STREAM FEATURES

WSD: 3173A1

(RQ-2021-07-05-42)

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ 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>5 sec.</u> <u>4.5</u> m wide	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>2</u> Right Bank: <u>16</u>				Hydrologic Modification Score (per FT 3101) ☐				☐ m/s <u>0.2</u> m/s ☐ m/s	
High Water Mark: <u>0.6</u> + <u>0.3</u> = <u>0.9</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				☐ m deep <u>0.3</u> 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 INVERT PERI % # Times # Times Coverage Sampled Sampled Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation <u>0.8</u> <u>N/A</u> <u>N/A</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>0.15</u> <u>27.7</u> <u>6.78</u> <u>5.97</u> <u>76.0</u> <u>161.1</u> <u>0.07</u> <u>0.3</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>Shrimp Trap</u> <u>0.3</u> Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SANDS060</u> Exp: <u>4/30/22</u> 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) ☒ <u>Canal</u> AMBIENT FIELD CONDITIONS / NOTES: Sunny/hot Large apple snail observed Pools not stable ☒ The antecedent hydrologic conditions have been met to my best knowledge.					

SAMPLING TEAM Terry Riordan / Victoria Schwartz **SIGNATURE:** Terry Riordan **DATE:** 6/28/21

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

SAMPLING AGENCY: <u>21 FL CEN</u>		STORET STATION NUMBER: <u>G4CE0219</u>	DATE (MM/DD/YY): <u>6/28/21</u>	RECEIVING BODY OF WATER: <u>Fish Lake</u>
REMARKS: <u>pools not stable</u>	COUNTY: <u>Osceola</u>	LOCATION: <u>Bass Slough 10m N of Neptune Rd</u>		FIELD ID/NAME: <u>G4CE0219</u>

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>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>2</u> 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 <u>2</u> 1
Water Velocity <u>14</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 <u>14</u> 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>7</u> Primary Score <u>25</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 <u>7</u> 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components Artificial Channelization <u>8</u>	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 <u>8</u> 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 <u>6</u> Left Bank <u>9</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 <u>6</u>	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 <u>6</u> Left Bank <u>1</u>	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 <u>2</u> Left Bank <u>1</u> Secondary Score <u>33</u>	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

58

TOTAL SCORE

Date: <u>6/28/21</u>	Analyst: <u>Terry Ridsan/Victoria Schwark</u>	Signature: <u>[Signature]</u> / <u>[Signature]</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

WBID: 3173A1

Location: Bass Slough 10m N of Neptune Rd

Date: 6/28/21

Sampler: Terry Riordan/Victoria Schwab

100 m: Latitude 28.280447
Longitude -81.364649
0 m: Latitude 28.279552
Longitude -81.364769

Substrates: Code key, draw proportionate habitat abundance. %

☐	Snags	_____
☐	Roots/undercut banks	_____
☐	Leaf Packs (or mats)	_____
☒	Aquatic Macrophytes	0.8
☒	pools	_____
☒	Silt	_____
☒	Pools	total # observed = 2 # range expected = 2

Average width 4.5 m

Average depth 0.3 m

Velocity measured at 10 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:

- many *Tridacna subifera* + *Schinus terebinthifolia* along both banks
- Pools not stable, sand smothering
- Site not appropriate for SCI

$$\frac{2.5}{3.6} \text{ m}^2 \text{ r}$$

Revision Date: January 2017

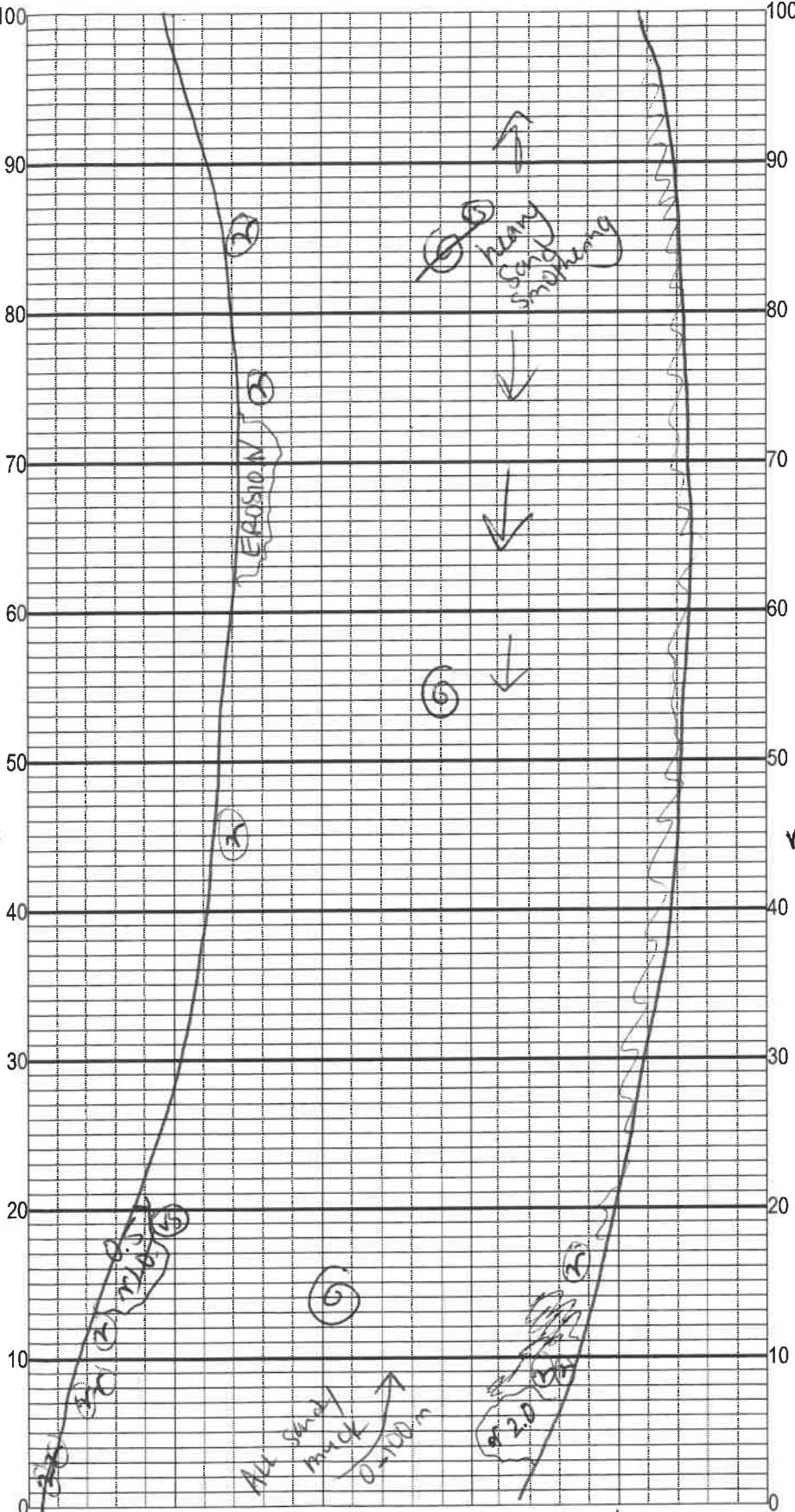
450m²

~5m ~4.5m wide

Left Bank

not marked roots

mowed riprap



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

62-160.800, F.A.C

$$r = 0.1 \text{ m}^2$$

* Drainage Canal *

Bass Slough 10m N of Neptune Rd

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Partin's Canal County: Osceola Date: 6/28/21 Investigators: Terry Riordan
Victoria Schwartz

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	N		60	1	3	N	
	2	N				2	N		
	3					3	N		
	4	N				4	N		
	5	N		14		5	N		60
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
10	1	N			70	1	3		
	2	N				2	3		
	3	N				3	N		
	4	N				4	N		
	5	N		44		5	N		43
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
20	1	N			80	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		73		5	N		
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
30	1	N			90	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		75		5	N		64
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
40	1	N			100	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		76		5	N		46
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
50	1	N				1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		80		5	N		
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		

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:
G4CE0219

Secchi depth 0.3 VOB
 Estimated?

points ranked 4-6 2
 total points assessed 99
 % points ranked 4-6 2

Check accompanying data collected at same site/date.
 Algal mat sample
 Linear Veg Survey ✓
 Habitat Assessment ✓
 SCI/Biorecon
 Water sample ✓
 RQ- 2021-07-05-42

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

Waterbody: Partins Canal

Date: 6/28/21

County: Osceola

Storet Number: 646E0219

Analyst: Terry Riordan, Victoria Schwartz

Signature: *[Signature]*

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.

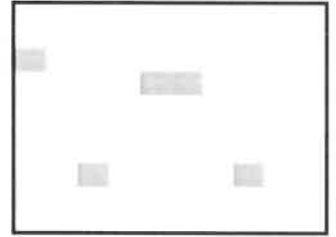
[illegible]

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

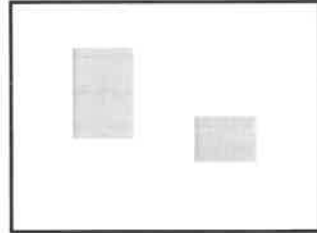
5% Macrophyte Coverage



5% Macrophyte Coverage



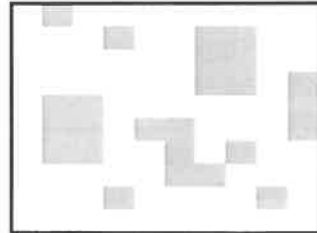
10% Macrophyte Coverage



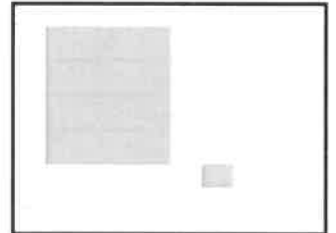
10% Macrophyte Coverage



25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

