



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Canoe Creek at SR 523 bridge **Date:** 2/8/2022
WIN/Field ID: G4CE0220 **WBID:** 3181 **ENR:** - **Latitude:** 28.0779
County: OSCEOLA **Org ID:** 21FLCEN **Longitude:** -81.26
Receiving Body of Water: Kissimmee River **RQ:** 2022-01-17-26

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

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:											
S BIO ID Numbers: SBIO ID: 83773 RPS: 9880 HA: 17240							LIMS 2304568				
Notes: CONTROL STRUCTURE OPEN SCI COLLECTION TIME: ALGAL ID COLLECTION TIME: N/A N/A											

Duplicate Sample

Time Zone: EST	Time: _____	Field ID: _____ (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-2022-02-09-02 WIN Import ID: 31607
Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 2/11/22 QC Station ID, Field Parameters In LIMS DMT: EB 3/1/22
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets KWM 3/15/22 Migrate Data to WIN: KWM 3/15/22 Verify Data In WIN: _____
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2022-01-17-26

Customer: WQAP

Project ID: SMP

Collected By: Elizabeth Bates, Leif Boman

Field Report Prepared By: Elizabeth Bates

Sampling Agency: FDEP

Place Label Here						Comments: Tracking: 522555430208					
WIN ID/Field ID:  G4CE0220											
Location: Canoe Creek at SR 523 bridge											
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)	
2/8/2022	1050 EST	9.13	96	17.8	7.02	0.3	1.3 ☐ VOB (S)	2.9	182.9	0.09	
	1058 EST	9.11	95.8	17.7	6.45	2.4	Central Lab please use top row for login purposes		182.7	0.09	
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 #	NA1105100		Exp:	6/7/22					
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A	
		Filter Lot #	17135566			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					
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: Elizabeth Bates Leif Boman					Signature: 					Date: 02/08/2022	

*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 21FLCEN LATITUDE 28.0779
 COUNTY Osceola STORET # 64CE0220 LONGITUDE -81.26
 DATE 2/8/22 TIME 10:40 on site SAMPLING AGENCY 21FLCEN
 SITE NAME Cande Creek
 FIELD ID/NAME Cande Creek at SR523 bridge RECEIVING BODY OF WATER Lake Cypress

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>20</u> Silviculture _____ Field/Pasture <u>50</u> Agricultural <u>30</u> Residential _____ Commercial _____ Industry _____ Other (Specify) _____								Landscape Development Intensity Index (LDI) <u>1 = 5/20 chapm water</u>	
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) Transec <u>16.5 sec</u> <u>35</u> m wide _____ m/s <u>.06</u> m/s _____ m/s			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>818</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) <u>7-8</u>				_____ m/s _____ m/s _____ m/s	
High Water Mark: <u>.1</u> + <u>2.9</u> = <u>3.0</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 <u>N/A</u>			Sediment Odors ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify): <u>N/A</u>			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 <u>Chem</u> ☐ LCI ☐ BioRecon			WATER QUALITY <u>10:50</u> 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>17.8</u> <u>7.02</u> <u>9.13</u> <u>96.0</u> <u>182.9</u> <u>0.09</u> <u>1.3</u> Mid: <u>/</u> <u>/</u> <u>/</u> <u>/</u> <u>/</u> <u>/</u> <u>/</u> <u>/</u> Bottom: <u>2.9</u> <u>17.7</u> <u>6.45</u> <u>9.11</u> <u>95.8</u> <u>182.7</u> <u>0.09</u> <u>2.9</u> Meter ID: <u>Crow Daddy</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 Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐		
			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			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) ☒ <u>canal</u>					
			AMBIENT FIELD CONDITIONS / NOTES: <u>Spraying observed site downstream from FL Turnpike + control structure</u> ☒ The antecedent hydrologic conditions have _____ ☐ _____					
SAMPLING TEAM <u>Elizabeth Bates, LEIF BOMAN</u>			SIGNATURE: <u>Eub</u>			DATE: <u>2/8/22</u>		

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

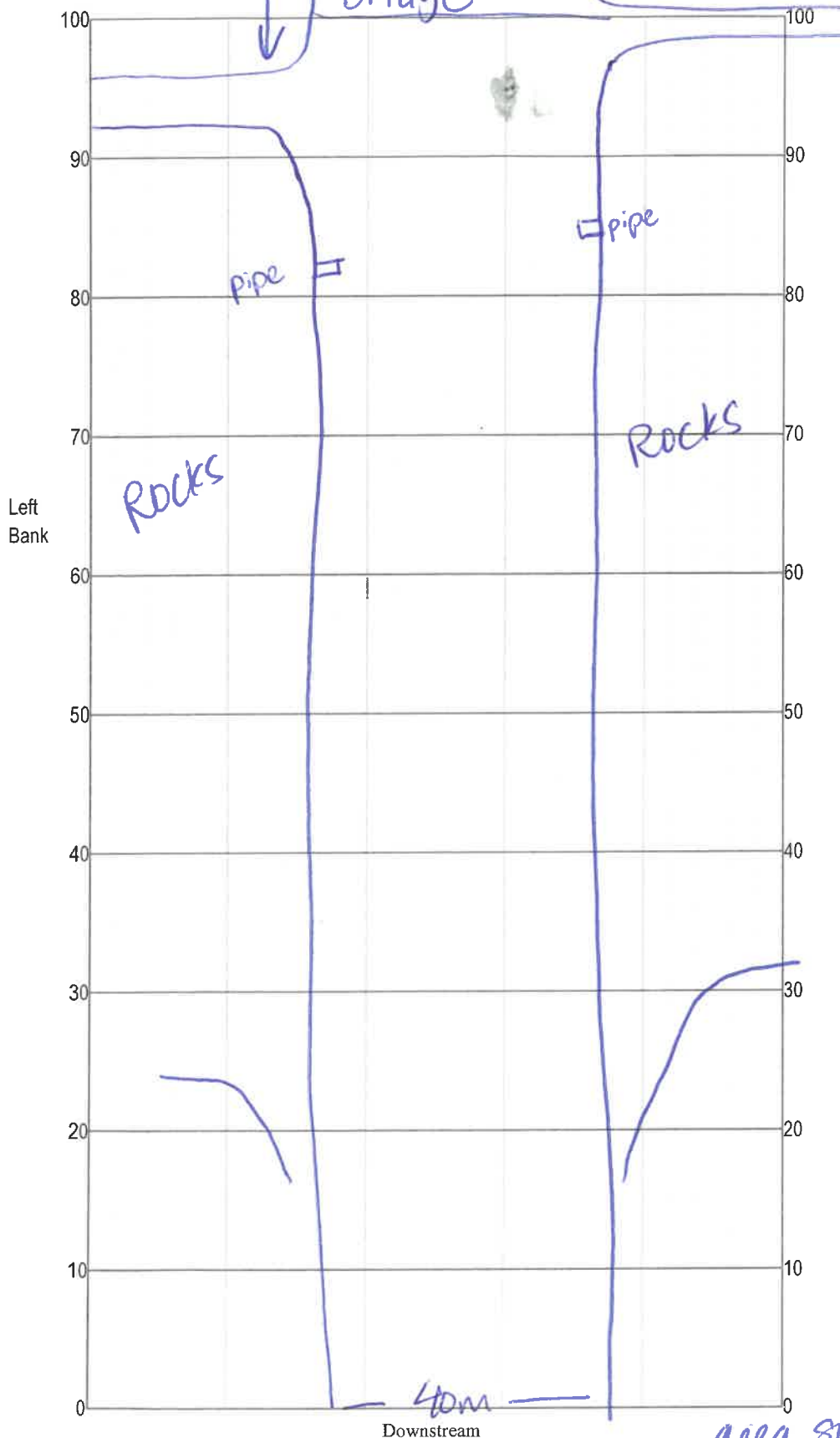
SAMPLING AGENCY: <u>21FLCEN-CENROC</u>		STORET STATION NUMBER: <u>GUCED0220</u>	DATE (MM/DD/YY): <u>2/8/22</u>	RECEIVING BODY OF WATER: <u>Lake Cypress</u>
REMARKS:	COUNTY: <u>Osceola</u>	LOCATION: <u>Cane Creek</u>	FIELD ID/NAME:	

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>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 2 1
Water Velocity <u>13</u> 7	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 <u>13</u> 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 <u>7</u> 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>6</u> ----- Primary Score <u>23</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). <u>10 9 8 7 6</u>	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. 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 <u>1</u>
Bank Stability Right Bank <u>4</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 Right Bank <u>10</u> Left Bank <u>10</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>2</u> ----- Secondary Score <u>35</u> <u>58</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

TOTAL SCORE

Date: <u>2/8/22</u>	Analyst: <u>Leif Boman, Elizabeth Bates</u>	Signature: <u>/ OLB</u>
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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: Canoe Creek
Date: 2/8/22
Sampler: Liz Bates, Leif Boman

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	_____ %
☐ _____	_____ %
☐ _____	_____ %
☐ Pools	total # observed = _____ # range expected = _____
Average width <u>40m</u> m	
Average depth _____ m	
Velocity measured at <u>0</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:

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40m Rock?

area surrounding are improved pasture, wetlands flatwoods etc.

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Canoe Creek County: _____ Date: 2/8/22 Investigators: Leif Boman, Liz Bates

Transect t (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	2			60	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		0		5	2		0
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
10	1	2			70	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		0		5	2		0
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
20	1	2			80	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		0		5	2		0
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
30	1	2			90	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		0		5	2		0
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
40	1	2			100	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		0		5	2		0
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
50	1	2				1	2		
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		0		5	2		0
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		

STORET Station Number: _____

Secchi depth _____
Estimated? 77

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

Check accompanying data collected at same site/date.

Algal mat sample X
Linear Veg Survey N/A
Habitat Assessment X
SCI/Biorecon Not applicable
Water sample X

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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

fully open canal
NOT SHADED

RPS ID -
9880

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%.

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

Waterbody: <u>Canoë Creek</u>	Date: <u>7/8/22</u>	County: <u>Osceola</u>	Storet Number: <u>62G4C0021</u>
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Analyst: Lin Bates / Leif Boman

Comments: NO LVS performed C2eqn

Comments: No EBS for 11/22/2019

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]