



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: CARRELL CANAL **Date:** 12/1/2021
WIN/Field ID: G3SD0167 **WBID:** 3240W **ENR:** - **Latitude:** 26.6114
County: LEE **Org ID:** 21FLFTM **Longitude:** -81.88
Receiving Body of Water: Caloosahatchee **RQ:** 2021-11-29-29

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Nicole Reistad	x		x		
☒	Thomas Baker		x		x	x
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# FRIDAY					
Photos: YES		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:											
SBIO ID Numbers:											
Notes:											

Duplicate Sample

Time Zone: EST	Time:	Field ID:	(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: 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-2021-11-29-29

Customer: WQAP

Project ID: SMP

Collected By: Nicole Reistad, Thomas Baker

Field Report Prepared By: Nicole Reistad

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3SD0167

Location: CARRELL CANAL

Comments: Microbiology sample(s) submitted to contract laboratory

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)		
	815 EST	10.09	110.4	19.6	7.73	0.3	0.7 ☐ VOB (S)	1.1	676	0.33		
12/1/2021												
	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:	04/30/22						
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A		
		Lot #	NA1105100		Exp:	06/07/22						
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A		
		Filter Lot #	17162587									
		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			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						
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI	☒ WE8321-MS	☒ W-PSNP-TQ	W-CT-CL-R	☒ Ice			5 or 3	A		
Phytoplankton/Periphyton		W-PCL-TQ-R		W-CARB-AA (5 ml of MCAA** Buffer Solution)								
				DTY-QN-C								
				PKD-QN-BV		☐ Ice						
Name: Nicole Reistad Thomas Baker					Signature:				Date:			

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

SAMPLE ID macro ID: 12020 HA50: 17106 RMSID: 9810 LATITUDE 26.6114145
 COUNTY Lee STORET # G3SD0167 LONGITUDE -81.8839302
 DATE 12/01/21 TIME 0800 SAMPLING AGENCY FDEP-SROL
 SITE NAME Correll Canal abv weir
 FIELD ID/NAME G3SD0167 RECEIVING BODY OF WATER Caloosahatchee River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ <u>Golfcourse</u> Other (Specify) <u>100%</u>							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>16</u> m wide <u>0.01</u> m/s <u>0.045</u> m/s <u>0.01</u> m/s <u>0.3</u> m deep <u>1.1</u> m deep <u>0.3</u> m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>0</u> Right Bank: <u>0</u>				Hydrologic Modification Score (per FT 3101) ☐			
High Water Mark: <u>1</u> + <u>1.1</u> = <u>2.1</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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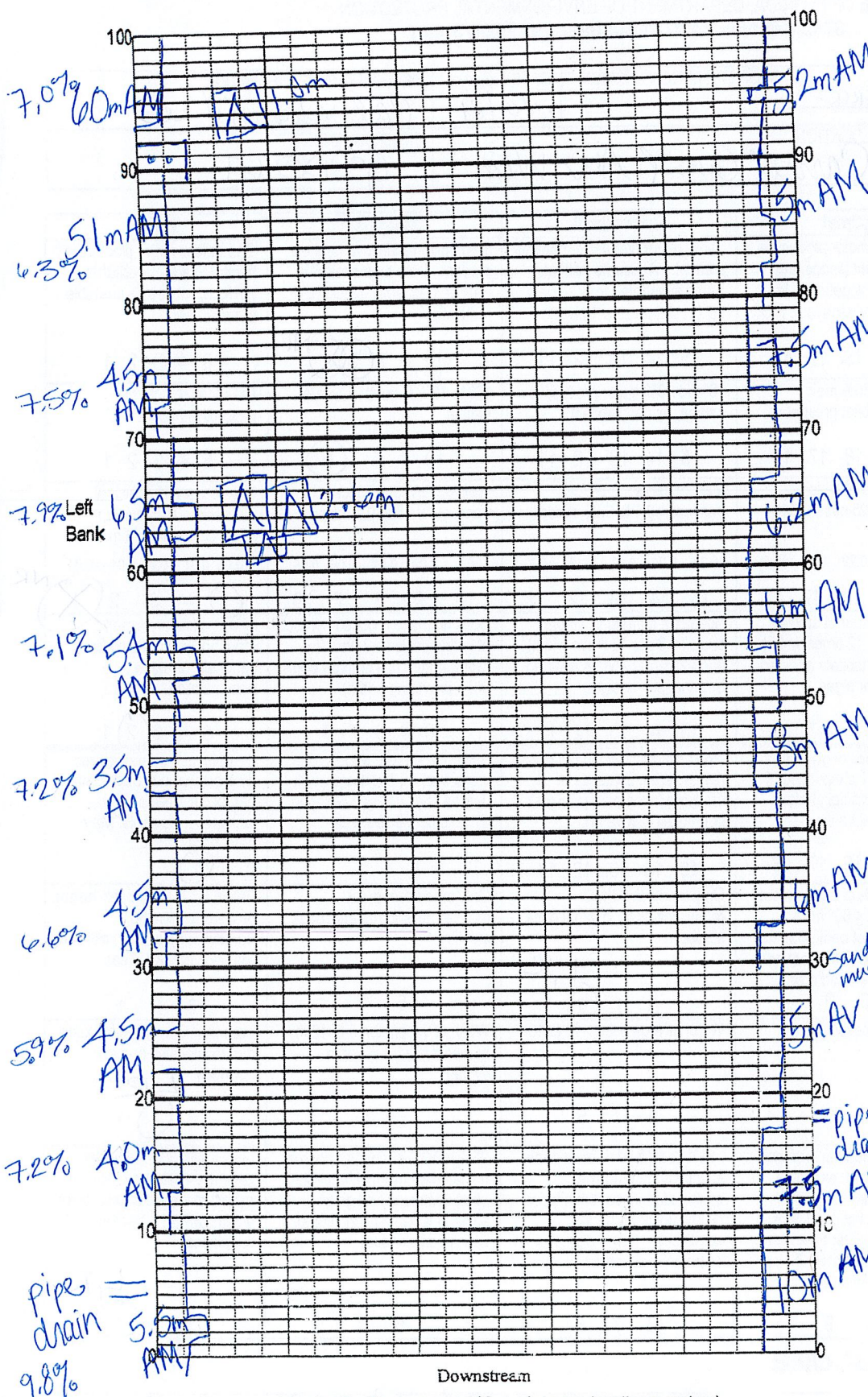
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon % Coverage ☐ # Times Sampled ☐ PERI # Times Sampled				WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>7.103</u> <u>19.6</u> <u>7.73</u> <u>10.09</u> <u>110.4</u> <u>676</u> <u>0.33</u> <u>0.7</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ VOB Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ TOTAL DEPTH <u>1.1</u> Meter ID: <u>JB Friday</u>							
Woody Debris (Snags) <u>0</u> Undercut Banks / Roots <u>0</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>7.24</u> Rock or Shell Rubble <u>0.23</u> Sand <u>0</u> Mud / Muck / Silt ☐ Other ☐ Other ☐				Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SA1105060</u> Exp: <u>4/30/22</u>				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: ☐ The antecedent hydrologic conditions have been met to my best knowledge.							

SAMPLING TEAM <u>Nicole Reister, Thomas Baker</u>	SIGNATURE: <u>Thomas Baker</u>	DATE: <u>12/02/21</u>
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[illegible]

Revision Date: January 2017

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: G3SD0167
Carroll Canal Abv Wein
Date: 12/1/2021
Sampler: Nicole Reistad

100 m: Latitude	<u>26.611441</u>
Longitude	<u>-81.882930</u>
0 m: Latitude	<u>26.6114145</u>
Longitude	<u>-81.8839302</u>
Substrates: Code key, draw proportionate habitat abundance.	
☒ S	Snags <u>0</u>
☒ Rt	Roots/undercut banks <u>0</u>
☒ L	Leaf Packs (or mats) <u>0</u>
☒ AM	Aquatic Macrophytes <u>7.24</u>
☒ Rk	Rocks <u>0.23</u>
☐ P	Pools
total # observed = <u>0</u>	
# range expected = <u>1-2</u>	

Average width	<u>16</u> m
Average depth	<u>1.0</u> 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:

Canal, completely manmade / engineered

TOTALS
S = 0m²
Rt = 0m²
L = 0m²
AM = 115m²
Rk = 3.6m²
Velocity
22slm = 0.045

DEP-SOP-001/01: Form FD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: <u>21FLEPM</u>		STORET STATION NUMBER:	DATE (MM/DD/YY): <u>12/01/21</u>	RECEIVING BODY OF WATER: <u>Caloosahatchee</u>
SUBMITTING AGENCY NAME: <u>ADep-SRCC</u>				
REMARKS:	COUNTY: <u>Lee</u>	LOCATION: <u>Carrell Canal Abv Wein</u>	FIELD ID/NAME: <u>G3SD0167</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>7</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6 <u>NR</u>	5 4 3 2 1
Substrate Availability <u>6</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 <u>6</u>	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>5</u> <u>NR</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 <u>5</u> 4 3 2 <u>NR</u>
Habitat Smothering <u>2</u> ----- Primary Score <u>20</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 <u>2</u> 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 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>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 2 1
Bank Stability Right Bank <u>4</u> Left Bank <u>4</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the 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> <u>LIR</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 root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>2</u> Left Bank <u>2</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 <u>3</u> <u>2</u> 1 <u>LIR</u>
Riparian Zone Vegetation Quality Right Bank <u>1</u> Left Bank <u>1</u> ----- Secondary Score <u>21</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 <u>1</u> <u>LIR</u>

41 **TOTAL SCORE**

Date: <u>12/01/2021</u>	Analyst: <u>Nicole Reistad, Thomas Baker</u>	Signature: <u>[Signature]</u>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Carrel Canal County: Lee Date: 12/11/11 Investigators: Nicole Reistad, Romal Baker

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

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: G3SD0167

Secchi depth 0.7
Estimated? No

points ranked 4-6 0
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- 2021-11-29-29

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