



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2015

A-KIT

PAGE 1 OF 1

Data Qualified?
Yes / No

STORET Station Name: FRYE CANAL - ALT STREAM

Date: 11-28-16
(mm/dd/yyyy)

STORET Station ID: 24010064

Latitude: 27.57600N
(Decimal Degrees)

WBID: 1819 RQ: 2016-11-28-38 ORG ID: 21FLTPA

Longitude: 82.3697W
(Decimal Degrees)

Receiving Body of Water:

Field ID: FRYEUNK

County: MANATEE

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment	
<u>JULY ASHTON</u>		X	X	X	X	X	☒ Sample Container	Pole
<u>SARAH BLUNT</u>							☐ Carboy	
							☐ Dipper	
							☐ Equipment	
							☒ Wading	
							☐ From Shore	
							☐ Other (note)	

Water Level: Dry / Low / Normal / High / Flooded Matrix: canal Marine / DI
Meter ID# 214 JDN Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
EST	12:40	0.3		9.0	96	7.8	0.27	0.3	547	18.3
CEN			0.3					"S"		

Biological Samples Collected:		None	MA	SCI	LVS	RPS	LVI	Other
Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check			
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4			☒ <2			
Metals	☐ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3			☐ <2			
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice						
Chlorophyll	☒ CHLSUITE-W	☒ Ice						
BOD	☐ BOD-UNIN	☐ Ice						
Physical/Aggregate (Kit A)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice						
Physical/Aggregate (Kit B)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice						
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin						
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ QPCR	☐ Ice						
Periphyton	☐ ALGAE-ID	☐ Ice						
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other						
Flow m/s	<u>0.25</u> m/s "J" Quality Flow							

Notes: <u>QPCR - H1B5</u> <u>W-SHC-AA-R</u> <u>W-UHB-AA-R</u>	RQ-2016-11-28-38 Date: 11/28/16 Time: Frye Canal Ref: SCI	FRYEUNK Field ID STORET 24010064
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Signature: [Signature] Date: 11-28-16

Field Parameters Entered into LIMS: SC 12-07-16 Field Parameters QC in LIMS: SC 01-05-17 SE 1/18/17
Date Migrated to STORET: (Initials/Date) Field Sheets Scanned/Saved: (Initials/Date)

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

SAMPLING AGENCY: <u>FDEP</u>		STORET STATION NUMBER: <u>24010064</u>	DATE (MM/DD/YY): <u>11-28-16</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>MANATEE</u>	LOCATION: <u>FRYE CANAL - REF SITE</u>	FIELD ID/NAME: <u>FRYELINK</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>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 (4) 3 2 1
Substrate Availability <u>3</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>18</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>13</u> ----- Primary Score <u>38</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 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>12</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 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 root zone with raw, eroded areas.
Right Bank <u>4</u> Left Bank <u>2</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>9</u> Left Bank <u>9</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>6</u> Left Bank <u>6</u> ----- Secondary Score <u>48</u>	10 9	8 7 (6)	5 4	3 2 1

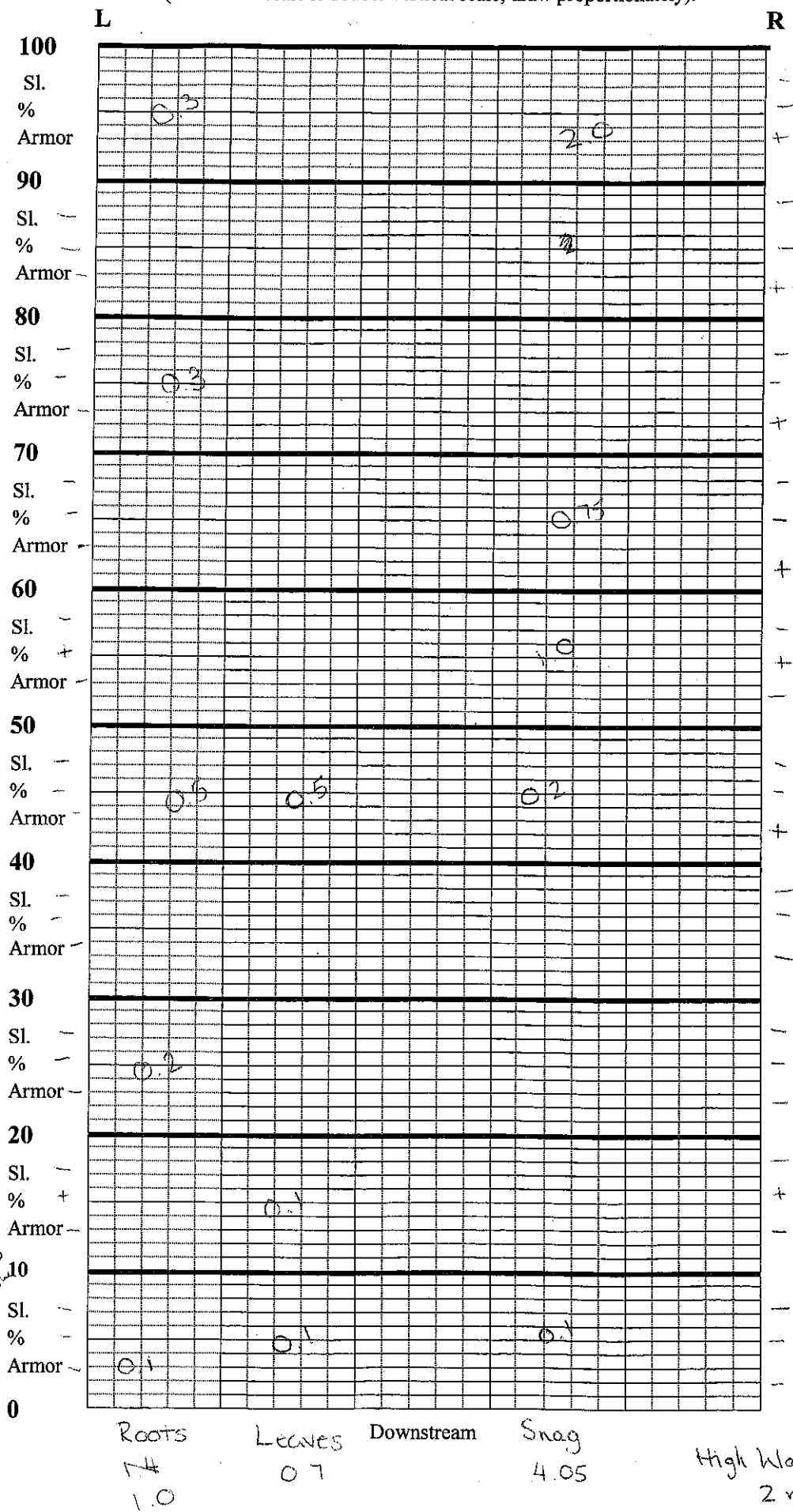
86

TOTAL SCORE

Date: <u>11-28-16</u>	Analyst: <u>Justy Ashton</u>	Signature: <u>[Signature]</u>
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Stream/River Habitat Sketch Sheet, Form FD 9000-4 (March 07, 2013)

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



Location: FLY CANYON
DEL. STREAM
Date: 11-28-16
Samplers: J. ASHTON
S. EANS

Substrates: Code key, draw proportionate habitat abundance. %

☐ Snags 1

☐ Roots/undercut banks 0.2

☐ Leaf Packs (or mats) 0.1

☐ Macrophytes ---

☐ ---

☐ ---

Total observed 1.3

☒ Pools Range expected ---

Velocity measured at 10 meter mark.

WQ & chemistry taken at 10 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.

1 sec per 1 m	1m/s	sec	m/s
2	0.5	12	0.08
3	0.33	13	0.076
4	0.25	14	0.071
5	0.2	15	0.066
6	0.16	16	0.062
7	0.14	17	0.058
8	0.12	18	0.055
9	0.11	19	0.052
10	0.1	20	0.052
11	0.09	21	0.047
22	0.045	NO	FLOW

Prod. hab	1	2	3	4	5
Sweeps (Maj)	10	7	5	4	3
Sweeps (Min)	10	6	5	4	5

DEP-SOP-001/01: Form FD 9000-3 (9/19/12)
PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID _____ ORG ID _____ LATITUDE 27.5600 N
 COUNTY MAWAEE STORET # 24010064 LONGITUDE 82.3697 W
 DATE 11-28-16 TIME 12:40 SAMPLING AGENCY AKO
 SITE NAME FRYE CANAL - REF. STREAM
 FIELD ID/NAME FRYE LINK RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐ <u>50</u> <u>40</u> <u>10</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>6</u> m wide _____ m/s <u>0.25</u> m/s _____ m/s _____ m deep <u>0.3</u> m deep _____ m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718m</u> Right Bank: <u>718m</u>				Hydrologic Modification Score (per FT 3101) <u>5</u>			
High Water Mark: <u>2m</u> + <u>0.3</u> = <u>2.3</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 <table border="1"> <thead> <tr> <th></th> <th>% Coverage</th> <th>INVERT # Times Sampled</th> <th>PERI # Times Sampled</th> </tr> </thead> <tbody> <tr> <td>Woody Debris (Snags)</td> <td><u>1.0</u></td> <td><u>10</u></td> <td></td> </tr> <tr> <td>Undercut Banks / Roots</td> <td><u>0.2</u></td> <td><u>1</u></td> <td></td> </tr> <tr> <td>Leaf Packs or Mat</td> <td><u>0.1</u></td> <td><u>2</u></td> <td></td> </tr> <tr> <td>Aquatic Vegetation</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Rock or Shell Rubble..</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sand.....</td> <td></td> <td><u>7</u></td> <td></td> </tr> <tr> <td>Mud / Muck / Silt</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				% Coverage	INVERT # Times Sampled	PERI # Times Sampled	Woody Debris (Snags)	<u>1.0</u>	<u>10</u>		Undercut Banks / Roots	<u>0.2</u>	<u>1</u>		Leaf Packs or Mat	<u>0.1</u>	<u>2</u>		Aquatic Vegetation				Rock or Shell Rubble..				Sand.....		<u>7</u>		Mud / Muck / Silt				Other				Other				WATER QUALITY <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>0.3</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>☒ VOB</td> </tr> <tr> <td>Bottom</td> <td><u>0.3</u></td> <td><u>18.3</u></td> <td><u>7.8</u></td> <td><u>9.0</u></td> <td><u>96</u></td> <td><u>547</u></td> <td><u>0.27</u></td> <td><u>0.3</u></td> </tr> </tbody> </table> Meter ID: _____						Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:								<u>0.3</u>	Mid:								☒ VOB	Bottom	<u>0.3</u>	<u>18.3</u>	<u>7.8</u>	<u>9.0</u>	<u>96</u>	<u>547</u>	<u>0.27</u>	<u>0.3</u>
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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 <table border="1"> <thead> <tr> <th></th> <th>Absent</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Fish:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Aquatic Plants:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>				Absent	Rare	Common	Abundant	Periphyton:	☐	☒	☐	☐	Fish:	☐	☐	☒	☐	Aquatic Plants:	☐	☒	☐	☐	Iron/Sulfur Bacteria:	☒	☐	☐	☐	System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐ _____ WEATHER CONDITIONS / NOTES: <u>CLOUDY, WARM - 80°</u> ☐ The antecedent hydrologic conditions have been met to my best knowledge.																																																							
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SAMPLING TEAM Shay Ashton, Sarah Elmer **SIGNATURE:** _____ **DATE:** 11-28-16

RPS # 8556

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: FRYE CAVAL REF. SITE					County: MAHARREE		Date: 11-28-10		Investigators: J. ASHBY, SARAH ELNIST	
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		91	60	1	N		73	
	2	N								
	3	N								
	4	N								
	5	N								
	6	N								
	7	N								
	8	N								
	9	3								
10	1	N		70	70	1	N		96	
	2	N								
	3	N								
	4	N								
	5	N								
	6	N								
	7	N								
	8	3								
	9	3								
20	1	N		66	80	1	N		96	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N								
30	1	N		86	90	1	N		83	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N								
40	1	N		95	100	1	N		89	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N								
50	1	N		90		1	N			
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9	N								

STORET Station Number: 24010064

Secchi depth 0.3
 Estimated?

points ranked 4-6 0
 total points assessed 99
 % points ranked 4-6 0

Check accompanying data collected at same site/date.
 Algal mat sample
 Linear Veg Survey X
 Habitat Assessment X
 SCL/Biorecon X
 Water sample X
 RQ-2010-11-28-38

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

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%.

Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALKALINITY						
	TURBIDITY						
	W-BR-IC						
	W-CL-IC						
	W-COLOR						
	W-F						
	W-SO4-IC						
	W-TDS						
	W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	CHL-SUITE-W						
Group: A	Bottle Type:	QPCR-P-250ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	PCR-HF183						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
	W-ICP						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	1
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						
Group: A	Bottle Type:	BC-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	W-SUC-AA-R						
	W-UHB-AA-R						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 2	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	1
	MI-FW-QLDC						
Group: C	Bottle Type:	P-120ML-WC-THI	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	SWD-AEL-FC						

ADIPSA @ AC

0370

