



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End

of Day CCV

Yes / No

WIN Station Name: Faulk Canal @ 50m upstream of Fiske Blvd

Date: 4/14/2021

WIN/Field ID: G3CE0016

WBID: 3060

ENR: -

Latitude: 28.3174

County: BREVARD

Org ID: 21FLCEN

Longitude: -80.7422

Receiving Body of Water: Upper St. Johns

RQ- 2021-04-12-75

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Elizabeth Bates	x		x		
☒	Terry Riordan		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: YES		Flow: FLOW		Tide:		Tide Times: High: Low:							
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:													
SBIO ID Numbers: SBIO 82325 RPS 9710 MACROPHYTE 11803 HA 16827 LIMS 2240097													
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_DDDMMYYY)
DI Source: _____	Location: _____		
DI Type: _____	Equipment ID: _____		
DI Container (Name/ID):		DI Container Type:	

LIMS EVENT ID: CEN-DIST-2021-04-15-03

WIN Import ID: 25378

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 4/20/21

QC Station ID, Field Parameters In LIMS DMT: EB 5/5/21

(Initials/Date)

(Initials/Date)

Scan/Save Field Sheets KWM 8/6/21

(Initials/Date)

Migrate Data to WIN: KWM 5/12/21

(Initials/Date)

Verify Data In WIN:

(Initials/Date)



RQ-2021-04-12-75

Customer: WQAP

Project ID: SMP

Collected By: Elizabeth Bates, Terry Riordan

Field Report Prepared By: Elizabeth Bates

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3CE0016

Location: Faulk Canal @ 50m upstream of Fiske Blvd

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)
4/14/2021	1108 EST	1.72	20.3	23.6	6.65	0.2	0.4 ☒ VOB (S)	0.4	603	0.29
	EST						Central Lab please use top row for login purposes			

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 Lot # SA0353110 Exp: 01/11/22	☒ Ice ☒ H2SO4*	☒ <2	1	A
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP ☐ W-HARD Lot # Exp:	☐ Ice ☐ HNO3*	☐ <2		
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter Filter Lot # 17135566 Syringe Lot # 0079900	☒ Ice		1	A
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)	☒ 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 ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN	☐ Ice			
Phytoplankton/Periphyton	DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV	☐ Ice			

Name:
Elizabeth Bates
Terry Riordan

Signature:

Date:

04/14/2021

*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 28.317396
 COUNTY Brevard STORET # G3CE0016 LONGITUDE -80.742210
 DATE 04/14/2021 TIME 11:08 SAMPLING AGENCY CENROC
 SITE NAME Faulk Canal
 FIELD ID/NAME Faulk Canal @ 50m upstream of Fiske Blvd RECEIVING BODY OF WATER Upper St. Johns

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) ☐ 100								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 5.5 m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>10m</u> Right Bank: <u>15m</u>				Hydrologic Modification Score (per FT 3101) ☐				☐ m/s ☐ m/s ☐ m/s	
High Water Mark: <u>0.4</u> + <u>0.4</u> = <u>0.8</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): _____		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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MACROPHYTE 11803

SUBSTRATE TYPE ☒ HA Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon				WATER QUALITY							
				Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Woody Debris (Snags)				<u>0.2</u>	<u>23.6</u>	<u>6.65</u>	<u>1.72</u>	<u>20.3</u>	<u>603</u>	<u>0.29</u>	<u>0.4</u>
Undercut Banks / Roots											☒ VOB
Leaf Packs or Mat											
Aquatic Vegetation											
Rock or Shell Rubble..											
Sand.....											
Mud / Muck / Silt											
Other											
Other											
				Meter ID: <u>Shrimp Trap</u>							
				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 <u>SA0353110</u> Exp: <u>1/11/22</u>				Color Tannic ☐ Green (Algae) ☐ Clear ☐ Other (Specify) ☒ <u>brownish green</u>			
				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) ☐

AMBIENT FIELD CONDITIONS / NOTES:

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

SAMPLING TEAM

Terry Riordan, Elizabeth Bates

SIGNATURE:

Terry Riordan / Elizabeth Bates

DATE:

04/14/2021

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

SAMPLING AGENCY: FDEP/21FLCEN		STORET STATION NUMBER: G3CE0016	DATE (MM/DD/YY): 04/14/2021	RECEIVING BODY OF WATER: Upper St. Johns
REMARKS:	COUNTY: Brevard	LOCATION: Faulk Canal 50m upstream of Fiske Blvd	FIELD ID/NAME: Faulk Canal	

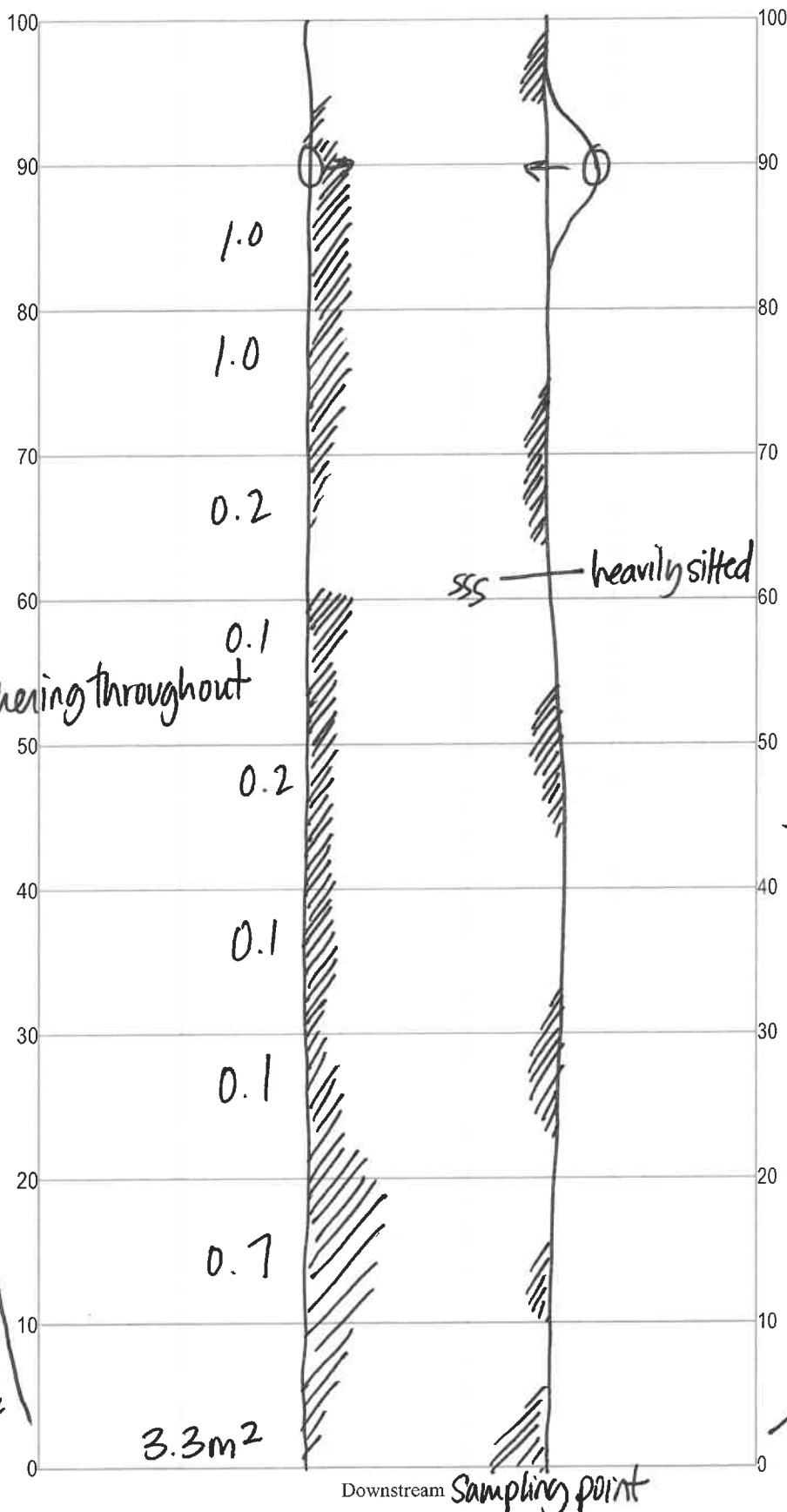
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 2 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>8</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 <u>8</u> 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>3</u> Primary Score <u>16</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 <u>3</u> 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>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	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>6</u> Left Bank <u>5</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>2</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	3 <u>2</u> 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>2</u> Left Bank <u>2</u> Secondary Score <u>22</u>	10 9	8 7 6	5 4	3 <u>2</u> 1

38

TOTAL SCORE

Date: 04/14/2021	Analyst: Terry Riordan, Elizabeth Bates	Signature: <i>Terry Riordan</i>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Faulk Canal
 Date: 04/14/2021
 Sampler: Terry Riordan, Elizabeth Bates

100 m: Latitude 28.317767
 Longitude -80.741248
 0 m: Latitude 28.317396
 Longitude -80.742210

Substrates: Code key, draw proportionate habitat abundance. %

☒ Snags (0.1m²)
☐ Roots/undercut banks _____
☐ Leaf Packs (or mats) _____
☒ Aquatic Macrophytes 0.6%
☐ pipe in _____
☐ _____
☒ Pools total # observed = 0
 # range expected = 1-2

Average width 5.5 m
 Average depth 0.4 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:

Velocity 15 m/s
0.066 m/s

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

Road

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Faulk Canal County: Brevard Date: 04/14/2021 Investigators: Terry Riordan, Elizabeth Bates

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			60	1	3		
	2	3				2	3		
	3	3				3	3		
	4	3	X	86		4	3		
	5	3	X			5	3		
	6	3	X			6	3		
	7	3				7	3		
	8	3				8	3		
	9	3				9	3		
10	1	3			70	1	3		
	2	3				2	3		
	3	3	X			3	3		
	4	3	X	63		4	3		
	5	3	X			5	3		
	6	3	X			6	3		
	7	3				7	3		
	8	3				8	3		
	9	3				9	3		
20	1	3			80	1	3		
	2	3				2	3		
	3	3				3	3		
	4	3				4	3		
	5	3		94		5	3		
	6	3				6	3		
	7	3				7	3		
	8	3				8	3		
	9	3				9	3		
30	1	3			90	1	3		
	2	3				2	3		
	3	3				3	3		
	4	3				4	3		
	5	3		94		5	3		
	6	3				6	3		
	7	3				7	3		
	8	3				8	3		
	9	3				9	3		
40	1	3			100	1	3		
	2	3				2	3		
	3	3				3	3		
	4	3				4	3		
	5	3		96		5	3		
	6	3				6	3		
	7	3				7	3		
	8	3				8	3		
	9	3				9	3		
50	1	3				1	3		
	2	3				2	3		
	3	3				3	3		
	4	3				4	3		
	5	3		96		5	3		
	6	3				6	3		
	7	3				7	3		
	8	3				8	3		
	9	3				9	3		

STORET Station Number: 93CE0016

Secchi depth	<u>0.4</u>
Estimated?	<u>15</u>

# points ranked 4-6	<u>11</u>
total points assessed	<u>84</u>
% points ranked 4-6	<u>13</u>

Check accompanying data collected at same site/date.

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

RQ-2021-04-12-75

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%.

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

Waterbody: Faulk Canal Date: 4/14/21 County: Brevard Storet Number: G3CE0016

Analyst: Terry Riordan, Elizabeth Bates 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.

HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
<i>Alternanthera philoxeroides</i>	/	/	/		/	/	/	/	/	/		<i>Micranthemum glomeratum</i>											
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>											
<i>Bidens mitis</i>												<i>Najas guadelupensis</i>											
<i>Boehmeria cylindrica</i>												<i>Nuphar luteum</i>											
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>											
<i>Ceratophyllum demersum</i>												<i>Panicum hemitomon</i>											
<i>Chara</i>												<i>Panicum repens</i>	/	/	/	/	/	/	/	/	/		
<i>Cicuta maculata</i>												<i>Panicum rigidulum</i>											
<i>Cladium jamaicense</i>												<i>Pistia stratioides</i>											
<i>Colocasia esculenta</i>												<i>Polygonum glabra</i>											
<i>Commelina diffusa</i>		/										<i>Polygonum hydropiperoides</i>											
<i>Commelina virginica</i>												<i>Polygonum punctatum</i>											
<i>Crinum americanum</i>												<i>Pontedaria cordata</i>											
<i>Diodia virginiana</i>												<i>Potamogeton illinoensis</i>											
<i>Eichhornia crassipes</i>	/	/										<i>Ruellia simplex</i>											
<i>Eleocharis (wispy viviparous)</i>		/		/	/	/	/	/	/	/		<i>Sacciolepis striata</i>											
<i>Hydrilla verticillata</i>												<i>Sagittaria kurziana</i>											
<i>Hydrocotyle</i>	/	D	/	/	/	/	/	/	/	/		<i>Sagittaria lancifolia</i>											
<i>Hygrophila polysperma</i>												<i>Sagittaria latifolia</i>											
<i>Hymenocallis</i>												<i>Salvinia minima</i>	/	/	/	/	/	/	/	/	/		
<i>Lachnanthes caroliniana</i>												<i>Samolus parviflora</i>											
<i>Landoltia punctata</i>												<i>Saururus cernuus</i>											
<i>Lemna</i>												<i>Sparganium americanum</i>					/			/			
<i>Limnophila sessiflora</i>												<i>Typha</i>											
<i>Ludwigia leptocarpa</i>	/			/		/	/	/	/	/		<i>Vallisneria americana</i>											
<i>Ludwigia palustris</i>												<i>Zizania aquatica</i>											
<i>Ludwigia peruviana</i>				/																			
<i>Ludwigia repens</i>												<i>Utricularia nuttiana</i>	/	/	/								
<i>Luziola fluitans</i>												<i>Ludwigia octovalis</i>	/		/	/	/			/			
												<i>Cyperus haspan</i>								/			
If no Dominant or Co-Dominant were selected, indicate with "X"	X		X	X	X	X	X	X	X	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																							

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

5% Macrophyte Coverage



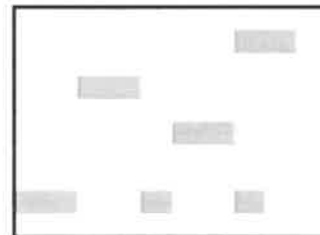
5% Macrophyte Coverage



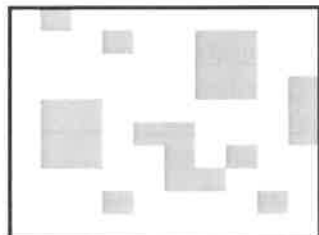
10% Macrophyte Coverage



10% Macrophyte Coverage



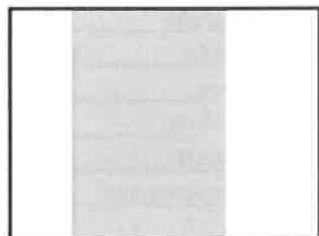
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

