



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Unnamed Ditch @ 30m West Of Riverside Dr **Date:** 11/23/2020
WIN/Field ID: G5CE0120 **WBID:** 2939 **ENR:** **Latitude:** 28.9731
County: VOLUSIA **Org ID:** 21FLCEN **Longitude:** -80.8936
Receiving Body of Water: Indian River Lagoon **RQ:** 2020-09-07-44

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Elizabeth Bates	x	x			
☒	Victoria Schwartz		x		x	x
☐	Natalie Ayala					
☐						

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: N/A		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☐ SCI ☒ RPS ☒ Algae ID ☒ LVS ☐ LVI Other:											
SBIO ID Numbers: SBIO 81679 VASCULAR 11761 RPS 9644						LIMS 2209030					
Notes:											

Duplicate Sample

Time Zone: EST	Time: N/A	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone:	Time: N/A	Field ID: N/A	(Blank Type_DDDMMYYY)
DI Source: N/A		Location: N/A	
DI Type: N/A		Equipment ID: N/A	

LIMS EVENT ID: CEN-DIST-2020-11-24-01 WIN Import ID: 23912
Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 12/4/20 QC Station ID, Field Parameters In LIMS DMT: EB 1/25/21
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets KWM 2/5/21 Migrate Data to WIN: KWM 2/5/21 Verify Data In WIN:
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2020-09-07-44

Customer: WQAP

Project ID: SMP

Collected By: Elizabeth Bates, Victoria Schwartz

Field Report Prepared By: Elizabeth Bates

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G5CE0120

Location: Unnamed Ditch @ 30m West Of Riverside Dr

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)
11/23/2020	14:26 EST	6.05	71.7	23.8	7.34	0.15	0.3 ☒ VOB (S)	0.3	618	0.3

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 Lot # 115269 Exp:	☒ Ice ☒ H2SO4*	☒ <2	1	B
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD Lot # NA9354060 Exp:	☒ Ice ☒ HNO3*	☐ <2	1	B
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter Filter Lot # 16930280 Syringe Lot # 9149785	☒ Ice		1	B
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	B
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	B
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		1	B
Microbiology (Contract Lab Bottle)	☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☒ Ice		1	B
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)	☒ Ice		5	B
		☐ Ice			

Name:
Elizabeth Bates
Victoria Schwartz

Signature:

Date:

11/23/2020

*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 28.9731
 COUNTY Volusia STORET # 65CE0120 LONGITUDE -80.8936
 DATE 11/21/2020/11/23/2020 TIME 15:47 / 14:26 SAMPLING AGENCY 21FLCEN / FDEP
 SITE NAME Unnamed Ditch @ 30m West of Riverside Dr
 FIELD ID/NAME 65CE0120 RECEIVING BODY OF WATER Indian River Lagoon

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>9</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>90</u> Commercial <u>1</u> 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 _____ m wide <u>4</u> m wide			
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>0.1</u> + <u>0.4</u> = <u>0.5</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 <u>not observed</u> ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse		Sediment Odors <u>not observed</u> ☐ 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 <u>performed 11/23/2020</u> 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)
Top:				<u>0.3</u>	<u>23.9</u>	<u>7.39</u>	<u>6.86</u>	<u>81.5</u>	<u>725</u>	<u>0.35</u>	<u>0.4</u>
Mid:											☒ VOB
Bottom:											TOTAL DEPTH
											<u>0.4</u>
Meter ID: <u>Crawl Daddy</u>				Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐				Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐			
Woody Debris (Snags) _____ Undercut Banks / Roots _____ Leaf Packs or Mat _____ Aquatic Vegetation _____ Rock or Shell Rubble.. _____ Sand..... _____ Mud / Muck / Silt _____ Other _____ 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: <u>N/A</u> Exp: <u>N/A</u>				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>Partridge Land</u>
AMBIENT FIELD CONDITIONS / NOTES: <u>Biology assessed separately from water chemistry</u> <u>sampling</u> <u>The antecedent hydrologic conditions have been met to my best knowledge.</u>

SAMPLING TEAM: Estalike Ayala, Elizabeth Bates SIGNATURE: [Signature] DATE: 11/21/2020
Victoria Schwartz 11/23/2020

Waterbody: <u>Unnamed Ditch</u>	Date: <u>11/24/20</u>	County: <u>Volusia</u>	Storet Number: <u>6560120</u>
Analyst: <u>Natalie Ayala</u>	Signature: <u>[Signature]</u>		

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]

FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

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

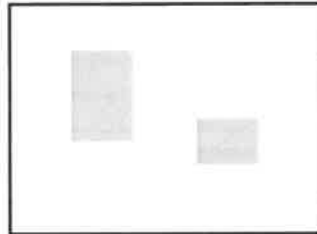
5% Macrophyte Coverage



5% Macrophyte Coverage



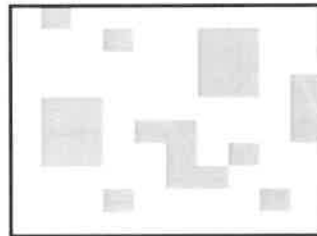
10% Macrophyte Coverage



10% Macrophyte Coverage



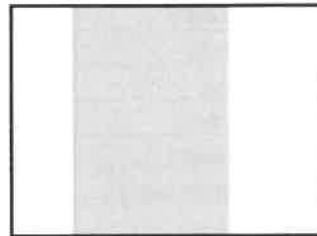
25% Macrophyte Coverage



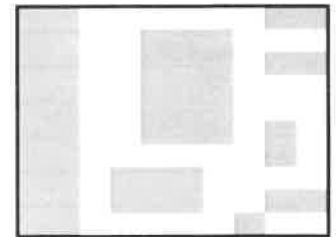
25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



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

SAMPLING AGENCY: FDOP		STORET STATION NUMBER: G5CE0120	DATE (MM/DD/YY): 11/21/2020	RECEIVING BODY OF WATER: Indian River Lagoon
REMARKS:	COUNTY: Volusia	LOCATION: Unnamed Ditch	FIELD ID/NAME: G5CE0120	

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 3	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 20	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 12	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 3 Primary Score 38	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 4	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 2 Left Bank 2	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 1 Left Bank 1	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 1 Left Bank 1 Secondary Score 12	10 9	8 7 6	5 4	3 2 1

TOTAL SCORE

50

Date: 11/21/2020	Analyst: Natalie Ayala	Signature: <i>[Signature]</i>
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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: _____

Date: _____

Sampler: _____

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 _____ m

Average depth _____ m

Velocity measured at _____ meter mark.

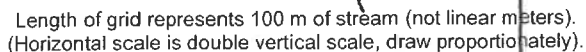
WQ & chemistry taken at _____ meter mark.

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:

Left
Bank
$$168 \div 900 = 0$$

Unnamed Ditch @ 30 m West of Riverside Dr.

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Unnamed Ditches WBID: 2939
G5CE0120

County: Volusia

Date: 11/23/20

Investigators: Elizabeth Bates / Victoria Schwartz

STORET Station Number: G5CE0120

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	5			60	1	N		
	2	5				2	3		
	3	5				3	4		
	4	6		33		4	N		1
	5	6		14		5	N		0
	6	6		6		6	N	✓	1
	7	5				7	3		
	8	5				8	3		
	9	5				9	3		
10	1	3			70	1	3		
	2	3				2	3		
	3	N				3	N		
	4	N		60		4	N		5
	5	N		34		5	N		12
	6	N		31		6	N		2
	7	N				7	N		
	8	N				8	4		
	9	N				9	⑤ 4 3		
20	1	N			80	1	3		
	2	3				2	3		
	3	N				3	N		
	4	N		⑤ 10 55		4	N		32
	5	N		43		5	3		9
	6	N		⑤ 5 10		6	3		8
	7	3				7	3		
	8	3				8	3		
	9	3				9	N		
30	1	3			90	1	3		
	2	3				2	3		
	3	3				3	N		
	4	N		19		4	N		34
	5	4		20		5	N		30
	6	N		6		6	N		11
	7	N				7	3		
	8	4				8	N		
	9	3				9	N		
40	1	3			100	1	5		
	2	3				2	3		
	3	N				3	3		
	4	N		16		4	N		32
	5	N		4		5	N		19
	6	4		0		6	N		20
	7	4				7	3		
	8	3				8	3		
	9	3				9	N		
50	1	3				1	3		
	2	④ 3 ⑤				2	3		
	3	4				3	4		
	4	4		1		4	4		
	5	4		0		5	4		
	6	4		0		6	4		
	7	4				7	4		
	8	3				8	3		
	9	N				9	N		

Secchi depth 0.3 vob
Estimated?

points ranked 4-6 20
total points assessed 99
% points ranked 4-6 20.2

Check accompanying data collected at same site/date. *
Algal mat sample ✓
Linear Veg Survey
Habitat Assessment
SCI/Biorecon
Water sample ✓
RQ- 2020-09-07-44

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

* Additional assessment completed by Natalie Ayala 11/21/20 (LVS/HA)

Algal ID collected

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%.

9/0/0/2/2/5/1/1/0/0/0 = 20