Login Checklist

RQ-2020-10-26-13 Login Station ID: #2

Shipping Method: FedEx | UPS | HD | Greyhound Date/Time of Receipt: 11/6/2020 9:35

*Cooler Temperature	Samples Frozen?	* All Samples in Cooler Preserved with		Number of Sample Containers in Cooler	Evidence Tape				Waybill Tracking #
					Present?		*Intact?		
	YES	HNO_3	Formalin		Yes	No	Yes	No	
0.3				11		✓			911763816485
0.1				IM 11/6/20 8 4		✓			127840157717
0.3				8		✓			127840157728

COOLER CHECK

***All samples received on ice unless otherwise noted. HNO3 and Formalin preserved samples do NOT have a temperature requirement.**

- If the temperature of a cooler exceeds 6.0 oC (above 10.0 oC for W-1-4-DIOX and microbiology) or received without ice, identify affected samples in an NCR. **NCR#** _____
- DOH coolers can exceed 2.0 °C above the standard temperature (6.0 or 10.0 °C for W-1-4-DIOX) without login confirmation from customer for samples requiring ice preservation; identify affected samples in an NCR. **NCR#** _____
- If cooler or samples are received with a damaged Evidence Seal; identify the affected samples in an NCR. **NCR#** _____
- If coolers or samples are received late; identify the affected samples in an NCR. **NCR#** _____

Chain of Custody/ Field Sheet(s) Included? Yes ✓ No _____

Micro-Biology Overflow Chain of Custody/ Field Sheet(s) Included? Yes _____ No _____

CONTAINER CHECK

Evidence Tape on Bottles? Yes ____ No ____ NA ✓ Evidence Tape intact? Yes ____ No ____

If Criminal, photographs taken? Yes ____ No ____ Containers intact? Yes ✓ No ____

Caps on tight? Yes ✓ No ____

Sufficient Sample Volume: Yes ✓ No ____

If NO is checked above, generate an NCR listing affected sample IDs in its appropriate category. NCR# _____

CHLORINE CHECK REQUIRED? *(Blue dot on container)* Yes ✓ No _____ Init: IM

Chlorine detected? *(One container checked per Field ID)* Yes _____ No ✓ Init: IM

If chlorine is detected, generate an NCR listing affected sample IDs . NCR# _____

PRESERVATION CHECK *(EXCLUDING SAMPLES SENT TO OVERFLOW LABS, "OV-")*

**Acid Preserved Samples: pH< 2.0? Yes ✓ No _____ NA _____ Init: IM

**W-1-4-DIOX *(Green dot on container)* preserved to pH<4.0? Yes _____ No _____ NA ✓ Init: IM

If samples were not preserved correctly, generate an NCR listing affected sample IDs . NCR# _____

Coolers Unpacked/Checked by: IM **Date:** 11/6/2020 **Event contains NCRs (Y/N)?** N

Event ID: ____ Stevens, Pringle SCI
NE-DIST-2020-11-06-01 (SMP)
Date Received: 06-NOV-2020 09:35

Login Checklist

Login Preservation Equipment	Lot # & Exp: Date
Infrared Thermometer ID:	IR TEMP GUN #2 exp:10/28/21
pH Test Strips 0 – 6	
pH Paper 0 – 3	
pH Paper 0 – 13	231019 exp: 11/1/22
Chlorine Test Strips	8261 exp: 07/2021

Additional Comments:

ENCORE SAMPLES

S-VOC-MS samples in Encores must be frozen within 48 hours of collection.

Were Encore samples received? Yes_____ Init:_____

Date and time placed in freezer _____

Were all samples placed in freezer within 48 hours of collection? Yes_____ No_____

If no, were samples shipped on dry ice? Yes_____ No_____

If S-VOC-MS samples were not preserved correctly, generate an NCR listing affected sample IDs . NCR# _____

FOR CLEAN LAB USE ONLY – Total Mercury Preservation Check (W-HG-AF;W-HG-AF-F):

Samples preserved within 48 hours? Yes_____ No_____

Date and time samples preserved: _____

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CHAIN OF CUSTODY FORM

Date:	11/5/2020	**Collected By:**	Jeremy Parrish, Kelly McDonald
Customer:	NE-DIST	**Sampling Agency:**	FDEP
RQ:	RQ-2020-10-26-13	**Project ID:**	SMP

PLEASE RETURN THE ORIGINAL OF THIS FORM WITH SAMPLE SUBMITTAL FORMS AND THE COOLER PACKING WORKSHEET TO THE LAB

Number of Coolers Shipped: 2

FIELD ID (Labels) submitted under this RQ for this collection date.

Site Location	Field ID/WIN ID
Moses Cr At Us 1	 27010050

RELINQUISHED BY(SIGNATURE): Kelly A McDonald **DATE/TIME:** 11/5/2020 1600

THIS SECTION TO BE COMPLETED BY LABORATORY

Rec'd/Inspected By: IM **Rec'd/Inspected Date:** 11/6/20

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End of Day CCV
Yes / No

WIN Station Name: Moses Cr At Us 1 **Date:** 11/5/2020

WIN/Field ID: 27010050 **WBID:** 2535B **ENR:** **Latitude:** 29.7746

County: ST. JOHNS **Org ID:** 21FLA **Longitude:** -81.3161

Receiving Body of Water: Upper East Coast **RQ-** 2020-10-26-13

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
[x] Jeremy Parrish		x		x	x
[x] Kelly McDonald	x		x	x	x
[ ]					
[ ]					

Sampling Equipment

- [x] Sample Container
- [ ] Dipper
- [ ] Syringe
- [ ] Carboy
- [ ] Van Dorn
- [x] Pole

Depth measured with: Meter
Secchi Equipment ID:

Collection Method

- [ ] Wading
- [x] From Shore
- [ ] Other
- [ ] Canoe/Kayak
- [ ] Electric Motor
- [ ] Gasoline Motor

Water Level: [X] Normal [ ] Low [ ] High [ ] Dry [ ] Pooled [ ] Flooded

Meter ID# STITCH

Photos: NO **Flow:** FLOW **Tide:**

Tide Times: High: Low:

Biological Samples Collected: [ ] None [X] HA [X] SCI [X] RPS [ ] Algae ID [X] LVS [ ] LVI Other:

SBIO ID Numbers:

Notes:
CODE R FOR RECENT RAIN

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_DDMMYYYY)

DI Source: N/A **Location:** N/A

DI Type: N/A **Equipment ID:** N/A

LIMS EVENT ID: **WIN Import ID:**

Enter Field Parameters, Verify Station ID In LIMS DMT: (Initials/Date) **QC Station ID, Field Parameters In LIMS DMT:** (Initials/Date)

Scan/Save Field Sheets (Initials/Date) **Migrate Data to WIN:** (Initials/Date) **Verify Data In WIN:** (Initials/Date)

RQ-2020-10-26-13
Customer: WQAP
Project ID: SMP

Collected By: Jeremy Parrish, Kelly McDonald
Field Report Prepared By: Jeremy Parrish
Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID: 27010050

Location: Moses Cr At Us 1

Comments: Microbiology sample(s) submitted to contract laboratory. Code r for recent rain

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)
11/5/2020	11:30 EST	6.43	71.2	20.1	6.65	0.15	0.316 ☒ VOB (S)	0.316	283.7	0.14
	↑ 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	☒ Ice ☒ H_2SO_4*	☒ <2	1	A
	Lot # Sa0038110 **Exp:**	2.7.21			
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO_3*	☒ <2	1	A
	Lot # Na9354060 **Exp:**	12.20.2020			
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # R9ba86875				
	Syringe Lot #				
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		3	B
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		1	A
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		3	A
		☐ Ice			

Name: Jeremy Parrish, Kelly McDonald

Signature: Kelly A McDonald

Date: 11/5/2020

*2.0 ml of Preservative used unless noted otherwise.
**MCAA: Monochloroacetic acid buffer solution

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: moses cr @ US 1 | County: St Johns | Date: 11/5/20 | Investigators: K. McDonald, J. Parrish

STORET Station Number: 27010050

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2			
	3			
	4			
	5			95
	6	X		
	7	N		
	8			
	9			
10	1	N		
	2			
	3			
	4			
	5			86
	6			
	7			
	8			
	9			
20	1	N		
	2			
	3			
	4			
	5			79
	6			
	7			
	8			
	9			
30	1	N		
	2			
	3			
	4	X		
	5	X		70
	6	X		
	7	X		
	8	N		
	9	N		
40	1	N		
	2	N		
	3	N		
	4	N		
	5	X		93
	6			
	7			
	8			
	9			
50	1	N		
	2			
	3			
	4			
	5	X		84
	6	N		
	7			
	8			
	9			
60	1	N		
	2			
	3			
	4	X		
	5	X		88
	6	N		
	7			
	8			
	9			
70	1	N		
	2			
	3			
	4			
	5			88
	6			
	7			
	8			
	9			
80	1	X		
	2			
	3			
	4			X
	5			
	6			↓
	7			
	8			
	9			
90	1	X		
	2			
	3			
	4			
	5	↓		48
	6	3		
	7	N		
	8			
	9	↓		
100	1	X		
	2			
	3			
	4			
	5			78
	6			
	7	↓		
	8	N		
	9	N		

Secchi depth	0.3
Estimated?	NO

# points ranked 4-6	0
total points assessed	65
% points ranked 4-6	0

Check accompanying data collected at same site/date.

Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	✓
Water sample	✓

RQ- 2020-10-26-13

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

90
-10
79 70
-8

avg cover = 809/10 = 80.9

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%.

62-160.800, F.A.C.

Revision Date: January 2017

62-160.800, F.A.C.

Revision Date: January 2017

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CHAIN OF CUSTODY FORM

Date:	11/5/2020	**Collected By:**	Brian Davis, Kim Appleby
Customer:	NE-DIST	**Sampling Agency:**	FDEP
RQ:	RQ-2020-10-26-13	**Project ID:**	SMP

PLEASE RETURN THE ORIGINAL OF THIS FORM WITH SAMPLE SUBMITTAL FORMS AND THE COOLER PACKING WORKSHEET TO THE LAB

Number of Coolers Shipped: 1

FIELD ID (Labels) submitted under this RQ for this collection date.

Site Location	Field ID/WIN ID
Stevens Branch S Of Pelicer Cemetery Off Cr 20	27010070

RELINQUISHED BY(SIGNATURE): Brian Davis **DATE/TIME:** 11/05/2020 1600

THIS SECTION TO BE COMPLETED BY LABORATORY

Rec'd/Inspected By: IM **Rec'd/Inspected Date:** 11/6/20

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there are qualified data on this page.

Meter ID: Desi RQ: 2020-10-26-13 Project: Stevens Branch SU

Notes: (1) Always wait for meter to stabilize before recording any readings.
(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 10/20

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Brian Davis	11/5/20 840 →		22.3	767.7	8.8	—	101.0	—	1.06	(P) F	(L) F
ICV	↓	11/5/20	846	23.2	767.8	8.6	8.62	100.7	—	1.06	(P) F	(L) F
CCV	Kim Appleby	↓	1651	23.0	765.2	8.6	8.65	100.9	—	1.06	(P) F	(L) F
CCV											P / F	L / F

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.
Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	Brian Davis	11/5/20	844	2009028	9/21	1000	1000	(P) F	(L) F
ICV	↓	↓	847	200902A	9/21	100	102.3	(P) F	(L) F
CCV	Kim Appleby	↓	1655	191025A	11/20	1413	1405	(P) F	(L) F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Brian Davis	11/5/20	853	2001C31	1/22	7.01	23.6	7.03	-21.2	(P) F	(L) F
Calibr.	↓	↓	856	2006B06	5/22	4.00	23.6	4.00	157.6	(P) F	(L) F
Calibr.	↓	↓	859	2002911	8/22	10.01	23.6	10.02	-194.2	(P) F	(L) F
ICV	↓	↓	901	2001C31	1/22	7.0	23.6	7.03	-20.6	(P) F	(L) F
CCV	Kim Appleby	↓	1657	2006B06	5/22	~~4.01~~ 4.00	23.7	4.01	157.7	(P) F	(L) F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50;
If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)
If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____
If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	Brian Davis	11/5/20	903	0.00	0.00	(P) F	(L) F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.

COMMENTS:

Form effective August 1, 2018

RQ-2020-10-26-13
Customer: WQAP
Project ID: SMP

Collected By: Kimberly Applebee, Brian Davis
Field Report Prepared By: Kimberly Applebee
Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID: 27010070

Location: Stevens Branch S Of Pelicer Cemetery Off Cr 204

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 (PPTh)
11/5/2020	10:40 EST	6.65	71.8	19	7	0.3	0.3 ☐ VOB (S)	0.76	231.7	0.11
	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	☒ Ice ☒ H_2SO_4*	☒ <2	1	A
	Lot # SA0038110 Exp:	2/7/21			
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO_3*	☒ <2	1	A
	Lot # NA9354060 Exp:	12/20/20			
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # R0CB48647				
	Syringe Lot #				
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		2	B
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)	☒ Ice		4	A
		☐ Ice			

Name: Kimberly Applebee, Brian Davis

Signature: B. D.

Date: 11/5/20

*2.0 ml of Preservative used unless noted otherwise.
**MCAA: Monochloroacetic acid buffer solution

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End of Day CCV: Yes / No

WIN Station Name: Stevens Branch S Of Pelicer Cemetery Off Cr 204 **Date:** 11/5/2020

WIN/Field ID: 27010070 **WBID:** 2551A **ENR:** _____ **Latitude:** 29.6516

County: FLAGLER **Org ID:** 21FLA **Longitude:** -81.3197

Receiving Body of Water: Upper East Coast **RQ-** 2020-10-26-13

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
[x] Kimberly Applebee	x		x	x	x
[x] Brian Davis		x		x	
[ ]					
[ ]					

Sampling Equipment

- [x] Sample Container
- [ ] Dipper
- [ ] Syringe
- [ ] Carboy
- [ ] Van Dorn
- [ ] Pole

Depth measured with: Meter

Secchi Equipment ID:

Collection Method

- [x] Wading
- [ ] From Shore
- [ ] Other _____
- [ ] Canoe/Kayak
- [ ] Electric Motor
- [ ] Gasoline Motor

Water Level: [ ] Normal [ ] Low [x] High [ ] Dry [ ] Pooled [ ] Flooded

Meter ID# DESI

Photos: No **Flow:** FLOW **Tide:** **Tide Times:** High: Low:

Biological Samples Collected: [ ] None [x] HA [x] SCI [x] RPS [ ] Algae ID [x] LVS [ ] LVI Other:

SBIO ID Numbers:

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_DDMMYYYY)

DI Source: N/A **Location:** N/A

DI Type: N/A **Equipment ID:** N/A

LIMS EVENT ID: _____ **WIN Import ID:** _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ (Initials/Date) **QC Station ID, Field Parameters In LIMS DMT:** _____ (Initials/Date)

Scan/Save Field Sheets BD 11/5/20 (Initials/Date) **Migrate Data to WIN:** _____ (Initials/Date) **Verify Data In WIN:** _____ (Initials/Date)

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID _____ LATITUDE _____

COUNTY St Johns STORET # 27010050 LONGITUDE _____

DATE 11/5/20 TIME 1130 SAMPLING AGENCY FDEP NEROC

SITE NAME moses cr @ us 1

FIELD ID/NAME _____ RECEIVING BODY OF WATER ~~In~~ Matanzas 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	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

Width of Riparian Vegetation (m) on Each Buffer Side: Left Bank: 12-18 Right Bank: 18+

Hydrologic Modification Score (per FT 3101): _____

High Water Mark: 0.5 (m) + 0.3 (above present water level) = 0.8 (present depth) (above bed)

Artificially Impounded: ☐ Yes ☒ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect: 2.5 m wide

Velocity (m/sec)			
.25 m/s	_____ m/s	_____ m/s	
Depth (m)			
0.3 m deep	_____ m deep	_____ m deep	

Artificially Channelized: ☒ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☒	☐	☐
Silt Smothering:	☐	☒	☐	☐
Algae Smothering:	☒	☐	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
→ Woody Debris (Snags)	6	5	
Undercut Banks / Roots	1.5	5	
Leaf Packs or Mat	1.5	5	
Aquatic Vegetation ...	<1	5	
Rock or Shell Rubble..			
→ Sand.....	70	5	
Mud / Muck / Silt	20		
Other			
Other			

WATER QUALITY

	Depth (M)	Temp (°C)	pH (SU)	D.O (MG/L)	D.O. Sat (%)	Cond (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:	0.15	20.1	6.65	6.43	71.2	283.7	0.14	0.3
Mid:								☒ VOB
Bottom								TOTAL DEPTH
Meter ID:	Pro DSS Stitch							0.3

Water Odors: Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils: Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☒ Yes ☐ No

Sample Preserved? ☒ Yes ☐ No

Lot Number: see SMP Exp: field sheet

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) ☐

AMBIENT FIELD CONDITIONS / NOTES:

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

SAMPLING TEAM: K.McDonald, J Parrish

SIGNATURE: Kelly McDonald

DATE: 11/5/20

62-160.800, F.A.C.

Revision Date: January 2017

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

Waterbody: Moses cr. @ US1	Date: 1/15/20	County: St Johns	Storet Number: 27010050
Analyst: Jerry Parrish		Signature: Jerry Parr	

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m^2 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.

2.59 meters

HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, Indicate with "X"											

HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum											
Orontium aquaticum		X	X	X	X	X			X	X	
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus										X	
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											
(If no Dominant or Co-Dominant were selected, Indicate with "X")		X	X	X	X				X	X	

Indicate % cover macrophytes per section

Coverage	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
0-5% Macrophyte Coverage										
>5 and ≤10% Macrophyte Coverage										
>10 and ≤25% Macrophyte Coverage										
>25 and ≤50% Macrophyte Coverage										
> 50% Macrophyte Coverage										

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

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
		27010050	11/5/20	
REMARKS:	COUNTY: St Johns	LOCATION: Moses creek @ US1		FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity 13	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 (13) 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed. 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 8	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 15	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 18 Primary Score 54	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 Artificial Channelization 20	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 1
Bank Stability Right Bank 10 Left Bank 10	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 10 Left Bank 9	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 10 Left Bank 8 Secondary Score 77	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) (8)	>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

128 / 26 / 4

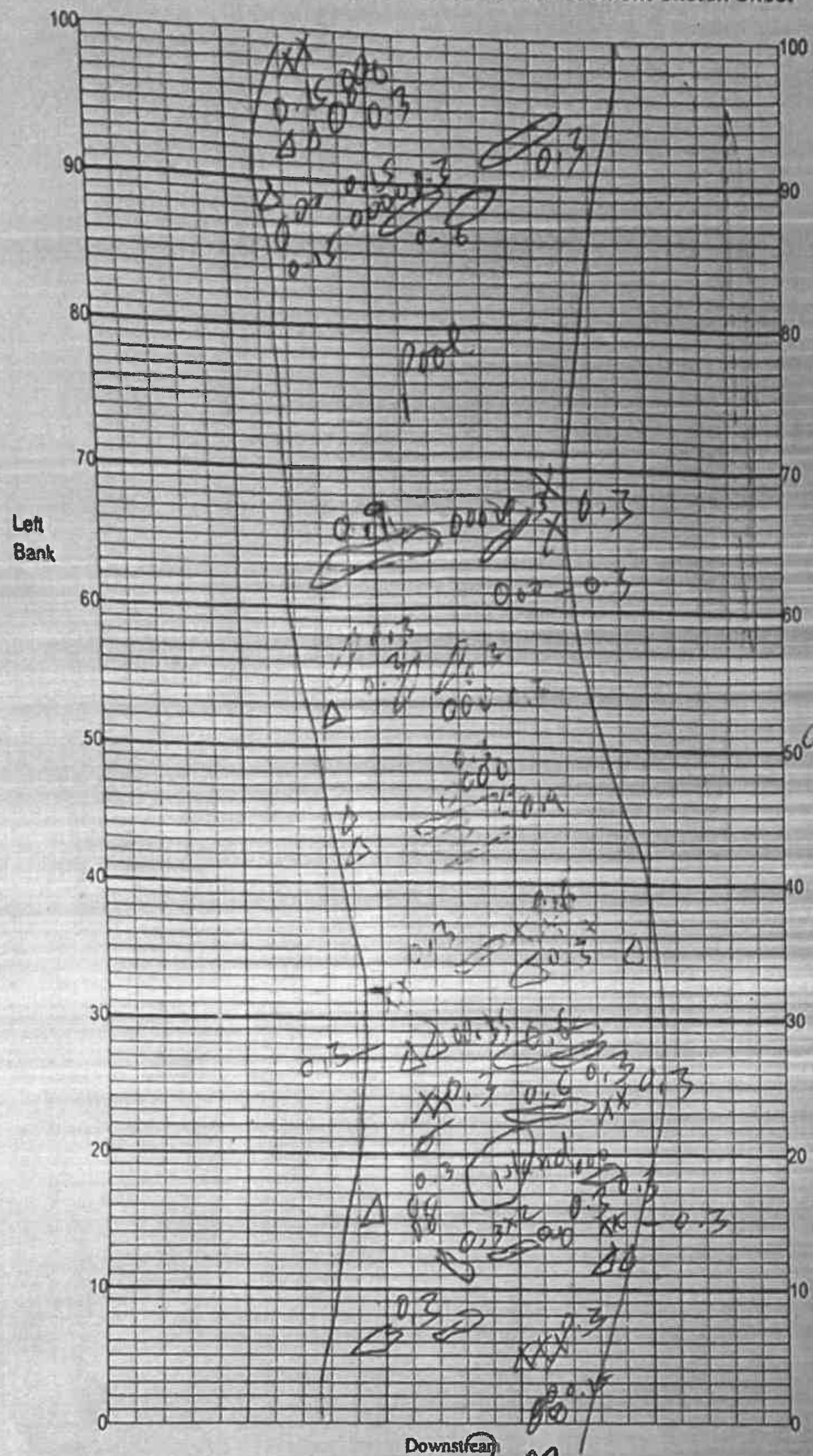
131 **TOTAL SCORE**

Date: 11/5/20	Analyst: Jeremy Penn	Signature: Jeremy Penn

62-160.800, F.A.C.

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).

5 m wide

Location: Moses cr.

Date: 11/5/20

Sampler: JP / Km

100 m: Latitude	
Longitude	
0 m: Latitude	
Longitude	

Substrates: Code key, draw proportionate habitat abundance.

		%
	Snags	6
X	Roots/undercut banks	1.5
	Leaf Packs (or mats)	1.5
	Aquatic Macrophytes	<1
	~~woody debris~~	<1
	Sand/muck	90/2
	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:

plant = 1 m

leaf = 0.15 + 0.3 + 0.3 + 0.3 + 0.3 + 0. ... 0.3, 0.15, 0.3, 0.3, ...

root = 4 m

snag = 1 + 1.5 + 1.5 + 1 + 1 + 1.5 + 0.6 + 0.6 + ... 12

0.25 m sec

250 total

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / Ph(904) 739-2277 / FAX (904) 739-2011

SR #

ALS Contact: Mandy Sullivan

Page 1 of 1

Client Name	Project Number
FDEP-NE ROC	RQ-2020- 10-26-13
Report To	**Report CC**
Dep-Overflowmicro@dep.state.fl.us	
Company/Address	
8800 Baymeadows Way W Jacksonville, Fl 32256	
Phone #	**FAX #**
904-256-1700	
Sampler's Signature	**Sampler's Printed Name**
Kelly A McDonald	Kelly A McDonald

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS	Preservative	E.Coli	Enterococci	REMARKS
27010050		11/5	1230	SW	1		X		Fresh
			1130	Rm					

Preservative Key: 0. None; 1. HCL; 2. HNO3; 3. H2SO4; 4. NaOH; 5. Zn Acetate; 6. MeOH; 7. NaHSO4; 8. ICE

Special Instructions/Comments: Email Report to: Dep-Overflowmicro@dep.state.fl.us

0.0

TURNAROUND REQUIREMENTS

___ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE: N/A

REQUESTED REPORT DATE: N/A

REPORT REQUIREMENTS

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION

P.O. #

Bill to:

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: Kelly A McDonald	Signature:	Signature	Signature	Signature	Signature
Printed Name: Kelly A McDonald	Printed Name: Hdie Hernandez	Printed Name	Printed Name	Printed Name	Printed Name
Firm: FDEP NE ROC	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 11/5/20 1359	Date/Time: 11/5/20 1357	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Suite 200 Jacksonville, FL 32256 / PH(904) 739-2277 / FAX (904) 739-2011

SR #

ALS Contact: Mandy Sullivan

Client Name	Project Number
FDEP-NE ROC	RQ-2020-10-26-13
Report To	**Report CC**
Dep-Overflowmicro@dep.state.fl.us	
Company/Address	
8800 Baymeadows Way W Jacksonville, Fl 32256	
Phone #	**FAX #**
904-256-1700	
Sampler's Signature	**Sampler's Printed Name**
B-D-	Brian Davis

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix	NUMBER OF CONTAINERS	E Coli	Enterocool	REMARKS
27010070		11/5/20	1040	SW	1	1		Fresh

Preservative Key: 0 None; 1 HCL; 2 HNO3; 3 H2SO4; 4 NaOH; 5 Zn. Acetate; 6 MeOH; 7 NaHSO4; 8. ICE

Special Instructions/Comments: Email Report to: Dep-Overflowmicro@dep.state.fl.us

0.4

TURNAROUND REQUIREMENTS

___ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE: N/A

REQUESTED REPORT DATE: N/A

REPORT REQUIREMENTS

___ I Results Only

___ II Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III Results + QC and Calibration Summaries

___ IV Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION

P.O. # [redacted]

Bill to

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: B-D-	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Brian Davis	Printed Name: Valerie Spears	Printed Name	Printed Name	Printed Name	Printed Name
Firm: FDEP NEROC	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 11/5/20 1459	Date/Time: 11/5/20 1500	Date/Time	Date/Time	Date/Time	Date/Time

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21FLA LATITUDE _____
COUNTY ~~St. Johns~~ Flagler STORET # 22o10070 LONGITUDE _____
DATE 11/5/20 TIME 1040 SAMPLING AGENCY FDEP NE ROB
SITE NAME Stevens Branch S of Pellicer Landing off Cr 304
FIELD ID/NAME _____ RECEIVING BODY OF WATER Pellicer Creek

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)	Landscape Development Intensity Index (LDI)

Local Watershed Erosion (select one): [X] None [ ] Slight [ ] Moderate [ ] Heavy

Local Watershed NPS Pollution: [X] No evidence [ ] Slight [ ] Moderate [ ] Heavy

Width of Riparian Vegetation (m) on Each Buffer Side: Left Bank: 718 Right Bank: 718

Hydrologic Modification Score (per FT 3101): _____

High Water Mark: 0.7 (m) + 0.9 (above present water level) = 1.6 (present depth) (above bed)

Artificially Impounded: [ ] Yes [X] No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect: 3 m wide

_____ m/s	0.17 m/s	_____ m/s
_____ m deep	0.9 m deep	_____ m deep

Artificially Channelized: [X] No [ ] Some recovery [ ] Mostly recovered, more sinuous [ ] Recent, severe

Canopy Cover %: [ ] Open [ ] Lightly Shaded (11-45%) [X] Heavily Shaded [ ] Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils: [X] Absent [ ] Slight [ ] Moderate [ ] Profuse

Sediment Odors: [X] Normal [ ] Sewage [ ] Petroleum [ ] Chemical [ ] Anaerobic [ ] Other (Specify)

Smothering of Substrates:

	None	Slight	Moderate	Severe
Sand Smothering:	[X]	[ ]	[ ]	[ ]
Silt Smothering:	[ ]	[X]	[ ]	[ ]
Algae Smothering:	[X]	[ ]	[ ]	[ ]

SUBSTRATE TYPE

Assessment Tool: [X] SCI [X] RPS [X] LVS [ ] LCI [ ] BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	3	7	
Undercut Banks / Roots	4	7	
Leaf Packs or Mat	<1	7	
Aquatic Vegetation	0		
Rock or Shell Rubble	0		
Sand		4	
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp (°C)	pH (SU)	D.O (MG/L)	D.O Sat (%)	Cond (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top	0.3	19.0	7.00	6.65	71.8	231.7	0.11	0.3
Mid:								VOB
Bottom								TOTAL DEPTH
Meter ID:	Des							0.9

Water Odors: [X] Normal [ ] Petroleum [ ] Sewage [ ] Chemical [ ] Other

Water Surface Oils: [X] Normal [ ] Sheen [ ] Globs [ ] Slick [ ] Other

Water Sample Taken? [X] Yes [ ] No
Sample Preserved? [X] Yes [ ] No
Lot Number: _____ Exp: _____

Color: [X] Tannic [ ] Clear [ ] Green (Algae) [ ] Other (Specify) _____

Algae Sample Taken? [ ] Yes [X] No
Sample Preserved? [ ] Yes [ ] No
Lot Number: _____ Exp: _____

Clarity: [X] Clear [ ] Slightly Turbid [ ] Turbid [ ] Opaque

ABUNDANCE

	Not Obs	Rare	Common	Abundant
Periphyton:	[ ]	[X]	[ ]	[ ]
Fish:	[X]	[ ]	[ ]	[ ]
Aquatic Plants:	[X]	[ ]	[ ]	[ ]
Iron/Sulfur Bacteria:	[X]	[ ]	[ ]	[ ]

System Type: [X] Stream [ ] Lake [ ] Wetland [ ] Estuary [ ] Other(Specify) _____

AMBIENT FIELD CONDITIONS / NOTES:

[X] The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM	SIGNATURE	DATE
Kim Appleby & Brian Davis		11/5/20

62-160.800, F.A.C.

Revision Date: January 2017

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Stevens Branch S of Pellicer Cr[illegible]
County: Flagler ~~St. Johns~~
Date: 11/5/20
Investigators: Kim Appleby + Brian Davis
STORET Station Number: 27010070

Transect ℓ (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2		X	
	3			
	4			
	5			94
	6			
	7			
	8			
	9	↓	↓	
10	1	N	X	
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9	↓	↓	
20	1	N	X	
	2			
	3			
	4			
	5			96
	6			
	7			
	8		↓	
	9	↓		
30	1	N	X	
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9	↓	↓	
40	1	N		
	2			
	3			
	4			
	5			96
	6			
	7			
	8		↓	
	9	↓		
50	1	N	X	
	2			
	3			
	4			
	5			92
	6			
	7			
	8			
	9	↓	↓	

Transect ℓ (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N		
	2		X	
	3			
	4			
	5			80
	6			
	7			
	8		↓	
	9	↓		
70	1	N	X	
	2			
	3			
	4			
	5			96
	6			
	7			
	8		↓	
	9	↓		
80	1	N	X	
	2			
	3			
	4			
	5			94
	6			
	7			
	8	↓	↓	
	9			
90	1	N		
	2		X	
	3			
	4			
	5			96
	6			
	7			
	8			
	9	↓	↓	
100	1	N	X	
	2			
	3			
	4			
	5			92
	6			
	7			
	8			
	9	↓	↓	

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	✓
Habitat Assessment	✓
SCI/Biorecon	✓
Water sample	✓
RQ-2020-10-26-13	

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%.

62-160.800, F.A.C. Revision Date: January 201

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

SAMPLING AGENCY: FDEP NEROC		STORET STATION NUMBER: 27010070	DATE (MM/DD/YY): 11/5/20	RECEIVING BODY OF WATER: Pelican Creek
REMARKS:	COUNTY: Flagler St Johns	LOCATION: Stevens Br S of Pelican Com. off CR204		FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity 10	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed (10) 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 7	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 13	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 17 Primary Score 47	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 Artificial Channelization 16	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 1
Bank Stability Right Bank 8 Left Bank 6	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 10 Left Bank 10	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 10 Left Bank 10 Secondary Score 72	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

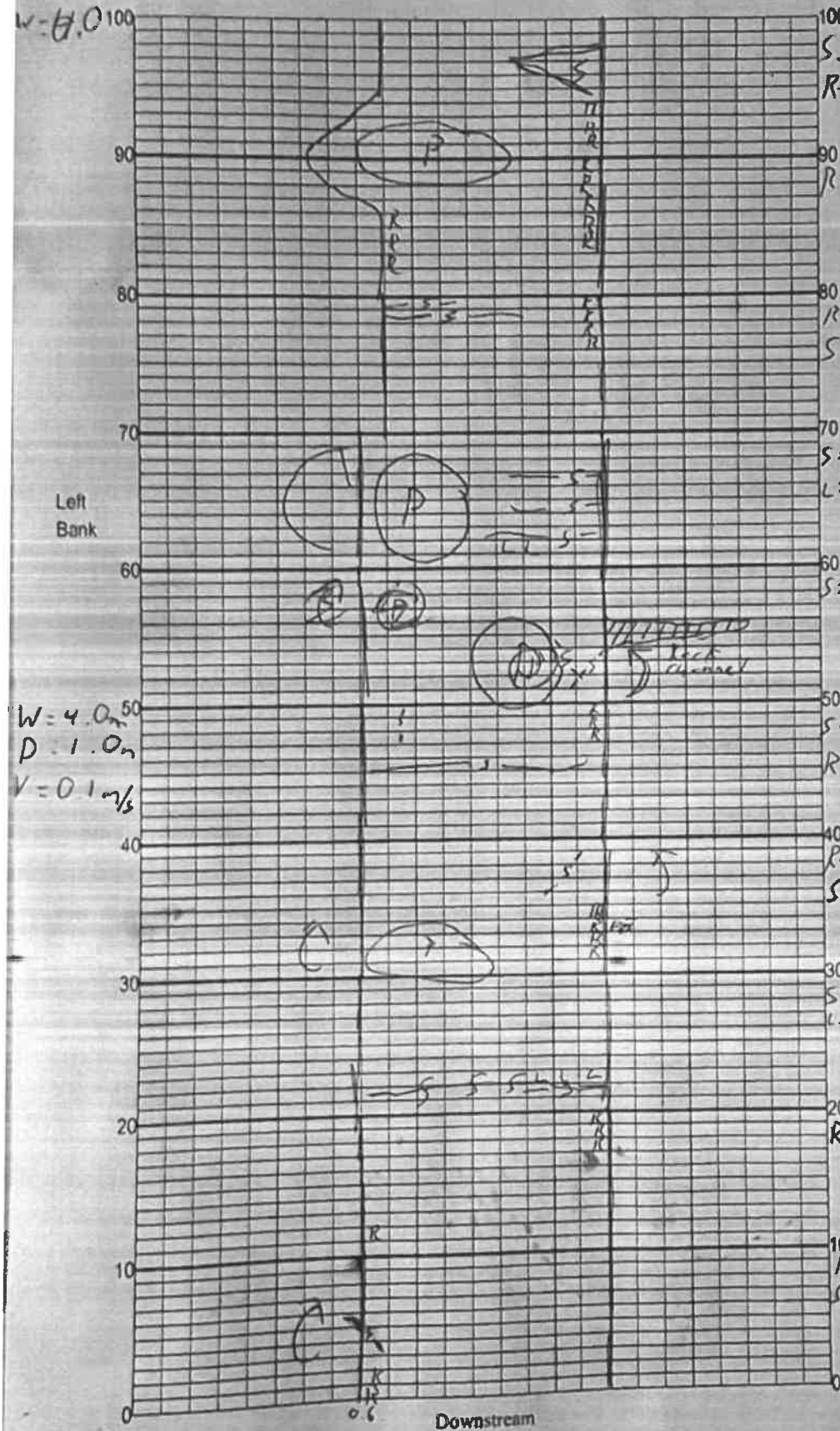
119 **TOTAL SCORE**

Date: 11/5/20	Analyst: Brian Davis Kim Appleby	Signature: B — D—

Revision Date: January 2017

62-160.800, F.A.C.

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: Steven's Branch

Date: 11/5/20

Sampler: Brian Davis

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.		%
S	Snags	3
R	Roots/undercut banks	4
L	Leaf Packs (or mats)	<1%
	Aquatic Macrophytes	
P	Pools — total # observed = 4; # range expected = 3	

Average width 3.0 m

Average depth 0.9 m

Velocity measured at 50 meter mark.

WQ & chemistry taken at 100 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: <2m² Yes

R = 11.8/300 = 4%

S = 7.7/100 = 8%

L = <1%/100

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RQ-2020-10-26-13

Date of Request: 18-SEP-2020
Created By: PARRISH_J On: 18-SEP-2020
Modified By: JASROTIA_P On: 06-OCT-2020
Customer: NE-DIST
Project: SMP
Division: Division of Environmental Assessment and Restoration
District: Northeast District
Event Description: Stevens, Pringle SCI

Send Coolers To:

Phone: 904-256-1700
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish
Cooler Ship EMail: Jeremy.M.Parrish@dep.state.fl.us

Priority: 3
Event Status: S
Criminal Investigation: NO
Chemistry Request Reviewed By: WATTS_J On: 06-OCT-2020
Biology Request Reviewed By: JASROTIA_P On: 06-OCT-2020
Sampling Kit Required: YES Ship on: 16-OCT-2020
Sampling Kit Shipped: YES On: 14-OCT-2020
Sampling Kit Packed By: SHAIK_A
Preservatives Needed: NO
Date to Receive Samples: 26-OCT-2020
Logged In By:

Send Final Report To:

8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish
Report Notification EMail: Jeremy.M.Parrish@dep.state.fl.us

Comments: Group A: Nutrients, Metals, Tracers, Q-PSNP-TQ, Bacteria
Group B: SCI, Algae_ID

NE-ALS-ECQ

Packing Notes:
none

Bottle Group A (Water) With 2 Samples:

Bottle Type: P-1L — Number of Bottles: 2 — Preserved With: ICE

ALKALINITY	Template: DEFAULT	(SM 2320 B-2011) Alkalinity in aqueous matrices as mg CaCO3/L
TURBIDITY	Template: DEFAULT	(EPA 180.1 Rev. 2.0) Turbidity in aqueous matrices
W-CL-IC	Template: DEFAULT	(EPA 300.0 Rev. 2.1) Chloride in aqueous matrices
W-COLOR Color (true)	Template: DEFAULT	(SM 2120 B-2011) True Color measured at 450 nm (not valid for NPDES monitoring)
W-F	Template: DEFAULT	(SM 4500 F-C-2011) Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)
W-SO4-IC	Template: DEFAULT	(EPA 300.0 Rev. 2.1) Sulfate in aqueous matrices
W-TDS	Template: DEFAULT	(SM 2540 C-2011) Total Dissolved Solids in aqueous matrices
W-TSS	Template: DEFAULT	(SM 2540 D-2011) Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample

Bottle Type: BP-1L — Number of Bottles: 2 — Preserved With: ICE

CHLSUITE-W	Template: DEFAULT	(SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

Bottle Type: P-250ML-WI-THI — Number of Bottles: 2 — Preserved With: ICE

NE-ALS-ECQ	Template: DEFAULT	(SM 9223 B Quanti-Tray) E. coli by Colilert/QT by ALS in Jacksonville

Bottle Type: BG-500ML — Number of Bottles: 2 — Preserved With: ICE

W-E8321-DI	Template: DEFAULT	(EPA 8321B) Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS
W-E8321-MS	Template: DEFAULT	(EPA 8321B) Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Bottle Type: P-500ML — Number of Bottles: 2 — Preserved With: HNO3

W-HARD Hardness	Template: DEFAULT	(SM 2340B) Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3
W-ICP	Template:	(EPA 200.7 Rev. 4.4) Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

Bottle Group A (Water) With 2 Samples:

Bottle Type: P-500ML Number of Bottles: 2 Preserved With: HNO3

W-ICP	Template:	(EPA 200.7 Rev. 4.4) Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

Barium
Calcium
Iron
Magnesium
Potassium
Sodium
Zinc

W-ICPMS	Template:	(EPA 200.8 Rev. 5.4) Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

*Boron
Aluminum
Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Nickel
Selenium
Silver
Thallium

Bottle Type: P-500ML Number of Bottles: 2 Preserved With: ICE And H2SO4

W-NH3	Template: DEFAULT	(EPA 350.1 Rev. 2.0) Ammonia in aqueous matrices as mg N/L
W-NO2NO3	Template: DEFAULT	(EPA 353.2 Rev. 2.0) Nitrite/Nitrate in aqueous matrices as mg N/L
W-S-A-TP	Template: DEFAULT	(EPA 365.1 Rev. 2.0) Total Phosphorus in aqueous matrices as mg P/L
W-TKN	Template: DEFAULT	(EPA 351.2 Rev. 2.0) Total Kjeldahl Nitrogen in aqueous matrices
W-TOC	Template: DEFAULT	(SM 5310 B-2011) Nonpurgeable Organic Carbon in aqueous matrices

Bottle Type: P-125ML Number of Bottles: 2 Preserved With: FILTER-ICE

W-PO4-F	Template: DEFAULT	(EPA 365.1 Rev. 2.0) Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Bottle Type: BG-1L Number of Bottles: 6 Preserved With: ICE

W-PSNP-TQ	Template: MASTERLIST	(EPA 8270E) Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS

Bottle Group B (Biological) With 2 Samples:

Bottle Type: PJ-2L Number of Bottles: 4 Preserved With: Formalin

MI-FW-QLDC	Template: DEFAULT	(SOP-IZ06) No. Taxa of FW macroinverts, qual samp, 20 dipnets.

Bottle Type: PT-50ML Number of Bottles: 2 Preserved With: ICE

ALGAL_ID	Template: DEFAULT	(SOP-AB05) Qualitative assessment of algal taxa present without counts

* - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.