

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: **EXO MOC** RQ- **2019-08-26-22** Project: **Nassau West**

- 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 **6/19**

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.	C Ruben	8-28-19	0730	23.5	758	8.5	8.46	98%	—	—	P/F	L/F
ICV	↓	↓	0732	23.5	758	8.5	8.47	99.7%	—	—	P/F	L/F
CCV	↓	↓	1515	24.5	757	8.3	8.4	101%	—	—	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 #	Explr. Date	Standard µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	C Ruben	8-28-19	0734	190711B	7/20	1000	997	P/F	L/F
ICV	↓	↓	0736	19039B	3/20	100	104	P/F	L/F
CCV	↓	↓	1517	190711B	7/20	1000	995	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Explr. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	C Ruben	8-28-19	0738	2902778	1/21	7.	24.5	7.47	-68.8	P/F	L/F
Calibr.	↓	↓	0740	2904800	3/21	4.	24.2	4.36	112.9	P/F	L/F
Calibr.	↓	↓	0741	2901351	7/20	10.	24.4	10.04	-236.5	P/F	L/F
ICV	↓	↓	0743	2902778	1/21	7.0	24.3	7.07	-68.2	P/F	L/F
CCV	↓	↓	1520	2904800	3/21	4.0	24.5	4.16	101.7	P/F	L/F
CCV	↓	↓	1522	2901351	7/20	10.0	24.5	9.97	-234	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	C Ruben	8-28-19	0745	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:

CR 8/29/19



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: BRANDY BRANCH AT CR 121

Date: 8/28/2019

(mm/dd/yyyy)

WIN/ Field ID: 19010063

WBID: 2226

Latitude: 30.27927

(Decimal Degrees)

County: Nassau

ORG ID: 21FLA

Longitude: -82.14523

(Decimal Degrees)

Receiving Body of Water: St. Mary River

RQ-2019- 08-26-22

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
B. Davis						✓			
C. Ruben					✓		✓	✓	✓

Sampling Equipment	
☐ Sample Container	☐ Van Dorn ☒ Pole
☐ Carboy	☐ Syringe
☐ Dipper	☐ Other
Depth Measured with <u>MCE</u>	
Equipment ID	
Collection Method	
☐ Wading	☐ Canoe/Kayak
☒ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded		Meter ID# <u>MCE</u>	Matrix: <u>Fresh</u> / Marine / DI							
Photos: Yes / <u>No</u>	Flow: No Flow / Intertidal / <u>Flowing</u> / NA	Tide: Rising/ Falling/ Slack/ <u>NA</u>	Tide Times: High / Low							
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (µmhos/cm)	Temp. (C°)
EST	<u>1215</u>	<u>0.3</u>	<u>0.15</u>	<u>VOB</u>	<u>1.96</u>	<u>23.8</u>	<u>7.32</u>	<u>0.06</u>	<u>130.7</u>	<u>25.3</u>
CEN				<u>(S)</u>						

Biological Samples Collected:	<u>None</u>	HA	SCI	RPS	Algae ID	LVS	LVI	Other:
SBIO ID Numbers:	SBIO-ID:	HA-ID:	RPS-ID:	Macrophyte-ID:	LIMS#:			
Parameter Suite	Parameter Methods			Preservation	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				
Physical/Aggregate (Fresh)	☐ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS			☐ Ice				
Physical/Aggregate (Marine)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY			☐ Ice				
Macroinvertebrates	☐ MI-FW-QLDC			☐ Formalin				
Periphyton	☐ ALGAE-ID			☐ Ice				
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci			☒ Ice				
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD			☐ Ice				
Tracers	☐ W-E8321-DI ☐ W-E8321-MS			☐ Ice				
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA			☐ Ice				
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C			☐ Ice				

Notes:

WIN ID/Field ID: 
19010063

BRANDY BRANCH AT CR 121

Signature: B. Davis

Date: 8/28/19

LIMS EVENT ID:

WIN Import ID:

Enter Field Parameters, Verify Station ID in LIMS DMT:

QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: ST MARYS S PRONG @ US 90

Date: 8/28/2019

(mm/dd/yyyy)

WIN/ Field ID: 19010021

WBID: 2247

Latitude: 30.27927

(Decimal Degrees)

County: Nassau

ORG ID: 21FLA

Longitude: -82.14523

(Decimal Degrees)

Receiving Body of Water: St. Mary South Prong

RQ-2019- 08-26-22

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
B-V									
C Ruben									

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Depth Measured with MOE		
Equipment ID Ortho # 7		

Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded
Photos: Yes / (No) / Flow: No Flow / Intestinal / Flowing / NA
Meter ID# EXO
Matrix: Fresh / Marine / DI
Tide: Rising/ Falling/ Slack/ NA
Tide Times: High / Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (umhos/cm)	Temp. (C°)
EST	0940	0.2	0.1	0.2	3.73	45.8%	7.57	0.07	152.5	25.7
CEN				S						

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

SBIO ID Numbers: SBIO-ID: HA-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	SA9010030	4/10/20	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	NA9099030	4/9/20	☒ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice	RA908675		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes:

WIN ID/Field ID:



19010021

ST MARYS S PRONG @ US 90

Signature: B-V

Date: 8/28/19

LIMS EVENT ID: WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets 08-28-19 Migrate Data to WIN: Verify Data In WIN:

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

SAMPLE ID 2247 ORG ID 211617 LATITUDE 30.27927
 COUNTY Nassau STORET # 19010021 LONGITUDE -82.14523
 DATE 8/28/19 TIME 12:15 SAMPLING AGENCY FDEP REAR NE
 SITE NAME St Marys Prong US 90
 FIELD ID/NAME St Marys South Prong RECEIVING BODY OF WATER St Marys River

RIPARIAN ZONE / STREAM FEATURES

Meter ID: Exo Moe

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							Typical Width (m) Depth (m)/Velocity (m/sec) Transect <u>30</u> m wide <u>2.1</u> m/s <u>0.5</u> m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u><6</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101)			
High Water Mark: <u>2.0</u> + <u>0.5</u> = <u>2.5</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 ☒ 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>5</u></td> <td></td> <td></td> </tr> <tr> <td>Undercut Banks / Roots</td> <td><u>9</u></td> <td></td> <td></td> </tr> <tr> <td>Leaf Packs or Mat</td> <td></td> <td></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></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>5</u>			Undercut Banks / Roots	<u>9</u>			Leaf Packs or Mat				Aquatic Vegetation				Rock or Shell Rubble				Sand				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. Sat (%)</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>0.2</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bottom</td> <td><u>32</u></td> <td><u>25.2</u></td> <td><u>7.57</u></td> <td><u>3.73</u></td> <td><u>45.6%</u></td> <td><u>152.9</u></td> <td><u>0.06</u></td> <td><u>0.2</u></td> </tr> </tbody> </table> System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐				Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:								<u>0.2</u>	Mid:									Bottom	<u>32</u>	<u>25.2</u>	<u>7.57</u>	<u>3.73</u>	<u>45.6%</u>	<u>152.9</u>	<u>0.06</u>	<u>0.2</u>
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AMBIENT FIELD CONDITIONS / NOTES: Hydrologic Disturbance Scoring ☐ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐ The antecedent hydrologic conditions have been met to my best knowledge.			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																																																														
SAMPLING TEAM <u>C. Ruben</u> <u>B. Davis</u>			SIGNATURE: 																																																																														

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: St. Mary's S Prong US90 County: Nassau Date: 8/28/19 Investigators: B DAVIS C Ruben

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover STORET Station Number: 19010021

Transect (m)	Point	1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1		N	✓	
	2				
	3				
	4				
	5				86
	6				
	7				
	8				
	9				
10	1		N	✓	
	2				
	3				
	4				
	5				86
	6				
	7				
	8				
	9				
20	1		N		
	2				
	3				
	4				
	5				94
	6				
	7				
	8				
	9				
30	1		N	✓	
	2				
	3				
	4			✓	
	5				88
	6				
	7				
	8				
	9				
40	1		N		
	2				
	3				
	4			✓	
	5				80
	6				
	7				
	8				
	9				
50	1		N		
	2				
	3				
	4			✓	
	5				72
	6				
	7				
	8				
	9				

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

60	1		N		
	2				
	3				
	4				
	5				96
	6				
	7				
	8				
	9				
70	1		N		
	2				
	3				
	4				
	5				96
	6				
	7				
	8				
	9				
80	1		N		
	2				
	3				
	4				
	5				96
	6				
	7				
	8				
	9				
90	1		N		
	2				
	3				
	4			✓	
	5			✓	96
	6			✓	
	7				
	8				
	9				
100	1		N		
	2				
	3				
	4				
	5				96
	6				
	7				
	8				
	9				

Secchi depth LOP
Estimated?

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

Check accompanying data collected at same site/date.

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

RQ- 2019-08-26-22

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%.

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

SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 19010021	DATE (MM/DD/YY): 8/28/19	RECEIVING BODY OF WATER: St Marys River
REMARKS:	COUNTY: Nassau	LOCATION: St Marys & Prong 2590		FIELD ID/NAME:

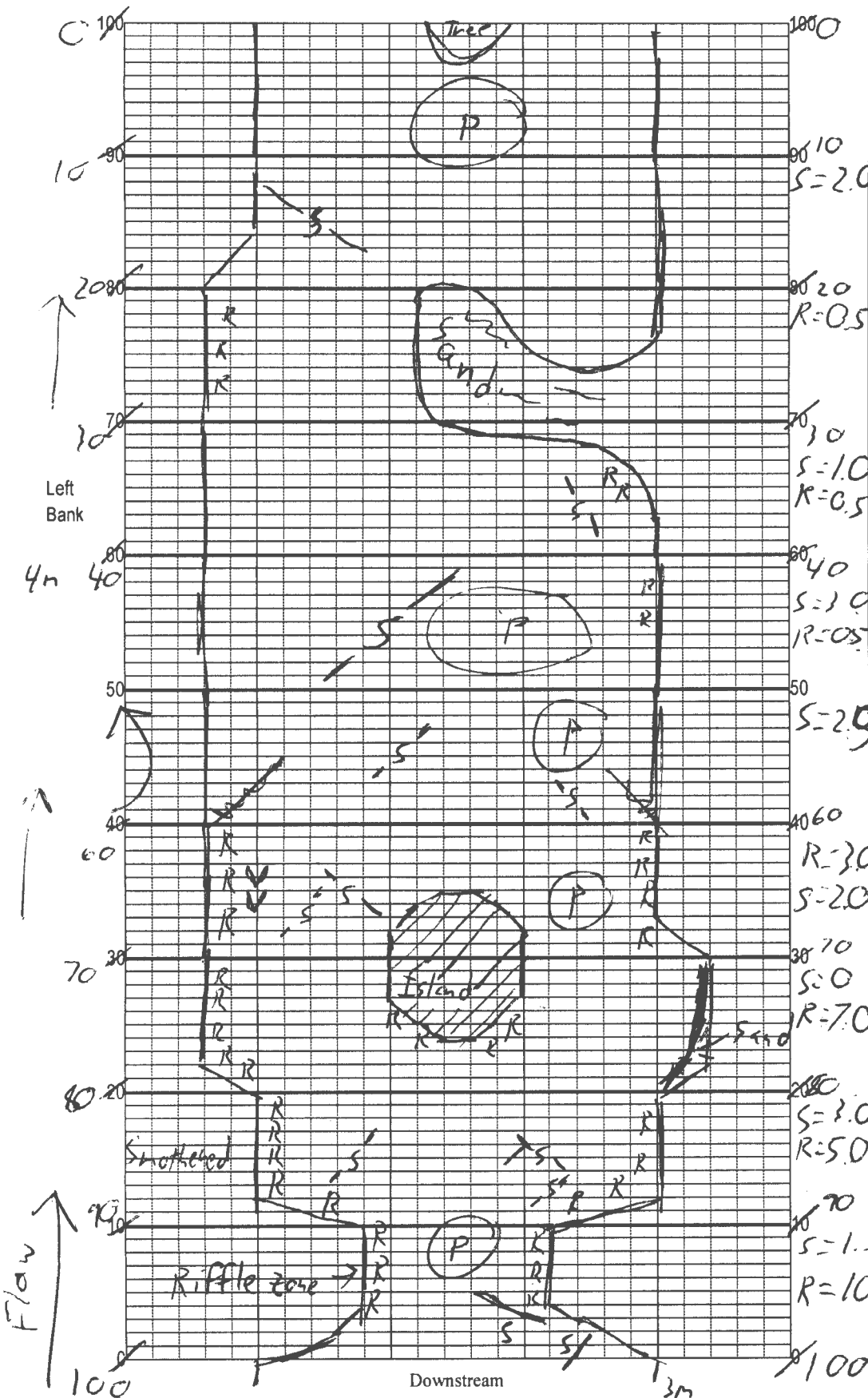
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>10</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>10</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>14</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>17</u> Primary Score <u>51</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>16</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>8</u> Left Bank <u>8</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>10</u> Left Bank <u>5</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>10</u> Left Bank <u>5</u> Secondary Score <u>62</u>	10 9	8 7 6	5 4	3 2 1

113

TOTAL SCORE

Date: <u>8/28/19</u>	Analyst: <u>C. Ruben / B. Davis</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: St Mary's Spring @ US90

Date: 8/28/19

Sampler: BD/CR

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ S Snags 5

☐ R Roots/undercut banks 9

☐ L Leaf Packs (or mats) _____

☐ V Aquatic Macrophytes _____

☐ _____

☐ _____

☐ P Pools total # observed = 5
range expected = 3

Average width 3.0 m

Average depth 0.3 m 0.5

Velocity measured at 0 meter mark.

DWQ & 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:

<2 M of Macrophytes was observed while doing the LVSP YES or NO

R = 26.5

S = 15

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

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Nassau West

Customer: NE-DIST

Requester: Jeremy M. ParrishField Report Prepared By: B - D -

Project ID: SMP

Collected By: Brian Davis, Cheyenne RubenSampling Agency: DEAR MED

Location		☐ Comp ☒ Grab		Collection (comp begin or grab) Date <u>8/28/19</u> Time <u>1215</u>		☒ Eastern ☐ Central		Composite end Date _____ Time _____		Bottle Group(s) (See pg 2)	
Field ID		WIN ID/Field ID:  19010063		Matrix (type, e.g., Salt, Fresh, etc) <u>Fresh</u>		Diss. Oxygen <u>1.96</u>		☒ mg/L ☐ % sat		Total Res. Chlorine (mg/L)	
WIN/ST		BRANDY BRANCH AT CR 121		Temp (C) <u>25.3</u>		pH <u>7.32</u>		Sample Depth <u>0.15</u>		☐ ft ☒ m	
Latitude		☐ dd ☐ dms		Salinity (ppt) <u>0.06</u>		Comments					
Location		☐ Comp ☒ Grab		Collection (comp begin or grab) Date <u>8/28/19</u> Time <u>940</u>		☒ Eastern ☐ Central		Composite end Date _____ Time _____		Bottle Group(s)	
Field ID		WIN ID/Field ID:  19010021		Matrix (type, e.g., Salt, Fresh, etc) <u>Fresh</u>		Diss. Oxygen <u>3.73</u>		☒ mg/L ☐ % sat		Total Res. Chlorine (mg/L)	
WIN/ST		ST MARYS S PRONG @ US 90		Temp (C) <u>25.7</u>		pH <u>7.57</u>		Sample Depth <u>0.1</u>		☐ ft ☒ m	
Latitude		☐ dd ☐ dms		Salinity (ppt) <u>0.07</u>		Comments					
Location		☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____		☐ Eastern ☐ Central		Composite end Date _____ Time _____		Bottle Group(s)	
Field ID				Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)	
WIN/STORET #				Temp (C)		pH		Sample Depth		☐ ft ☐ m	
Latitude		☐ dd ☐ dms		Longitude		☐ dd ☐ dms		Salinity (ppt)		Comments	
Location		☐ Comp ☐ Grab		Collection (comp begin or grab) Date _____ Time _____		☐ Eastern ☐ Central		Composite end Date _____ Time _____		Bottle Group(s)	
Field ID				Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)	
WIN/STORET #				Temp (C)		pH		Sample Depth		☐ ft ☐ m	
Latitude		☐ dd ☐ dms		Longitude		☐ dd ☐ dms		Salinity (ppt)		Comments	

Relinquished By: <u>B - D -</u>	Date/Time: <u>8/28/19 1630</u>	Shipping Method: <u>FedEx</u>	Number of Coolers Shipped: <u>1</u>	Received By: _____	Date/Time: _____
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Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALKALINITY						
	TURBIDITY						
	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
	CHLSUITE-W						
Group: A	Bottle Type:	P-250ML-WI-THI	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1 to ALS
	NE-ALS-ECQ						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
	W-ICP						
	W-ICPMS						
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:	P-125ML	# of Bottles: 1	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
	W-PO4-F						
Group: B	Bottle Type:	P-250ML-WI-THI	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1 to ALS
	NE-ALS-ECQ						

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR # _____

ALS Contact: _____

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

Page 1 of 1

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