



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: St Marys R Sr 2 East

Date: 12/29/2020

WIN/Field ID: 19010027

WBID: 2097G

ENR:

Latitude: 0 30.524975

County: Nassau

Org ID: 21FLA

Longitude: 0 -82.017777

Receiving Body of Water: Nassau River

RQ- 2020121415

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Kimberly Applebee	x		x		
☒	Jeremy Parrish		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☐ Syringe	☐ Pole
Depth measured with: Sonar	
Secchi Equipment ID:	
Collection Method	
☐ Wading	☒ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# STITCH					
Photos: YES		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☒ 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: QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:



RQ-2020121415

Customer: WQAP

Project ID: SMP

Collected By: Kimberly Applebee, Jeremy Parrish

Field Report Prepared By: Kimberly Applebee

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



19010027

Location: St Marys R Sr 2 East

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)
12/29/2020	1155 EST	10.56	91.7	9.2	5.31	0.3	0.7 ☐ VOB (S)	3.3	65.2	0.03

Central Lab please use top row for login purposes

	1205 EST	10.55	91.7	9.2	5.32	2.6			65.2	0.03
--	-------------	-------	------	-----	------	-----	--	--	------	------

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 # SA0293040 Exp: 10/19/21	☒ Ice ☒ H2SO4*	☒ <2	1	A
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD Lot # NA0038050 Exp: 02/07/21	☒ Ice ☒ HNO3*	☒ <2	1	A
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter Filter Lot # R9BA86875 Syringe Lot #	☒ 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		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
Jeremy Parrish

Signature:

Kimberly Applebee

Date:

12/29/2020

*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 81746 ORG ID 21FLA LATITUDE 30.524975
 COUNTY Nassau STORET # 9010022 LONGITUDE -82.017777
 DATE 12/1/20 TIME 11:55 SAMPLING AGENCY DEP
 SITE NAME St Marys CSR
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Nassau 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							Typical Width (m) Depth (m)/Velocity (m/sec) Transect 30 meters <u>25</u> m wide <u>0.1</u> m/s <u>0.33</u> m/s <u>0.1</u> m/s _____ m deep <u>3.3</u> m deep _____ m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>18</u> Right Bank: <u>18m</u>				Hydrologic Modification Score (per FT 3101) ☐			
High Water Mark: <u>1.7</u> + <u>3.3</u> = <u>5.0</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># Times Sampled</th> <th>PERI # Times Sampled</th> </tr> </thead> <tbody> <tr> <td>Woody Debris (Snags)</td> <td><u>21</u></td> <td><u>7</u></td> <td></td> </tr> <tr> <td>Undercut Banks / Roots</td> <td><u>41</u></td> <td><u>7</u></td> <td></td> </tr> <tr> <td>Leaf Packs or Mat</td> <td><u>21</u></td> <td><u>2</u></td> <td></td> </tr> <tr> <td>Aquatic Vegetation</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Rock or Shell Rubble</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sand</td> <td><u>99</u></td> <td><u>4</u></td> <td>Sample</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	# Times Sampled	PERI # Times Sampled	Woody Debris (Snags)	<u>21</u>	<u>7</u>		Undercut Banks / Roots	<u>41</u>	<u>7</u>		Leaf Packs or Mat	<u>21</u>	<u>2</u>		Aquatic Vegetation				Rock or Shell Rubble				Sand	<u>99</u>	<u>4</u>	Sample	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><u>0.3</u></td> <td><u>9.2</u></td> <td><u>5.31</u></td> <td><u>10.56</u></td> <td><u>91.7</u></td> <td><u>65.2</u></td> <td><u>0.03</u></td> <td><u>0.7</u></td> </tr> <tr> <td>Mid</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>☐ VOB</td> </tr> <tr> <td>Bottom</td> <td><u>2.6</u></td> <td><u>9.2</u></td> <td><u>5.22</u></td> <td><u>10.56</u></td> <td><u>91.7</u></td> <td><u>65.2</u></td> <td><u>0.03</u></td> <td>TOTAL DEPTH</td> </tr> </tbody> </table> Meter ID: _____				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>9.2</u>	<u>5.31</u>	<u>10.56</u>	<u>91.7</u>	<u>65.2</u>	<u>0.03</u>	<u>0.7</u>	Mid								☐ VOB	Bottom	<u>2.6</u>	<u>9.2</u>	<u>5.22</u>	<u>10.56</u>	<u>91.7</u>	<u>65.2</u>	<u>0.03</u>	TOTAL DEPTH
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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: _____ Exp: _____			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐																																																																														
Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																																																														
ABUNDANCE 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 <u>Jeren Park</u>			SIGNATURE: <u>Jeren Park</u>		DATE: <u>12/25/20</u>																																																																												

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>St. Marys R. S-2 East</u>					County: <u>Nassau</u>		Date: <u>12/27/12</u>		Investigators: <u>Kim Appleby & Jeremy Parrish</u>											
									STORET Station Number: <u>19010027</u>											
Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect t (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover											
0	1	N	N		60	1	N	N		Secchi depth <u>0.7</u> Estimated? <u>No</u>										
	2		N			2		N												
	3		Y			3		Y												
	4					4														
	5					5														
	6					6														
	7					7														
	8					8														
	9					9														
10	1	N	N		70	1	N	N		# points ranked 4-6 <u>0</u> total points assessed <u>99</u> % points ranked 4-6 <u>0</u>										
	2		N			2		N												
	3		Y			3		Y												
	4					4														
	5					5														
	6					6														
	7					7														
	8					8														
	9					9														
20	1	N	N		80	1	N	N		Check accompanying data collected at same site/date. Algal mat sample ☐ Linear Veg Survey ☒ Habitat Assessment ☒ SCI/Biorecon ☐ Water sample ☒ RQ-2020 -										
	2		N			2		N												
	3		Y			3		Y												
	4					4														
	5					5														
	6					6														
	7					7														
	8					8														
	9					9														
30	1	N	N		90	1	N	N		Algal Thickness Rank										
	2		N			2		N												
	3		Y			3		Y												
	4					4														
	5					5														
	6					6														
	7					7														
	8					8														
	9					9														
40	1	N	N		100	1	N	N		<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td>N</td><td>rough, no algae, slimy, algae up to 1mm</td></tr> <tr><td>3</td><td>>1mm - 6mm</td></tr> <tr><td>4</td><td>>6mm - 20mm</td></tr> <tr><td>5</td><td>>20mm - 10 cm</td></tr> <tr><td>6</td><td>>10 cm</td></tr> </table>	N	rough, no algae, slimy, algae up to 1mm	3	>1mm - 6mm	4	>6mm - 20mm	5	>20mm - 10 cm	6	>10 cm
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	4	>6mm - 20mm																		
	5	>20mm - 10 cm																		
	6	>10 cm																		
	2		N			2		N												
	3		Y			3		Y												
	4					4														
5				5																
6				6																
7				7																
8				8																
9				9																
50	1	N	N		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%.															
	2		N																	
	3		Y																	
	4																			
	5																			
	6																			
	7																			
	8																			
	9																			

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

Waterbody: <u>St. Marys R SR 2 East</u>	Date: <u>12/27/2</u>	County: <u>Nassau</u>	Storet Number: <u>1901002</u>
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Analyst: K. m Appleby & Jeremy Parrish

Signature: *[Handwritten Signature]*

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² 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]

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

SAMPLING AGENCY: FDLP		STORE STATION NUMBER: 19010027	DATE (MM/DD/YY): 12/29/20	RECEIVING BODY OF WATER: Nassau River
REMARKS:	COUNTY: Nassau	LOCATION: St Marys R SRZ	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>6</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 <u>6</u>	<u>5</u> 4 3 2 1
Substrate Availability <u>1</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 <u>1</u>
Water Velocity <u>20</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 <u>20</u> 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>10</u> ----- Primary Score <u>38</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). <u>10</u> 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 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>20</u>	<u>20</u> 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 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>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 <u>4</u>	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>9</u> Left Bank <u>8</u>	10 <u>9</u>	<u>8</u> 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>9</u> Left Bank <u>9</u> left bank=8 JP Secondary Score <u>60</u> 62-JP	10 <u>9</u>	<u>8</u> 7 6	5 4	3 2 1

99

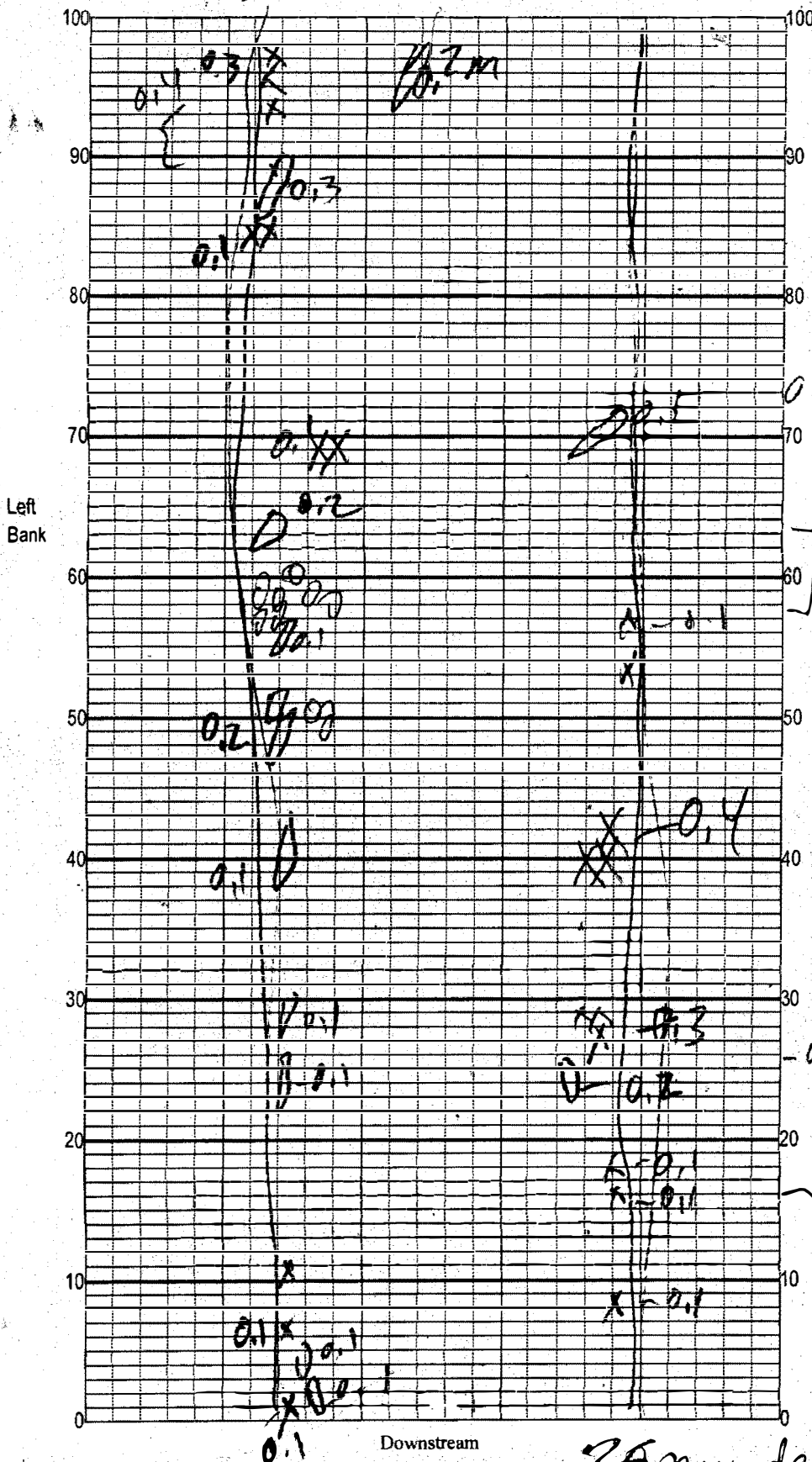
TOTAL SCORE

Date: 12/29/20
Analyst: _____

Signature: _____

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).

3.5

Location: S-Mary BR 2

Date: 12/29/20

Sampler: JP/KA

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.

☒ Snags <1

☒ Roots/undercut banks <1

☒ Leaf Packs (or mats) <1

☐ 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:

0.5 scurf
1m leaf
0.2 4.5 scurf 2m root
3m frog

0.34m/sec

2500

25m wide