



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?
Yes / No

WIN Station Name: Unnamed at Van Gundy

Date: 01/12/2019
(mm/dd/yyyy)

WIN/ Field ID: G2NE1192

WBID: 2224C

Latitude: 30.39052
(Decimal Degrees)

County: Duval

ORG ID: 21FLA

Longitude: -81.69946
(Decimal Degrees)

Receiving Body of Water: Ribault River

RQ-2019- 09-16-17

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
<u>G. Ruben</u> <u>J. Parrish</u>						☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole		
											☐ Carboy	☐ Syringe	☐ Other		
											☐ Dipper	☐ Other			
											Depth Measured with <u>meter</u>				
											Equipment ID <u>Ortho # 44</u>				
											Collection Method				
											☒ Wading	☐ Canoe/Kayak			
											☐ From Shore	☐ Electric Motor			
											☐ Other	☐ Gasoline Motor			
Water Level: <u>Dry</u> / Pooled / Low / <u>Normal</u> / High / Flooded						Meter ID# <u>Desi</u>			Matrix: <u>Fresh</u> / Marine / DI						
Photos: <u>Yes</u> / No						Flow: <u>No Flow</u> / Intestinal / <u>Flowing</u> / NA			Tide: <u>Rising</u> / 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	<u>0940</u>	<u>0.2</u>	<u>0.1</u>	<u>0.2</u>	<u>2.43</u>	<u>31%</u>	<u>7.36</u>	<u>0.53</u>	<u>1074</u>	<u>27.6</u>					
CEN				<u>5</u>											
Biological Samples Collected: None <u>HA</u> SCI <u>RPS</u> Algae ID <u>LVS</u> 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		<u>SA9010030</u>	<u>4/20</u>	☒ <2					
Metals		☒ W-ICPMS ☒ W-ICP				☒ Ice ☒ HNO3		<u>NA9099060</u>	<u>4/20</u>	☒ <2					
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 um Filter				☒ Ice		<u>R98H86875</u>							
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 ☐ W-E8321-MS ☐ W-CARB-AA				☒ Ice									
Phytoplankton		☐ DTY-QN-C ☐ PKD-QN-C				☐ Ice									

Notes:

WIN ID/Field ID:



G2NE1192

Unnamed Creek at Van Gundy

Signature: [Signature]

9.19.19

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)

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET																												
Waterbody: <u>Unnamed at Van Gundy</u>								Date: <u>9.19.19</u>				County: <u>Durham</u>				Storet Number: <u>2224C</u>												
Analyst: <u>J Parrish / C Ruben</u>								Signature: <u>[Signature]</u>																				
Comments:																												
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m 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.																												
HERBACEOUS SPECIES		Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES		Meter Mark										Specimen collected (check)			
		0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100				0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100				
<i>Alternanthera philoxeroides</i>		P	P	P	P							P	P		<i>Micranthemum glomeratum</i>													
<i>Bacopa caroliniana</i>															<i>Micranthemum umbrosum</i>													
<i>Bacopa monnieri</i>															<i>Myriophyllum aquaticum</i>													
<i>Bidens mitis</i>															<i>Najas guadelupensis</i>													
<i>Boehmeria cylindrica</i>															<i>Nuphar luteum</i>													
<i>Centella asiatica</i>															<i>Orontium aquaticum</i>													
<i>Ceratophyllum demersum</i>															<i>Panicum hemitomon</i>													
<i>Chara</i>															<i>Panicum repens</i>													
<i>Cicuta maculata</i>															<i>Panicum rigidulum</i>													
<i>Cladium jamaicense</i>															<i>Pistia stratioides</i>													
<i>Colocasia esculenta</i>															<i>Polygonum glabra</i>													
<i>Commelina diffusa</i>															<i>Polygonum hydropiperoides</i>													
<i>Commelina virginica</i>															<i>Polygonum punctatum</i>													
<i>Crinum americanum</i>															<i>Pontedaria cordata</i>											P		
<i>Diodia virginiana</i>															<i>Potamogeton illinoensis</i>													
<i>Eichhornia crassipes</i>															<i>Ruellia simplex</i>													
<i>Eleocharis (wispy viviparous)</i>															<i>Sagittaria striata</i>													
<i>Hydrilla verticillata</i>															<i>Sagittaria kurziana</i>													
<i>Hydrocotyle</i>															<i>Sagittaria lancifolia</i>													
<i>Hygrophila polysperma</i>															<i>Sagittaria latifolia</i>													
<i>Hymenocallis</i>															<i>Salvinia minima</i>													
<i>Lachnanthes caroliniana</i>															<i>Samolus parviflora</i>													
<i>Landoltia punctata</i>															<i>Saururus cernuus</i>													
<i>Lemna</i>															<i>Sparganium americanum</</i>													

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

SAMPLE ID _____ ORG ID _____ LATITUDE 30.3905
 COUNTY Duval STORET # 62N01197 LONGITUDE 81.69996
 DATE 9/19/15 TIME 940 SAMPLING AGENCY _____
 SITE NAME Unnamed @ Van Grady
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Ripault River

RIPARIAN ZONE / STREAM FEATURES

Meter ID: _____

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 _____ m wide _____ m/s <u>0.21</u> m/s _____ m/s _____ m deep <u>0.2</u> m deep _____ m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>6</u> Right Bank: <u>6</u>				Hydrologic Modification Score (per FT 3101) ☐				
High Water Mark: <u>0.5</u> + <u>0.2</u> = <u>0.7</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 INVERT PERI % # Times # Times Coverage Sampled Sampled Woody Debris (Snags) <u><1</u> _____ Undercut Banks / Roots _____ Leaf Packs or Mat <u>1</u> <u>No</u> Aquatic Vegetation <u>1</u> <u>No</u> Rock or Shell Rubble.. _____ Sand..... _____ Mud / Muck / Silt _____ Other _____ Other _____			WATER QUALITY <table border="1"> <thead> <tr> <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><u>1078</u></td> </tr> <tr> <td>Mid: <u>0.1</u></td> <td><u>27.6</u></td> <td><u>7.36</u></td> <td><u>2.4</u></td> <td><u>31</u></td> <td><u>107</u></td> <td><u>0.53</u></td> <td>TOTAL DEPTH</td> </tr> <tr> <td>Bottom <u>0.2</u></td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td><u>0.1</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>1078</u>	Mid: <u>0.1</u>	<u>27.6</u>	<u>7.36</u>	<u>2.4</u>	<u>31</u>	<u>107</u>	<u>0.53</u>	TOTAL DEPTH	Bottom <u>0.2</u>	_____	_____	_____	_____	_____	_____	<u>0.1</u>
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Bottom <u>0.2</u>	_____	_____	_____	_____	_____	_____	<u>0.1</u>																																	
			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: _____ 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 <table border="1"> <thead> <tr> <th></th> <th>Not Obs.</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Fish:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Aquatic Plants:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> </tbody> </table>				Not Obs.	Rare	Common	Abundant	Periphyton:	☐	☒	☐	☐	Fish:	☐	☐	☒	☐	Aquatic Plants:	☐	☐	☒	☐	Iron/Sulfur Bacteria:	☐	☐	☒	☐	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.												
	Not Obs.	Rare	Common	Abundant																																				
Periphyton:	☐	☒	☐	☐																																				
Fish:	☐	☐	☒	☐																																				
Aquatic Plants:	☐	☐	☒	☐																																				
Iron/Sulfur Bacteria:	☐	☐	☒	☐																																				
SAMPLING TEAM <u>Jerry Cur</u>			SIGNATURE: <u>Jerry Cur</u>																																					

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Unnamed at Van Gundy</u>					County: <u>Duval</u>		Date: <u>9.19.19</u>		Investigators: <u>J Parrish / C Riben</u>		
STORET Station Number: <u>G2NE192</u>											
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	N	N	96	60	1	N	N	96		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
10	1	N	N	96	70	1	N	N	96		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
20	1	N	N	62	80	1	N	N	82		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
30	1	N	N	92	90	1	N	N	8		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
40	1	N	N	92	100	1	N	N	66		
	2										
	3										
	4										
	5										
	6										
	7										
	8										
	9										
50	1	N	N	96	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										
	3										
	4										
	5										
	6										
	7										
	8										
	9										

Secchi depth 0.2
Estimated? N

points ranked 4-6 8
total points assessed 8
% points ranked 4-6 100

Check accompanying data collected at same site/date.

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

RQ- 2019-09-16-17

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

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

SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: G2NE1192	DATE (MM/DD/YY): 9/19/19	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Duval	LOCATION: Unnamed @ Van Gundy	FIELD ID/NAME:	

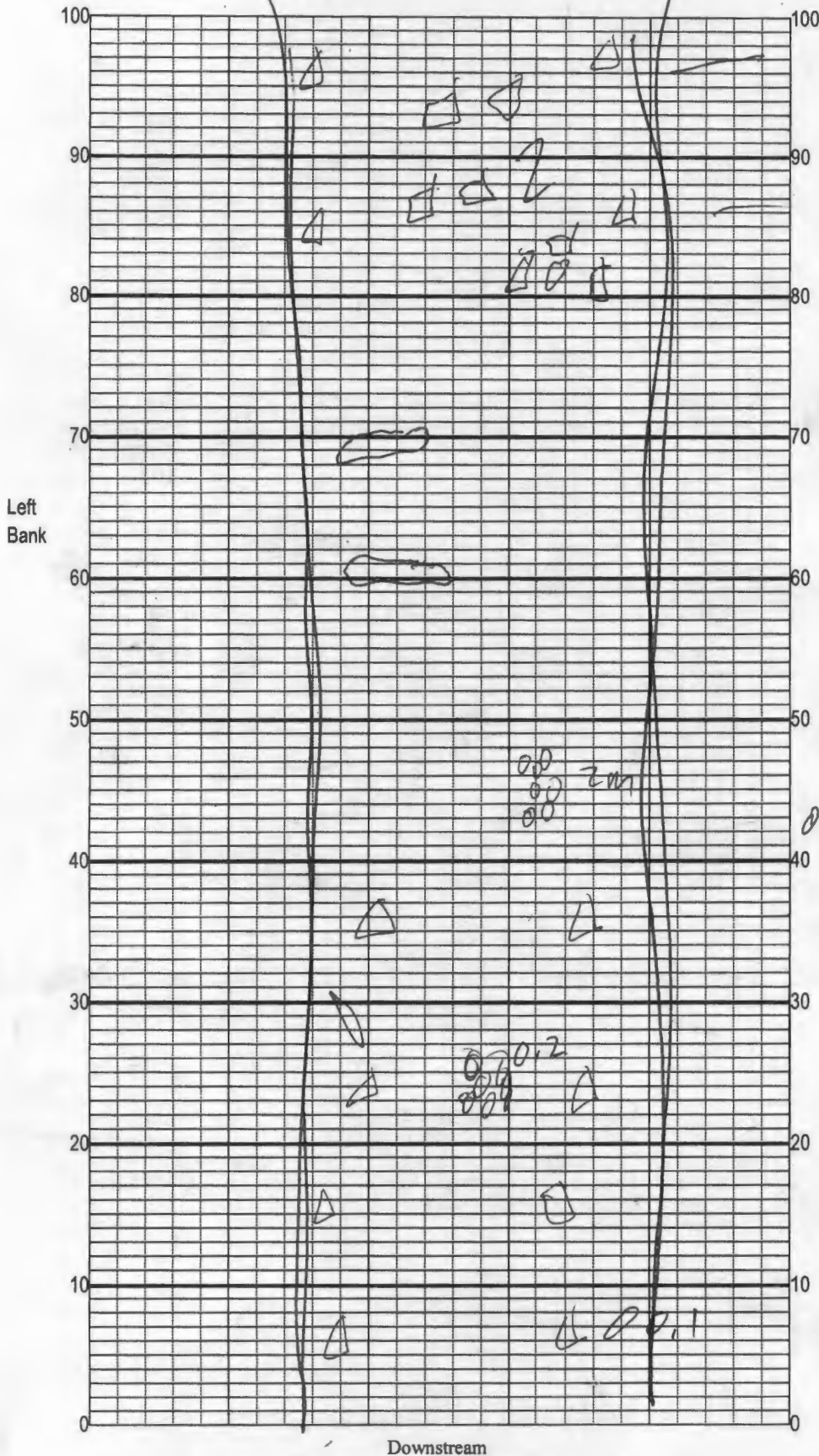
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>	5 4 3 2 1
Substrate Availability <u>2</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 <u>2</u> 1
Water Velocity <u>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 <u>14</u> 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>3</u> Primary Score <u>25</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 <u>3</u> 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 2 1
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the 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 root zone with raw, eroded areas. <u>3</u> 2 1
Riparian Buffer Zone Width	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 <u>5</u> <u>4</u>	Less than 6 m of buffer zone due to intensive human activities <u>3</u> 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. 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. <u>5</u> <u>4</u>	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). <u>3</u> 2 1
Right Bank <u>4</u> Left Bank <u>4</u> Secondary Score <u>25</u>				

50

TOTAL SCORE

Date: 9/19/19	Analyst: Jeremy Parashy/Carter	Signature: JP
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: On. Vangundy

Date: 9/18/19

Sampler: _____

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ Snags _____

☐ Roots/undercut banks _____

☒ Leaf Packs (or mats) <1

☒ Aquatic Macrophytes 1

☒ concrete rock 1

☐ _____

☐ 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:

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

0.2 m see

3m

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