



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REFERENCE STREAMS FIELD SHEET

January 2020

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Mormon Branch Upstream of SR 19 **Date:** 1/4/2022
WIN/Field ID: G2CE0052 **WBID:** 2905 **ENR:** - **Latitude:** 29.1916
County: MARION **Org ID:** 21FLCEN **Longitude:** -81.66
Receiving Body of Water: Middle St. Johns **RQ:** 2022-01-03-65

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Katie March	x	x	x	x	x
☒	Kalina Warren		x		x	x
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# CRAW DADDY					
Photos: YES		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:											
SBIO ID Numbers: SBIO Visit ID: 83608 RPS 9868 MACROPHYTE 12059						LIMS 2297629					
Notes:											

Duplicate Sample

Time Zone: EST	Time: _____	Field ID: _____ (WIN ID_DUP)
WIN DMT Activity ID: _____		

Blank

Time Zone: _____	Time: _____	Field ID: _____ (Blank Type_DDDMMYYY)
DI Source: _____	Location: _____	
DI Type: _____	Equipment ID: _____	
DI Container (Name/ID): _____		DI Container Type: _____

LIMS EVENT ID: CEN-DIST-2022-01-05-01 WIN Import ID: 32082
Enter Field Parameters, Verify Station ID In LIMS DMT: EB 1/7/22 QC Station ID, Field Parameters In LIMS DMT: KWM 2/11/22
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets KWM 4/8/22 Migrate Data to WIN: KWM 4/8/22 Verify Data In WIN: _____
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2022-01-03-65

Customer: WQAP

Project ID: SMP

Collected By: Katie March,

Field Report Prepared By: Katie March

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G2CE0052

Location: Mormon Branch Upstream of SR 19

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT)		
	1140 EST	7.7	81.9	18.3	7.14	0.15	0.3 ☒ VOB (S)	0.3	204.6	0.1		
1/4/2022												
	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 ☒ H2SO4*		☒ <2	1	A		
		Lot #	SA1105060		Exp:	4/30/2022						
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A		
		Lot #	NA1105100		Exp:	06/07/2022						
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A		
		Filter Lot #	17135566									
		Syringe Lot #	1112035									
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 Lot #	10.50911HN		☒ Formalin			2	B		
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice						
Microbiology (Contract Lab Bottle)		☐ E Coli ☐ F Coli ☐ Enterococci				☐ Ice						
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3				☐ Ice						
		☐ 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	☒ Ice			5	A		
Phytoplankton/Periphyton		W-PCL-TQ-R										
						DTY-QN-C						
						PKD-QN-BV		☐ Ice				
Name: Katie March					Signature: Kathryn March					Date: 1/4/22		

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY _____ STORET # G2LE0052 LONGITUDE _____
 DATE 1/4/22 TIME _____ SAMPLING AGENCY _____
 SITE NAME Mormon Branch upstream of SR19
 FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>95</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industry <u>5</u> Other (Specify) <u>highway</u>							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>0.25</u> m/s _____ m/s _____ m deep <u>0.3</u> m deep _____ m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) _____			
High Water Mark: <u>0.2</u> + <u>0.3</u> = <u>0.5</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☐ No			
Artificially ☒ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☐ Recent, severe				Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☒ Moderate Shaded (46-80%)			

SEDIMENT / SUBSTRATE

Sediment Oils ☒ 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			WATER QUALITY																																																																												
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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			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐																																																																												
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SAMPLING TEAM

Katie March, Kalina Warren

SIGNATURE:

KMarch

DATE:

1/4/22

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

SAMPLING AGENCY:		STORET STATION NUMBER: <u>62UE0052</u>	DATE (MM/DD/YY): <u>1/4/22</u>	RECEIVING BODY OF WATER: <u>Jumper Creek</u>
REMARKS:	COUNTY: <u>Maion</u>	LOCATION: <u>Morgan Branch</u>	FIELD ID NAME:	

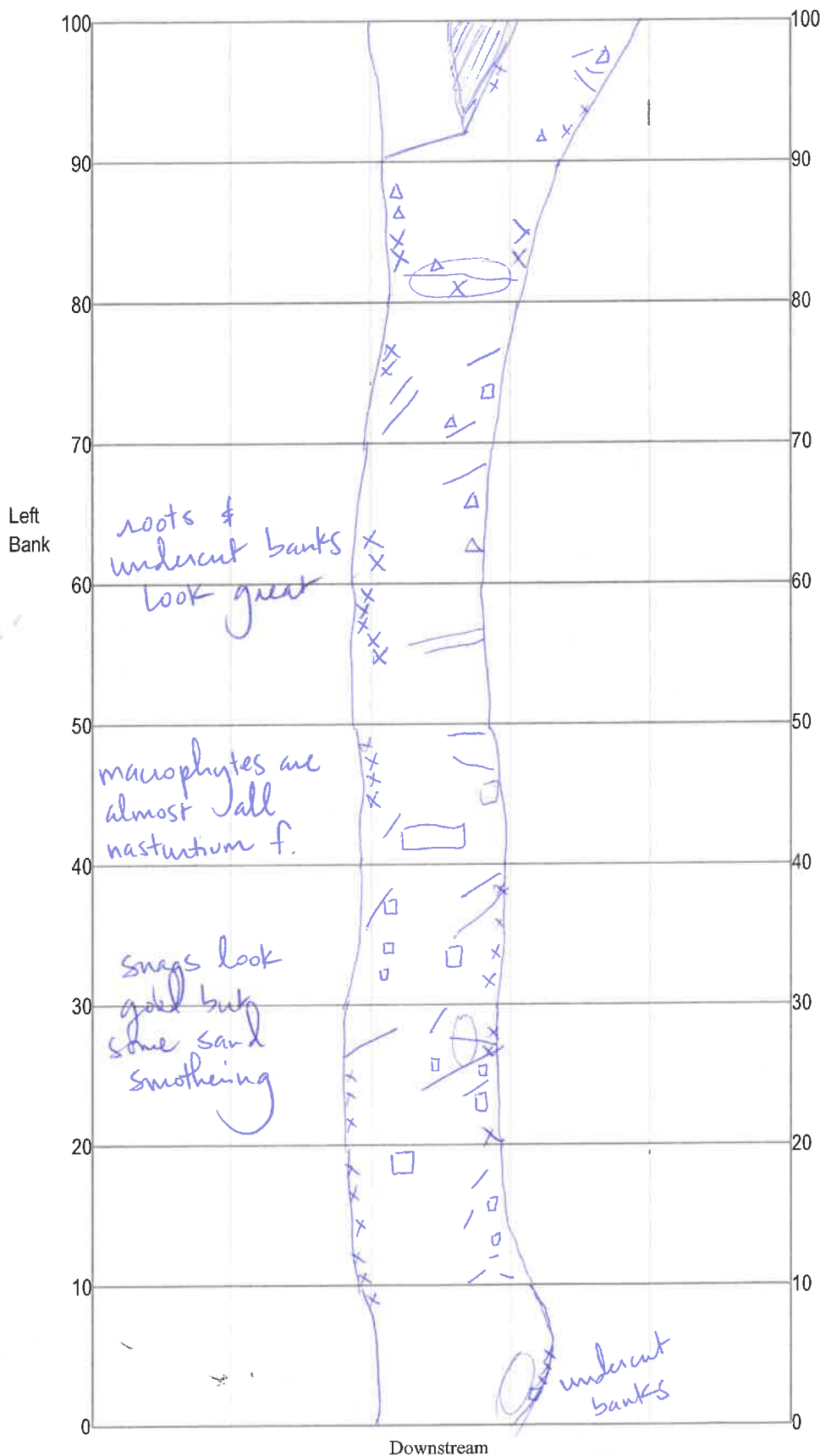
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>15</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>5</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>15</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>52</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 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>19</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 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>9</u> Left Bank <u>10</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>9</u> Left Bank <u>10</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>10</u> Secondary Score <u>77</u>	10 9	8 7 6	5 4	3 2 1

129

TOTAL SCORE

Date: <u>1/4/22</u>	Analyst: <u>Kate March</u>	Signature: <u>KMarch</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



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

Location: Morman Branch

Date: 1/4/22

Sampler: Kate March

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ Snags _____

☒ Roots/undercut banks _____

☒ Leaf Packs (or mats) _____

☒ Aquatic Macrophytes _____

☐ _____

☐ _____

☒ Pools total # observed = _____
range expected = _____

Average width 4 m

Average depth 0.2 m

Velocity measured at _____ meter mark.

WQ & chemistry taken at 0 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:

undercut banks & macrophytes not very productive. roots & leaves were.

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

Waterbody: <u>mormon Branch</u>	Date: <u>1/4/22</u>	County: <u>marion</u>	Storet Number: <u>62LE0052</u>
---------------------------------	---------------------	-----------------------	--------------------------------

Analyst: KALINA WARREN / Kati MARDU	Signature: 
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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 9000-25 Rapid Periphyton Survey Field Sheet

Site: Mormon Branch County: Marion Date: 1/4/2022 Investigators: KALINA WARREN + KATIE MARCA

STORET Station Number: 6260052

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			60	1	N			
	2					2				
	3					3				
	4					4				
	5			96		5				84
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2					2	N			
	3					3	N			
	4					4	3			
	5			92		5	N			80
	6					6	3			
	7					7	N			
	8					8	N			
	9					9	N			
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5			76		5				92
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			
	2					2				
	3					3				
	4	3				4				
	5	N		96		5				94
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2					2				
	3					3				
	4					4				
	5			72		5				84
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N				1	N			
	2					2				
	3					3				
	4					4				
	5			76		5				
	6					6				
	7					7				
	8					8				
	9					9				

Secchi depth 0.5 (5)
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- 2022-01-03-65

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%.