

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: Bruce

RQ: 2021-05-13-35

Project: LSR SW Bog

- 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 5/17/21

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.	Kim Appleby	5/19/21	751	20.1	766.1	9.1	—	100.8	—	1.041592	(P) F	(L) F
ICV			752	20.2	766.1	9.1	9.14	100.8	—	1.041592	(P) F	(L) F
CCV	Teray Paruch	5/19/21	1510	23.9	767	8.5	8.5	101.7	—	—	(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 μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	Kim Appleby	5/19/21	754	201222B	1/2022	1000	1000	(P) F	(L) F
ICV			800	201222A	1/2022	100	104.6	(P) F	(L) F
CCV	J Paruch	5/19/21	1512	200902C	9/21	1413	1427	(P) F	(L) F
CCV								P / F	L / F

Conductivity Acceptance criteria $\pm 5\%$

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.	Kim Appleby	5/19/21	809	2010F27	10/2022	7.00	22.5	7.00	-16.4	(P) F	(L) F
Calibr.			811	2010C31	9/2022	4.00	22.6	4.00	161.8	(P) F	(L) F
Calibr.			812	2012797	5/2022	10.00	21.7	10.00	-186.5	(P) F	(L) F
ICV			815	2010C31	9/2022	4.00	22.6	4.05	162	(P) F	(L) F
CCV			1514	2012797	5/22	10.00	24.9	10.06	-193.2	(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 $+180 \pm 50$;

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	Kim Appleby	5/19/21	815	0.00	0.00	(P) F	(L) F

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

COMMENTS:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CHAIN OF CUSTODY FORM

Date: 5/19/2021 Customer: NE-DIST RQ: RQ-2021-05-03-33	Collected By: Kimberly Appleby, Jeremy Parrish Sampling Agency: FDEP Project ID: SMP
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PLEASE RETURN THE ORIGINAL OF THIS FORM WITH SAMPLE SUBMITTAL
FORMS AND THE COOLER PACKING WORKSHEET TO THE LAB

Number of Coolers Shipped: 1

Delivery Method: FedEx

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

Site Location	Field ID/WIN ID
Mill Log Cr Downstream of Test Site	 20030304
BLACK CR @ RR BRIDGE BELOW MILLOG CR	 20030204

Place Label Here

WIN ID/Field ID:



20030191

Location: Swimming Pen CR @ SR 220

RELINQUISHED BY(SIGNATURE):



DATE/TIME: 5/19/2021
1600EST

THIS SECTION TO BE COMPLETED BY LABORATORY

Rec'd/Inspected By:

Rec'd/Inspected Date:



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Mill Log Cr Downstream of Test Site **Date:** 5/19/2021
WIN/Field ID: 20030304 **WBID:** 2423 **ENR:** - **Latitude:** 30.0792
County: CLAY **Org ID:** 21FLA **Longitude:** -81.76
Receiving Body of Water: Lower St. Johns **RQ:** 2021-05-03-33

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

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☐ Syringe	☐ Pole
Depth measured with: Meter	
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# Bruce					
Photos: YES		Flow: FLOW		Tide: FALLING		Tide Times: High: 730 Low:					
Biological Samples Collected: ☒ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:											
SBIO ID Numbers:											
Notes:											

Duplicate Sample

Time Zone: CEN	Time: _____	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID: _____			

Blank

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

LIMS EVENT ID: _____ **WIN Import ID:** _____
Enter Field Parameters, Verify Station ID In LIMS DMT: _____ **QC Station ID, Field Parameters In LIMS DMT:** _____
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets _____ **Migrate Data to WIN:** _____ **Verify Data In WIN:** _____
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-05-03-33

Customer: WQAP

Project ID: SMP

Collected By: Jeremy Parrish, Kimberly Appleby

Field Report Prepared By: Jeremy Parrish

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



20030304

Location: Mill Log Cr Downstream of Test Site

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 (PPT)
5/19/2021	1020 EST	4.45	52.3	23.3	6.4	0.2	0.44 ☒ VOB (S)	0.44	109.7	0.05
	EST						Central Lab please use top row for login purposes			

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 # SA053510 Exp: 1/11/22	☒ Ice ☒ H2SO4*	☒ <2	1	A
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD Lot # NA0344060 Exp: 1/4/22	☒ Ice ☒ HNO3*	☐ <2	1	A
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter Filter Lot # RN9BA86875 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			
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) ☐ W-DIELDRIN	☐ Ice			
Phytoplankton/Periphyton	DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV	☐ Ice			

Name:
Jeremy Parrish
Kimberly Appleby

Signature:

Kimberly Appleby

Date:

5/19/21

*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: BLACK CR @ RR BRIDGE BELOW MILLLOG CR **Date:** 5/19/2021
WIN/Field ID: 20030204 **WBID:** 2415A **ENR:** - **Latitude:** 30.0806
County: CLAY **Org ID:** 21FLA **Longitude:** -81.76
Receiving Body of Water: Lower St. Johns **RQ:** 2021-05-03-33

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

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☐ Syringe	☐ Pole
Depth measured with: Meter	
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#					
Photos: NO		Flow: FLOW		Tide: FALLING		Tide Times: High: 730 Low:					
Biological Samples Collected: ☒ None ☐ HA ☐ SCI ☐ RPS ☐ Algae ID ☐ LVS ☐ LVI Other:											
SBIO ID Numbers:											
Notes:											

Duplicate Sample

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

Blank

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

LIMS EVENT ID: _____ WIN Import ID: _____
Enter Field Parameters, Verify Station ID In LIMS DMT: _____ QC Station ID, Field Parameters In LIMS DMT: _____
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets _____ Migrate Data to WIN: _____ Verify Data In WIN: _____
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-05-03-33

Customer: WQAP

Project ID: SMP

Collected By: Kimberly Appleby, Jeremy Parrish

Field Report Prepared By: Kimberly Appleby

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



20030204

Location: BLACK CR @ RR BRIDGE BELOW MILLLOG CR

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 (PPT _h)
5/19/2021	1210 EST	4.89	58.3	24.2	6.49	0.3	0.9 ☐ VOB (S)	6.9	103.1	0.05
	1212 EST	4.59	54.4	23.9	6.51	6.47	Central Lab please use top row for login purposes		103.2	0.05

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 # SA029340 Exp: 10/19/21	☒ Ice ☒ H2SO4*	☒ <2	1	B
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP ☐ W-HARD Lot # Exp:	☐ Ice ☐ HNO3*	☐ <2		
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter Filter Lot # R9BA86875 Syringe Lot #	☒ Ice		1	B
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	B
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice		1	B
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☐ MI-FW-QLDC	☐ Formalin			
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice			
Microbiology (Contract Lab Bottle)	☒ E Coli ☐ F Coli ☐ Enterococci ☒ Contract Lab	☒ Ice		1	B
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) ☐ W-DIELDRIN	☐ Ice			
Phytoplankton/Periphyton	DTM-QL-C PEN-QL-C DTY-QN-C PKD-QN-C DTM-QN-C PRN-QN-C PKD-QN-BV	☐ Ice			

Name:
Kimberly Appleby
Jeremy Parrish

Signature:

Kimberly Appleby

Date:

5/19/21

*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: Swimming Pen CR @ SR 220 **Date:** 5/19/2021
WIN/Field ID: 20030191 **WBID:** 2410 **ENR:** - **Latitude:** 30.1
County: CLAY **Org ID:** 21FLA **Longitude:** -81.75
Receiving Body of Water: Lower St. Johns **RQ:** 2021-05-03-33

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

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# Bruce					
Photos: NO		Flow: FLOW		Tide: FALLING		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:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

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

LIMS EVENT ID: WIN Import ID:
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-05-03-33

Customer: WQAP

Project ID: SMP

Collected By: Kimberly Appleby, Jeremy Parrish

Field Report Prepared By: Kimberly Appleby

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



20030191

Location: Swimming Pen CR @ SR 220

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 (PPT _h)
5/19/2021	1305 EST	7.58	94.1	25.9	7.53	0.3	0.55 ☐ VOB (S)	0.6	3395	1.78
	EST						Central Lab please use top row for login purposes			

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 # NA0344060 Exp: 1/04/22	☒ 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			
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) ☐ W-DIELDRIN	☐ Ice			
Phytoplankton/Periphyton	DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV	☐ Ice			

Name:
Kimberly Appleby
Jeremy Parrish

Signature:

Kimberly Appleby

Date:

5/19/21

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

92240

SAMPLE ID	ORG ID <u>21FLA</u>	LATITUDE
COUNTY <u>Clay</u>	STORET # <u>20030304</u>	LONGITUDE
DATE <u>5/19/21</u>	TIME <u>1020</u>	SAMPLING AGENCY
SITE NAME <u>Mill log below test site</u>		
FIELD ID/NAME		RECEIVING BODY OF WATER

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) <u>4</u> m wide Depth (m) <u>0.17</u> m/s Velocity (m/sec) <u>0.44</u> m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>16m</u> Right Bank: <u>12-14</u>		Hydrologic Modification Score (per FT 3101) ☐
High Water Mark: <u>0.6</u> + <u>0.5</u> = <u>1.1</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							
Invert ☐ PERI ☐ % Coverage # Times Sampled # Times Sampled		Depth (M) Top: ☐ Mid: <u>0.8</u> Bottom: <u>0.44</u>	Temp. (°C) <u>23.3</u>	pH (SU) <u>6.4</u>	D.O. (MG/L) <u>4.45</u>	D.O. Sat (%) <u>52.3</u>	Cond. (UMHO/CM) <u>109.7</u>	Salinity (PPT) <u>0.05</u>	SECCHI (M) <u>0.44</u>
Woody Debris (Snags) <u>4</u> <u>NA</u> Undercut Banks / Roots <u>21</u> <u>NA</u> Leaf Packs or Mat ☐ Aquatic Vegetation <u>0.9</u> <u>NA</u> Rock or Shell Rubble <u>0.6</u> <u>NA</u> Sand <u>54</u> <u>NA</u> Mud / Muck / Silt <u>40</u> <u>NA</u> Other ☐ Other ☐		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		System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐							
Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☒ ☐ Iron/Sulfur Bacteria: ☐ ☒ ☐ ☐		AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.							
SAMPLING TEAM <u>John / K. M. M. M.</u>		SIGNATURE <u>John</u>		DATE: <u>5/19/21</u>					

Site: <u>mill log Darnish Test site</u>					County: <u>clay</u>		Date: <u>5/19/21</u>		Investigator: <u>JPKA</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		60	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5				90
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N	N		70	1	N	N		
	2					2				
	3					3				
	4			96		4				
	5					5				90
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N	N		80	1	N	N		
	2					2				
	3					3				
	4			50		4				88
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N	N		90	1	N	N		
	2					2				
	3					3				
	4			92		4				90
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N	N		100	1	N	N		
	2					2				
	3					3				
	4			96		4				96
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N	N		50	1	N	N		
	2					2				
	3					3				
	4			92		4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					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%.

STORET Station Number:

26030304

Secchi depth: _____

Estimated? _____

points ranked 4-6 _____

total points assessed _____

% points ranked 4-6 _____

Check accompanying data collected at same site/date.

Algal mat sample _____

Linear Veg Survey _____

Habitat Assessment _____

SCI/Biorecon _____

Water sample _____

RQ- _____

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

82240

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

Waterbody: Mill 106 Ave test Date: 5/19/21 County: Long Store Number: 20130304
 Analyst: JP Signature: Jerry Par
 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.

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>	PP											<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 missilata</i>												<i>Panicum rigidulum</i>											
<i>Cladium janaiense</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>Pontederia cordata</i>											
<i>Diodia virginiana</i>												<i>Potamogeton illinoensis</i>											
<i>Eichhornia crassipes</i>												<i>Ruellia simplex</i>											
<i>Elodea (wispy viviparous)</i>												<i>Sagittaria striata</i>											
<i>Hydrilla verticillata</i>												<i>Sagittaria kurziana</i>											
<i>Hydrocotyle</i>												<i>Sagittaria lancifolia</i>											
<i>Hydrophilis polysperma</i>												<i>Sagittaria latifolia</i>											
<i>Hymenocallis</i>												<i>Salvinia minima</i>											
<i>Ilacina tines caroliniana</i>												<i>Samolus parviflora</i>											
<i>Landoltia punctata</i>												<i>Saururus cernuus</i>											
<i>Lemna</i>												<i>Sparganium americanum</i>											
<i>Liriodaphne sessiflora</i>												<i>Typha</i>											
<i>Ludwigia leptocarpa</i>												<i>Vallisneria spiralis</i>											
<i>Ludwigia palustris</i>												<i>Zizania aquatica</i>											
<i>Ludwigia peruviana</i>																							
<i>Ludwigia repens</i>																							
<i>Luziola fluitans</i>																							

If no Dominant or Co-Dominant were selected, indicate with "X"

Indicate % cover macrophytes per section

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

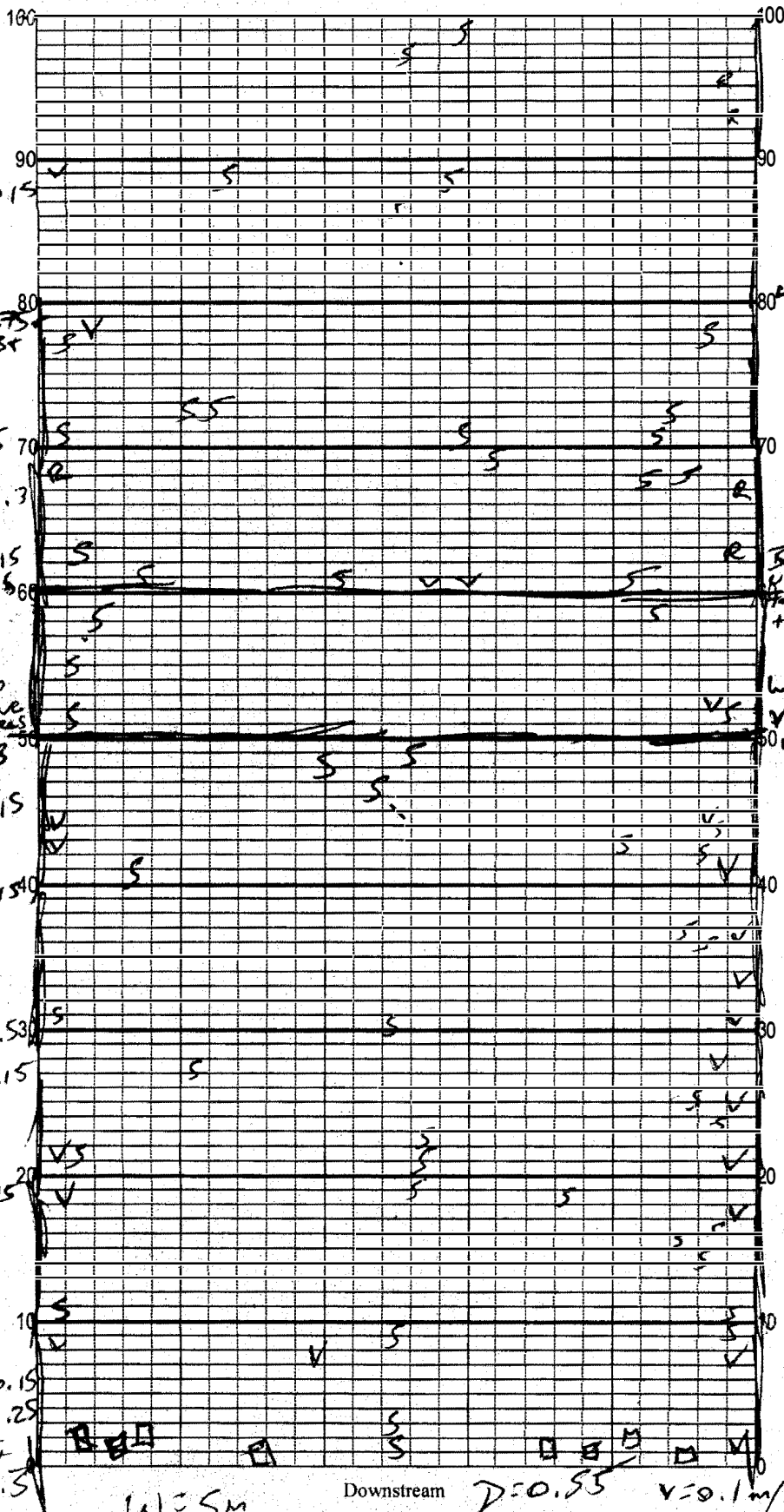
SAMPLING AGENCY:		STORET STATION NUMBER: <u>2030304</u>	DATE (MM/DD/YY): <u>5/19/21</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Clay</u>	LOCATION: <u>Mill log below test site</u>	FIELD ID/NAME:	

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>13</u>	20 19 18 17 16	15 14 <u>13</u> 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>6</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 <u>6</u>	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>13</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 <u>13</u> 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>9</u> Primary Score <u>41</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 <u>9</u> 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>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 <u>8</u> 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>6</u> Left Bank <u>6</u>	10 9	8 7 <u>6</u>	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>	<u>10</u> <u>9</u> <u>8</u> <u>7</u> <u>6</u>	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>8</u> Left Bank <u>9</u>	10 <u>9</u>	<u>8</u> 7 6	5 4	3 2 1
Secondary Score <u>56</u> <u>97</u>				

TOTAL SCORE

Date: <u>5/19/21</u>	Analyst: <u>Jerry Lane</u>	Signature: <u>Jerry Lane</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Mull 63
 Date: 5/19/21
 Sampler: JP/JKA

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

<u>S</u>	Snags	<u>3.9</u>
<u>R</u>	Roots/undercut banks	<u>0.2</u>
<u>V</u>	Aquatic Macrophytes	<u>0.4</u>
<u>O</u>	Pools	<u>0.6</u>
		total # observed = <u>0</u>
		# range expected = <u>2-4</u>

Average width 4 m
 Average depth 0.5 m

Velocity measured at 50 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:

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

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

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

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ALS Contact: Mandy Sullivan

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