

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: Stitch

RQ: 2019-10-14-16

Project: LSTR Southside

- 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 6/2019

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.	K. Appleby	10/17/19	736	22.6	755.4	8.6	8.60	99.4	-	1.03	P/F	D/F
ICV	↓	↓	737	22.6	755.4	8.6	8.59	99.3	-	1.03	P/F	D/F
CCV	J. Parnish	10/17/19	1259	22.4	755.4	8.6	8.67	99.4	-	1.03	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 hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	K. Appleby	10/17/19	738	190711B	7/2020	1000	1000	P/F	D/F
ICV	↓	↓	743	190711A	7/2020	100	104.9	P/F	D/F
CCV	J. Parnish	10/17/19	1300	190711B	7/2020	1000	1002	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.	K. Appleby	10/17/19	746	2902778	1/2021	7.00	24.4	7.00	-17.6	P/F	D/F
Calibr.	↓	↓	750	2904800	3/2021	4.00	24.3	4.00	169.2	P/F	D/F
Calibr.	↓	↓	752	2810F55	4/2020	10.00	24.2	10.00	-181.6	P/F	D/F
ICV	↓	↓	754	2904800	3/2021	4.00	24.3	3.95	169.7	P/F	D/F
CCV	J. Parnish	10/17/19	1303	2902778	1/2021	7.00	24.2	7.18	-16.0	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: 6/2019

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	K. Appleby	10/17/19	756	0.00	0.00	P/F	D/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 STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Miramar at Gadsden

Date: 10/17/2019

WIN/ Field ID: Q2NE1184 20030825

WBID: 2304

Latitude: 30.28283

(mm/dd/yyyy)

County: Duval

ORG ID: 21 FLA

Longitude: 81.652

(Decimal Degrees)

Receiving Body of Water: SJR

RQ-2019- 10-14-16

(Decimal Degrees)

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
J. Parrish									
K. Appleby									

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☒ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>meter</u>		
Equipment ID <u>ortho kit #3</u>		

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

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded

Meter ID# Stitch

Matrix: Fresh / Marine / DI

Photos: Yes / No

Flow: No Flow / Intestinal / Flowing / NA

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 (µmhos/cm)	Temp. (C°)
EST	940	0.16	0.08	0.16	5.11	59.4	6.70	0.19	387.1	22.9
CEN				5	4.80	56.4				

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	4/2020	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	NA8344050	12/2019	☒ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice	ETHAZ9001		
Chlorophyll	☒ CHLSUTE-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 Coll ☐ F Coll ☐ 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 / Field ID:



20030825

Miramar at Gadsden

Signature: [Signature]

Date:

10/17/2019

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 (Initials/Date) Migrate Data to WIN: (Initials/Date) Verify Data in WIN: (Initials/Date)

LSJR Southside

Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: NE-DIST

Requester: Jeremy M. Parrish

Field Report Prepared By:

Kimberly Appleby

Project ID: SMP

Collected By: J. Parrish + K. Appleby

Sampling Agency:

FDEP NE ROL

Location	WIN / Field ID:		20030068	☐ Comp ☒ Grab	Collection (comp begin or grab)	Date	10/17/2019	Time	835	☒ Eastern ☐ Central	Composite end	Date		Time		Bottle Group(s) (See pg 2)					
Field ID				Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☒ mg/L ☐ % sat		Total Res. Chlorine		(mg/L)		—		A					
WIN/STOF	BIG POTTSBURG CR BOWDEN RD			Temp (C)		23.0		pH		6.80		Sample Depth		0.3			Sp. Conductance (umho/cm)	289.7			
Latitude	☐ dd ☐ dms			Longitude			☐ dd ☐ dms			Salinity (ppt)			0.14			Comments			—		
Location	WIN / Field ID:		20030794	☐ Comp ☒ Grab	Collection (comp begin or grab)	Date	10/17/2019	Time	905	☒ 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)		—		L					
WIN/STORE	MILLER CR @ SCHUMACHER			Temp (C)		21.1		pH		6.69		Sample Depth		0.1			Sp. Conductance (umho/cm)	315			
Latitude	☐ dd ☐ dms			Longitude			☐ dd ☐ dms			Salinity (ppt)			0.15			Comments					
Location	WIN / Field ID:		20030825	☐ Comp ☒ Grab	Collection (comp begin or grab)	Date	10/17/19	Time	940	☒ 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)		—		B					
WIN/STOF	Miramar at Gadsden			Temp (C)		22.9		pH		6.70		Sample Depth		0.08			Sp. Conductance (umho/cm)	387.1			
Latitude	☐ dd ☐ dms			Longitude			☐ dd ☐ dms			Salinity (ppt)			0.19			Comments					
Location	WIN / Field ID:		20030852	☐ Comp ☒ Grab	Collection (comp begin or grab)	Date	10/17/2019	Time	1205	☒ 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)		—		C					
WIN/STOF	CORMORANT BRANCH @ MARBON RD			Temp (C)		21.7		pH		6.96		Sample Depth		0.1			Sp. Conductance (umho/cm)	263			
Latitude	☐ dd ☐ dms			Longitude			☐ dd ☐ dms			Salinity (ppt)			0.12			Comments					

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
K. Appleby	10/17/19 1530	Fed Ex	2		

Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>1</u>
	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	<u>1</u>
	CHLSUITE-W						
Group: A	Bottle Type:	P-250ML-WI-THI	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>1 → Sent to ALS</u>
	NE-ALS-ECQ						
Group: A	Bottle Type:	QPCR-P-500ML	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>1</u>
	PCR-HF183						
Group: A	Bottle Type:	BG-500ML	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>1</u>
	W-E8321-DI W-E8321-MS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	<u>1</u>
	W-ICP W-ICPMS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	<u>1</u>
	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	<u>1</u>
	W-PO4-F						
Group: B	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>—</u>
	ALKALINITY TURBIDITY W-CL-IC						

Florida Department of Environmental Protection
Central Laboratory Submittal Form

LSJR Southside

Customer: NE-DIST

Project ID: SMP

Requester: Jeremy M. ParrishCollected By: J. Parrish + K. ApplebyField Report Prepared By: Kimberly ApplebySampling Agency: FDEP NE ROL

Location		WIN / Field ID: 		☐ Comp	Collection (comp begin or grab)		☒ Grab	Date	Time	☒ Eastern	Composite end	Bottle Group(s) (See pg 2)
Field ID				Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen				Total Res. Chlorine		
WIN/STOF		DEEP BOTTOM CREEK AT SCOTT MILL RD		Temp (C)		pH		Sample Depth		Sp. Conductance		B
Latitude		Longitude		Salinity (ppt)		Comments						
Location		WIN / Field ID: 		☐ Comp	Collection (comp begin or grab)		☒ Grab	Date	Time	☒ Eastern	Composite end	Bottle Group(s)
Field ID				Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen				Total Res. Chlorine		
WIN/STORET		OLDFIELD CR @ JULINGTON CREEK ROAD		Temp (C)		pH		Sample Depth		Sp. Conductance		C
Latitude		Longitude		Salinity (ppt)		Comments						
Location				☐ Comp	Collection (comp begin or grab)		☐ Grab	Date	Time	☐ Eastern	Composite end	Bottle Group(s)
Field ID				Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen				Total Res. Chlorine		
WIN/STORET #				Temp (C)		pH		Sample Depth		Sp. Conductance		
Latitude		Longitude		Salinity (ppt)		Comments						
Location				☐ Comp	Collection (comp begin or grab)		☐ Grab	Date	Time	☐ Eastern	Composite end	Bottle Group(s)
Field ID				Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen				Total Res. Chlorine		
WIN/STORET #				Temp (C)		pH		Sample Depth		Sp. Conductance		
Latitude		Longitude		Salinity (ppt)		Comments						

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
<u>K. Appleby</u>	<u>10/17/19 1530</u>	<u>Fed Ex</u>	<u>2</u>		

Group: B	Bottle Type:	P-1L	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab	2
	W-COLOR					
	W-F					
	W-SO4-IC					
	W-TDS					
	W-TSS					
Group: B	Bottle Type:	BP-1L	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab	2
	CHLSUITE-W					
Group: B	Bottle Type:	P-250ML-WI-THI	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab	2 → sent to ALS
	NE-ALS-ECQ					
Group: B	Bottle Type:	P-500ML	# of Bottles: 2	Preservative: HNO3	Enter Number of Bottles Sent to Lab	2
	W-ICP					
	W-ICPMS					
Group: B	Bottle Type:	P-500ML	# of Bottles: 2	Preservative: ICE And H2SO4	Enter Number of Bottles Sent to Lab	2
	W-NH3					
	W-NO2NO3					
	W-S-A-TP					
	W-TKN					
	W-TOC					
Group: B	Bottle Type:	P-125ML	# of Bottles: 2	Preservative: FILTER-ICE	Enter Number of Bottles Sent to Lab	2
	W-PO4-F					
Group: C	Bottle Type:	P-1L	# of Bottles: 3	Preservative: ICE	Enter Number of Bottles Sent to Lab	3
	ALKALINITY					
	TURBIDITY					
	W-CL-IC					
	W-COLOR					
	W-F					
	W-SO4-IC					
	W-TDS					
	W-TSS					
Group: C	Bottle Type:	BP-1L	# of Bottles: 3	Preservative: ICE	Enter Number of Bottles Sent to Lab	3
	CHLSUITE-W					
Group: C	Bottle Type:	P-250ML-WI-THI	# of Bottles: 3	Preservative: ICE	Enter Number of Bottles Sent to Lab	→

Group: C	Bottle Type: P-250ML-WI-THI	# of Bottles: 3	Preservative: ICE	Enter Number of Bottles Sent to Lab	<u>3 → sent to ALS</u>
NE-ALS-ECQ					
Group: C	Bottle Type: P-500ML	# of Bottles: 3	Preservative: ICE And H2SO4	Enter Number of Bottles Sent to Lab	<u>3</u>
W-NH3					
W-NO2NO3					
W-S-A-TP					
W-TKN					
W-TOC					
Group: C	Bottle Type: P-125ML	# of Bottles: 3	Preservative: FILTER-ICE	Enter Number of Bottles Sent to Lab	<u>3</u>
W-PO4-F					



CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Suite 200. Jacksonville, FL 32256
Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011

www.alsglobal.com

SR #
ALS Contact

Page _____ of _____

Project Name LSTR Southside		Project Number RQ-2019-10-14-16		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																				
Report To S. Parrish		Report CC		Preservative																Preservative Key				
Company/Address 8800 Baymeadows Way W Jacksonville, FL 32256		FAX #		NUMBER OF CONTAINERS E. Coli																0. None 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other REMARKS				
Phone # (904) 256-1700		Sampler's Signature [Signature]																				Sampler's Printed Name Kimberly Appleby		
CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	Matrix																				
20030068		10/17/19	835	SW	1	X																	Fresh	
20030794		10/17/19	905	SW	1	X																	Fresh	
20030825		10/17/19	940	SW	1	X																	Fresh	
20030595		10/17/19	1115	SW	1	X																	Fresh	
20030684		10/17/19	1150	SW	1	X																	Fresh	
20030852		10/17/19	1205	SW	1	X																	Fresh	
Special Instructions/Comments:					TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) STANDARD REQUESTED FAX DATE REQUESTED REPORT DATE				REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data Edata Yes No				INVOICE INFORMATION P.O. # Bill to:											
SAMPLE RECEIPT: CONDITION/COOLER TEMP: 0.9°C					CUSTODY SEALS: Y (N)																			
Relinquished By Signature [Signature]		Received By Signature		Relinquished By Signature		Received By Signature		Relinquished By Signature		Received By Signature		Relinquished By Signature		Received By Signature										
Printed Name Kimberly Appleby		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name										
Firm FDEP NE ROL		Firm		Firm		Firm		Firm		Firm		Firm		Firm										
Date/Time 10/17/19 1234		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time										

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

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY Purd STORET # 20030825 LONGITUDE _____
 DATE 10/17/19 TIME 940 SAMPLING AGENCY DEP NE RUC
 SITE NAME M. Gadsden
 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) ☐ <u>90</u> <u>10</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 <u>1.5</u> m wide			
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>0.6</u> + <u>0.16</u> = <u>0.76</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 % Coverage ☒ INVERT ☐ PERI # Times Sampled # Times Sampled			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHQ/CM) Salinity (PPT) SECCHI (M) Top: _____ Mid: <u>0.1</u> Bottom: <u>0.16</u> <u>22.9</u> <u>6.7</u> <u>4.8</u> <u>56.4</u> <u>387</u> <u>0.19</u> <u>0.16</u> Meter ID: _____		
Woody Debris (Snags) <u><1</u> Undercut Banks / Roots <u>1</u> Leaf Packs or Mat Aquatic Vegetation Rock or Shell Rubble.. <u><1</u> Sand..... <u>90</u> Mud / Muck / Silt <u>18</u> Other Other			Water Odors Normal ☐ Petroleum ☐ Sewage ☒ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____ Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☒ ☐ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☐ ☒			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐			AMBIENT FIELD CONDITIONS / NOTES: <u>Downstream 100m of Gadsden</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.		
SAMPLING TEAM <u>Grant K. Appleby</u>			SIGNATURE: <u>Jeremy Paul</u>		DATE: <u>10/17/19</u>

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: *Miraner @ Gadsden*

County: *Dade*

Date: *1/17/19*

Investigators: *J. P. ...*

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

STORET Station Number:

Secchi depth *2.2*
Estimated? *5.0*

points ranked 4-6 *1*
total points assessed *22*
% points ranked 4-6 *10%*

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

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: 20030825	DATE (mm/dd/yyyy): 10/17/19	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Orral	LOCATION: M. ramona @ badsden	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>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 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>11</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 <u>11</u>	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>19</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.	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>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 <u>4</u>	<u>3</u> <u>2</u> 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>2</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	<u>3</u> <u>2</u> 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>3</u> Left Bank <u>3</u> Secondary Score <u>21</u>	10 9	8 7 6	5 4	<u>3</u> 2 1

40

TOTAL SCORE

Date: 10/17/19	Analyst: Jeremy Carver & Kim Appleby	Signature: Jeremy Carver
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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: Miramor @ Gadsden

Date: 10/17/19

Sampler: JP/KA

100 m: Latitude _____	Longitude _____
0 m: Latitude _____	Longitude _____
Substrates: Code key, draw proportionate habitat abundance.	
☒	Snags %
☒	Roots/undercut banks 1
☐	Leaf Packs (or mats) _____
☐	Aquatic Macrophytes _____
☒	Rock ^{construction} 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

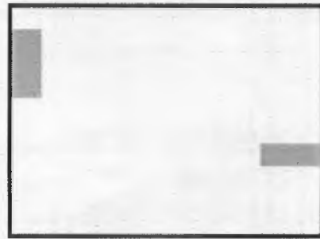
$$x = 1 - 2m$$

[illegible]

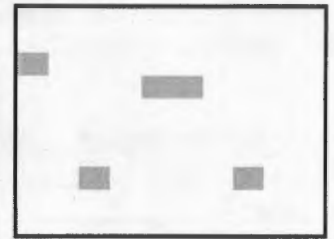
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

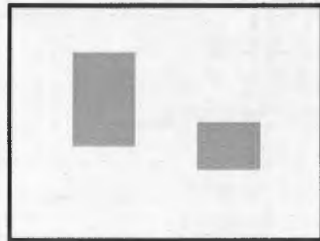
5% Macrophyte Coverage



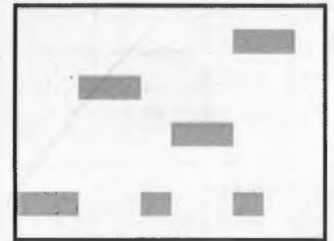
5% Macrophyte Coverage



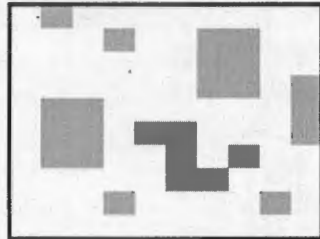
10% Macrophyte Coverage



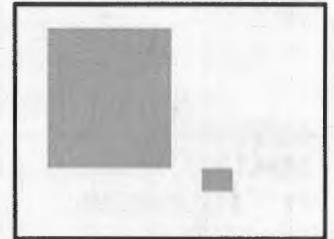
10% Macrophyte Coverage



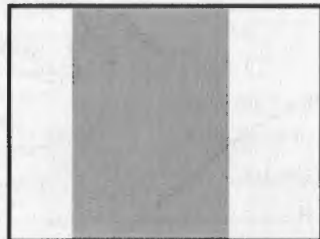
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

