



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Grog Branch @ Long Bay Rd Date: 2-27-2019
(mm/dd/yyyy)

WIN/ Field ID: 20030833 WBID: 2407 Latitude: 30.10695
(Decimal Degrees)

County: Clay ORG ID: 21FLA Longitude: 81.86325
(Decimal Degrees)

Receiving Body of Water: Black Creek RQ-2018- 02-25-09

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
P.O'Connor									
C. Roben									
A. Kalmbacher									

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>suck</u>		
Equipment ID <u>Ortho Kit #7</u>		
Collection Method		
☒ Wading	☐ Canoe/Kayak	
☐ From Shore	☐ Electric Motor	
☐ Other	☐ Gasoline Motor	

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded Meter ID# YSI EXO 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 (umhos/cm)	Temp. (C°)
EST	0930	0.15	0.1	0.15	5.05	50%	6.41	0.05	114	18.0
CEN				S						

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	<u>SAB74050</u>	<u>10/2019</u>	<u><2</u>
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	<u>NA 8080070</u>	<u>03/2019</u>	<u><2</u>
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice	<u>RBKAA17522</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 ☐ WE8321-MS ☐ W-CARB-AA	☒ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes: _____

WIN / Field ID: 20030833

Grog branch at Long Bay rd.

Signature: A. Kalmbacher Date: 2-27-2019

LIMS EVENT ID: 2019-02-28-01 WIN Import ID: _____

Enter Field Parameters, Verify Station ID in LIMS DMT: JP 2/29/19 QC Station ID, Field Parameters in LIMS DMT: Chyl 3/4/19
(Initials/Date) (Initials/Date)

Scan/Save Field Sheets BD 3/5/19 Migrate Data to WIN: _____ Verify Data in WIN: _____
(Initials/Date) (Initials/Date)

Contains: 1:1 H2SO4
Lot No.: SAB274050
Expires: 10/01/19
See Safety Data Sheet (SDS)

Contains
1:1
Nitric Acid
NA-8080070
EXP: 03/21/19
See SDS

Contains: 1:1 H2SO4
Lot No.: SAB274050
Expires: 10/01/19
See Safety Data Sheet (SDS)

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

19237 ✓

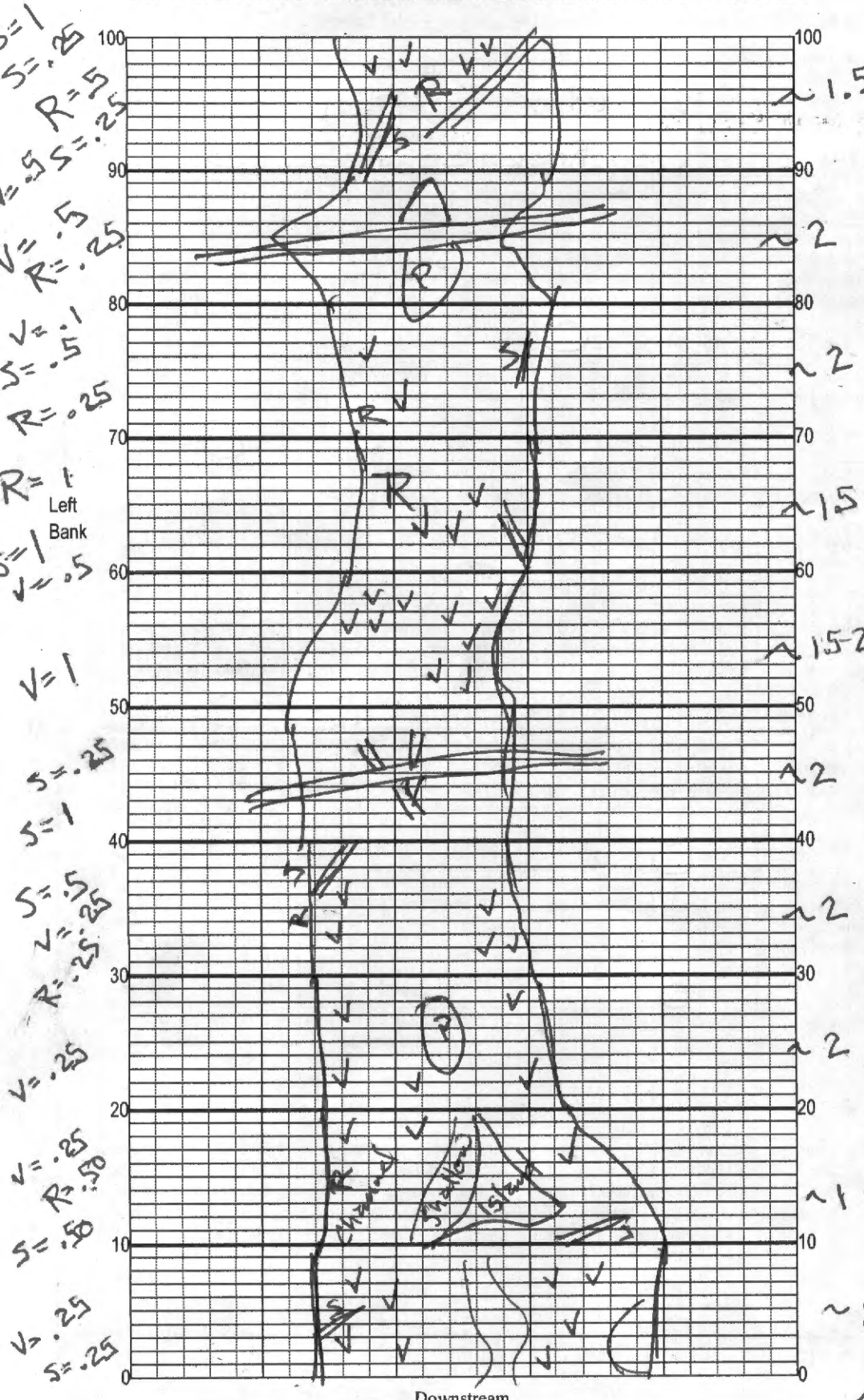
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 20030833	DATE (MM/DD/YY): 2-27-2019	RECEIVING BODY OF WATER: Black Cr.
REMARKS:	COUNTY: Clay	LOCATION: Long Branch @ Bay Rd	FIELD ID/NAME: 20030833	

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>11</u>	20 19 18 17 16	15 14 13 12 <u>11</u>	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>AK 37</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 <u>7</u> 6	Less than 5% major productive habitat <u>AK 5</u> 4 3 2 1
Water Velocity <u>10</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 <u>10</u> 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>6</u> Primary Score <u>34</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 <u>6</u> 2	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. <u>5</u> 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 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>14</u>	20 19 18 17 16	15 <u>14</u> 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 root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. <u>8</u> 7 6	Only meets 1 of the 3 requirements for optimal bank stability. <u>5</u> 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 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 5 4	Less than 6 m of buffer zone due to intensive human activities 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. 10 <u>9</u>	>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. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1
Right Bank <u>8</u> Left Bank <u>5</u>				
Right Bank <u>10</u> Left Bank <u>10</u>				
Right Bank <u>9</u> Left Bank <u>9</u>				
Secondary Score <u>63</u>				

99 TOTAL SCORE

Date: 2-27-2019	Analyst: A. Kelmbacher	Signature: <i>A. Kelmbacher</i>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Grog Branch
 Date: 2-27-2019
 Sampler: O'Connor, Ruben, Kelmbeck

100 m: Latitude _____
 Longitude _____
 0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ S	Snags	<u>1.25</u>
☒ R	Roots/undercut banks	<u>~0.70</u>
☐	Leaf Packs (or mats)	_____
☒ V	Aquatic Macrophytes	<u>0.90</u>
☐	_____	_____
☐	_____	_____
☐	Pools	total # observed = <u>3.85</u> # range expected = _____

Average width 1.5-2 m
 Average depth 0.15 m

Velocity measured at 30 meter mark.

WQ & chemistry taken at 90 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 NO

Japanese Climbing Fern

Average = 1.5-2m Width

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

425 62-160.800, F.A.C
 1.8 1.38
 S=5 V=3.6 R=2.75

Revision Date: March 1, 2014

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

79237

SAMPLE ID 20030833 ORG ID 21FLA LATITUDE 30.10695
 COUNTY Clay STORET # 20030933 LONGITUDE 81.86325
 DATE 2-27-2019 TIME 0930 SAMPLING AGENCY DEAR NEP Roc
 SITE NAME Grog Branch @ Long Bay Rd RECEIVING BODY OF WATER Black Creek
 FIELD ID/NAME _____

RIPARIAN ZONE / STREAM FEATURES

Meter ID: EXO

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
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18m</u> Right Bank: <u>7Bm</u>				Hydrologic Modification Score (per FT 3101) ☐				☐ m/s <u>0.1</u> m/s ☐ m/s
High Water Mark: <u>0.3</u> + <u>0.15</u> = <u>0.45</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				☐ m deep <u>0.15</u> m deep ☐ m deep
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>1.25</u> <u>5</u> ☐ Undercut Banks / Roots <u>0.7</u> <u>5</u> ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation <u>0.9</u> <u>5</u> ☐ Rock or Shell Rubble.. ☐ ☐ ☐ Sand..... <u>95</u> <u>5</u> ☐ Mud / Muck / Silt ☐ ☐ ☐ Other ☐ ☐ ☐ Other ☐ ☐ ☐				WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: ☐ ☐ ☐ ☐ ☐ ☐ ☐ <u>0.15</u> Mid: <u>0.5</u> <u>18.0</u> <u>6.41</u> <u>5.05</u> <u>50</u> <u>114</u> <u>0.05</u> <u>0.15</u> Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ <u>0.15</u> System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐	
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:	☐	☒	☐	☐

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.

SAMPLING TEAM

O'Connor, Ruben, Kelmbacker

SIGNATURE

R Becker

2-27-2019

(N) 79237

ALS 4428

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

 Site: Grog Branch @ Long Bay Rd County: Clay Date: 2-27-2019 Investigators: O'Connor, Roben, Kelmbacker

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		93	60	1	N		90
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
10	1	N		90	70	1	N		89
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
20	1	N		94	80	1	N		88
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
30	1	N		94	90	1	N		88
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
40	1	N		90	100	1	N		91
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			
50	1	N		92		1	N		
	2					2			
	3					3			
	4					4			
	5					5			
	6					6			
	7					7			
	8					8			
	9					9			

STORET Station Number: 20030833
 Secchi depth 0.25
 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-02-25-09

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%.

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

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

Page 1 of 1

SR #

ALS Contact: Jerry Allen

[illegible]

Request Number: RQ-2019-02-25-09

SCI 2407 Grog, 2246 Jones

Florida Department of Environmental Protection Central Laboratory Submittal Form

Page 1 of 2

last revised Jan 25, 2018

Customer: NE-DIST

Project ID: SMP

Requester: Jeremy M. Parrish

Field Report Prepared By:

Collected By:

C. Ruben, A. Kalmbacher, P. O'Connor

Sampling Agency:

DEAR MED ROC

Location	WIN / Field ID:		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 02-27-19 Time 0930	Eastern Central	Composite end Date Time	Bottle Group(s) (See pg 2)
Field ID	20030833		Matrix (type, e.g., Salt, Fresh, etc) Surface Water Fresh		Diss. Oxygen 5.05	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L) 114
WIN/STOF	Grog branch at Long Bay rd.		Temp (C) 18.0	pH 6.41	Sample Depth 0.1	Sp. Conductance (umho/cm) 114	A+B
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt) 0.05	Comments DO% 50		
Location	WIN / Field ID:		☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	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)
WIN/STOF			Temp (C)	pH	Sample Depth	Sp. Conductance (umho/cm)	
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments		
Location	WIN / Field ID:		☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	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)
WIN/STOF			Temp (C)	pH	Sample Depth	Sp. Conductance (umho/cm)	
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments		
Location	WIN / Field ID:		☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	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)
WIN/STOF			Temp (C)	pH	Sample Depth	Sp. Conductance (umho/cm)	
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments		

Relinquished By:

P. O'Connor

Date/Time

02-27-19 1300

Shipping Method

Fed Ex

Number of Coolers Shipped:

1

Received By:

Date/Time

Group: A	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALKALINITY TURBIDITY W-CL-IC W-COLOR W-F W-SO4-IC W-TDS W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	CHLSUITE-W						
Group: A	Bottle Type:	P-250ML-WI-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1 to ALS JAY
	NE-ALS-ECQ						
Group: A	Bottle Type:	BG-500ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	W-E8321-DI W-E8321-MS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
	W-ICP W-ICPMS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	1
	W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 2	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
	W-PO4-F						
Group: A	Bottle Type:	BG-1L	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	3
	W-PSNP-TQ						
Group: B	Bottle Type:	PT-50ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	0
	ALGAL_ID						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 4	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	2