



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?
Yes / No

WIN Station Name:

BULL CR SW CROSSING CR 125

Date: 10-15-18

WIN/ Field ID:

20030480

WBID:

2466

Latitude:

30.02055

County:

CLAY

ORG ID:

21FIA

Longitude:

81.91950

Receiving Body of Water:

Black Mill Creek

RQ-2018-

10-08-16

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
J. PATRICK D. O'Connor				X	X	X	X	X	☒ Sample Container	☐ Van Dorn	☐ Pole	
									☐ Carboy	☐ Syringe		
									☐ Dipper	☐ Other		
Depth Measured with				Equipment ID				DEPH # 154181 ORTHO # 7				
Collection Method				☒ Wading				☐ Canoe/Kayak				
				☐ From Shore				☐ Electric Motor				
				☐ Other				☐ Gasoline Motor				
Water Level: Dry/ Pooled/ Low / Normal / High / Flooded				Meter ID# DEPH # 154181				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	0945	0.2	0.1	0.25	7.16	79.8	6.07	0.03	62.1	20.6		
CEN												
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	SAB197090	01-16-19	<2				
Metals	☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO3			<2				
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter				☒ Ice	K7KA12572						
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-F / ☐ W-TSS / ☐ TURBIDITY				☐ Ice							
Macroinvertebrates	☒ MI-FW-QLDC SCI				☒ Formalin							
Periphyton	☐ ALGAE-ID				☐ Ice							
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci				☒ Ice							
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD				☐ Ice							
Tracers	☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice							
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI				☐ Ice							
	☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA				☐ Other							

Contains: 1:1 H2SO4
Lot No: SAB197090
Expires: 07/16/19
See Safety Data Sheet (SDS)

Place Preserve

Notes:

WIN /Field ID:



20030480

BULL CR SW CROSSING CR 215

Signature:

[Signature]

Date:

10/23/18

Enter Field Parameters, Verify Station ID in LIMS DMT:

10/20/18

QC Station ID, Field Parameters in LIMS DMT:

10/23/18

Scan/Save Field Sheets

10/23/18

Migrate Data to WIN:

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

(Initials/Date)

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

78946 ✓
S610

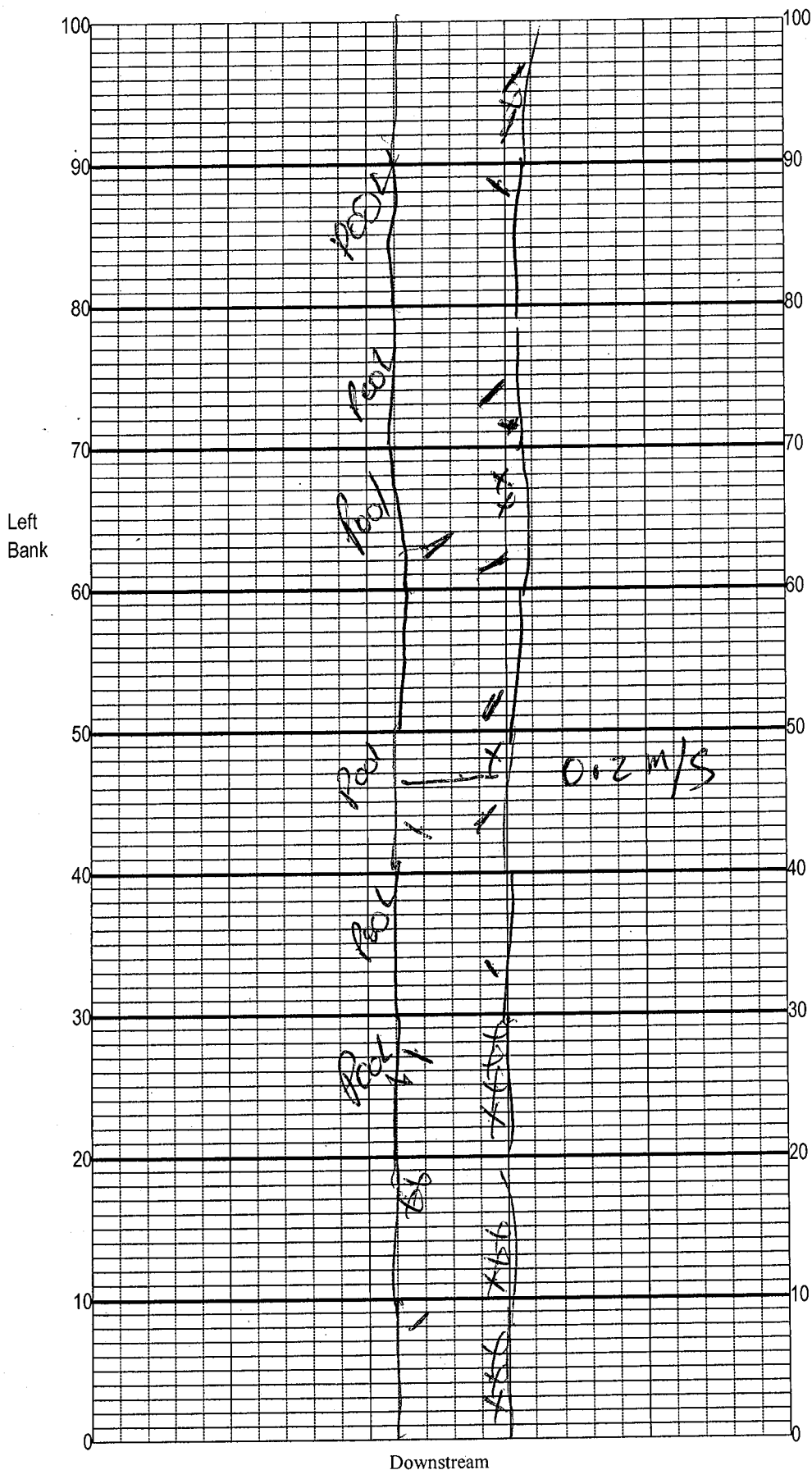
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: <u>2005048010-1518</u>	DATE (MM/DD/YY): <u>10-15-18</u>	RECEIVING BODY OF WATER: <u>St. Lawrence Mill Cr</u>
REMARKS:	COUNTY: <u>CLAY</u>	LOCATION: <u>Bull Creek, SW 1/4 Sec 125</u>	FIELD ID/NAME:	

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>10</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>8</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>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 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>11</u> Primary Score <u>43</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. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Artificial Channelization <u>20</u>				
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. 3 2 1
Right Bank <u>5</u> Left Bank <u>5</u>				
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
Right Bank <u>10</u> Left Bank <u>10</u>				
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. 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>10</u> Left Bank <u>10</u> Secondary Score <u>70</u>				

113 TOTAL SCORE

Date: <u>10-15-18</u>	Analyst: <u>P. O'Connor</u>	Signature: <u>P. O'Connor</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: Bull Cr SW
Crossing CR125
Date: 10-15-18
Sampler: O'Connor

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 <u>3.4-5.0</u> m	
Average depth <u>0.2</u> m	
Velocity measured at <u>50</u> 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

4% Roots
5% Snag

78710

Analyst: O'Connor, P	Signature: [Signature]
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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.

NO
AQUATIC
PLANTS

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

SAMPLE ID _____ ORG ID _____ LATITUDE 30.02055
COUNTY CLAY STORET # 2003 LONGITUDE 81.91930
DATE 10-15-18 TIME 0945 SAMPLING AGENCY DEAR NED ROC
SITE NAME Bull Cr SW Crossing CR215
FIELD ID/NAME _____ RECEIVING BODY OF WATER Black Creek Mill Cr

RIPARIAN ZONE / STREAM FEATURES

Meter ID: DEP #154181

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) : Forest/Natural <u>90</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>10</u> Commercial _____ Industry _____ Other (Specify) _____								Landscape Development Intensity Index (LDI) _____
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy				Typical Width (m) Depth (m)/Velocity (m/sec) Transect <u>3</u> m wide				
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy								
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank : <u>>18</u> Right Bank : <u>>18</u>				Hydrologic Modification Score (per FT 3101) _____				
High Water Mark: <u>0.8</u> + <u>0.4</u> = <u>1.2</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 ☐
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SUBSTRATE TYPE Assessment Tool: ☒ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon				WATER QUALITY							
				Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :											<u>0.25</u>
Mid :				<u>0.1</u>	<u>20.6</u>	<u>6.07</u>	<u>7.16</u>	<u>79.8</u>	<u>62.1</u>	<u>0.03</u>	TOTAL DEPTH
Bottom :											
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) _____											
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 Periphyton: ☒ Not Obs. ☐ Rare ☐ Common ☐ Abundant Fish: ☐ Not Obs. ☐ Rare ☒ Common ☐ Abundant Aquatic Plants: ☒ Not Obs. ☐ Rare ☐ Common ☐ Abundant Iron/Sulfur Bacteria: ☐ Not Obs. ☒ Rare ☐ Common ☐ Abundant	AMBIENT FIELD CONDITIONS / NOTES: <u>0.2 total Depth @ Sample Location</u> Hydrologic Disturbance Scoring ☐ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐ The antecedent hydrologic conditions have been met to my best knowledge.
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SAMPLING TEAM <u>Jeremy Pann</u> / <u>Pat Grouver</u>	SIGNATURE <u>Jeremy Pann</u>	<u>10/15/18</u>
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(NK) #78946 ✓
DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Bull Creek Sw. crossing 215 County: Clay Co. Date: 10/15/18 Investigators: J. Farnish

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

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

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Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

STORET Station Number: 20030480

Secchi depth
Estimated? 100

points ranked 4-6 0
total points assessed 96
% points ranked 4-6 0%

Check accompanying data collected at same site/date:
Algal mat sample
Linear Veg Survey Y
Habitat Assessment Y
SCI/Biorecon Y
Water sample
RQ- 2018-10

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%.

**Florida Department of Environmental Protection
Central Laboratory Submittal Form**

Customer: NE-DIST

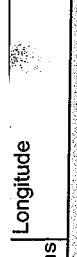
Project ID: SMP

Requester: Jeremy M. Parrish

Field Report Prepared By:

Collected By:

Sampling Agency:

Location		WIN /Field ID:		 20030569		20030569		20030569	
Field ID		WIN/ST		MILL LOG CREEK @ CR 739B(SANDRIDGE RD)		MILL LOG CREEK @ CR 739B(SANDRIDGE RD)		MILL LOG CREEK @ CR 739B(SANDRIDGE RD)	
Latitude		Longitude		20030569		20030569		20030569	
Location		WIN /Field ID:		 G2NE1150		G2NE1150		G2NE1150	
Field ID		WIN/ST		MILL Log at Russell Rd.		MILL Log at Russell Rd.		MILL Log at Russell Rd.	
Latitude		Longitude		20030480		20030480		20030480	
Location		WIN /Field ID:		 20030480		20030480		20030480	
Field ID		WIN/ST		BULL CR SW CROSSING CR 215		BULL CR SW CROSSING CR 215		BULL CR SW CROSSING CR 215	
Latitude		Longitude		20030480		20030480		20030480	
Location		WIN /Field ID:		 20030480		20030480		20030480	
Field ID		WIN/ST		BULL CR SW CROSSING CR 215		BULL CR SW CROSSING CR 215		BULL CR SW CROSSING CR 215	
Latitude		Longitude		20030480		20030480		20030480	
Location		WIN /Field ID:		 20030480		20030480		20030480	
Field ID		WIN/ST		BULL CR SW CROSSING CR 215		BULL CR SW CROSSING CR 215		BULL CR SW CROSSING CR 215	
Latitude		Longitude		20030480		20030480		20030480	

Relinquished By: 80' Comm	Date/Time 10-5-18 1500	Shipping Method Fed Ex	Number of Coolers Shipped: 1	Received By:	Date/Time
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Group: A	Bottle Type: ALKALINITY TURBIDITY W-CL-IC W-COLOR W-F W-SO4-IC W-TDS W-TSS	P-1L	# of Bottles: 1	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>1</u>
Group: A	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 1	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>1</u>
Group: A	Bottle Type: NE-ALS-ECQ	P-250ML-WI-THI	# of Bottles: 1	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>1 to 544 ALS</u>
Group: A	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles: 1	Preservative: ICE And H2SO4	Enter Number of Bottles Sent to Lab <u>1</u>
Group: A	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 1	Preservative: FILTER-ICE	Enter Number of Bottles Sent to Lab <u>1</u>
Group: B	Bottle Type: ALKALINITY TURBIDITY W-CL-IC W-COLOR W-F W-SO4-IC W-TDS W-TSS	P-1L	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>1</u>
Group: B	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>1</u>
Group: B	Bottle Type: P-250ML-WI-THI	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>1</u>	

Group: B	Bottle Type: NE-ALS-ECQ	P-250ML-WI-THI	# of Bottles:	2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1 to JAX ACS
Group: B	Bottle Type: W-ICP W-ICPMS	P-500ML	# of Bottles:	2	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
Group: B	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles:	2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	1
Group: B	Bottle Type: W-PO4-F	P-125ML	# of Bottles:	2	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
Group: C	Bottle Type: MI-FW-QLDC	PJ-2L	# of Bottles:	2	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	2

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR#

CAS Contract

Project Name **ESR SW SCI**
AND MILL LID

Project Number
RA-2018-10-08-16

Project Manager
J. Parrish

Email Address

Company/Address

DEAR WED ROC

8800 BAY MEADOWS WAY W

DAX FL 32256

Phone #

9042561700

FAX #

Sampler's Signature

Patrick O'Connor

Sampler's Printed Name

Patrick O'Connor

CLIENT SAMPLE ID

G2NE1150

LAB ID

SAMPLING DATE

10-15-18

MATRIX

SW 1

NUMBER OF CONTAINERS

E. Coli

PRESERVATIVE

8

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative Key

0. NONE
1. HCL
2. HNO3
3. H2SO4
4. NaOH
5. Zn Acetate
6. MeOH
7. NaHSO4
8. Other

REMARKS/
 ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS

0.0 °C

See CAPP ☐

SAMPLE RECEIPT: CONDITION/COOLER TEMP:

RELINQUISHED BY

Patrick O'Connor

RECEIVED BY

Patrick O'Connor

CUSTODY SEALS: Y N

RELINQUISHED BY

RECEIVED BY

RELINQUISHED BY

RECEIVED BY

Signature

Signature

Signature

Signature

Signature

Signature

Signature

Signature

Printed Name

Printed Name

Printed Name

Printed Name

Printed Name

Printed Name

Printed Name

Printed Name

Firm

Firm

Firm

Firm

Firm

Firm

Firm

Firm

Date/Time

Date/Time

Date/Time

Date/Time

Date/Time

Date/Time

Date/Time

Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client