

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

SAMPLE ID _____ ORG ID 21FLWQSP LATITUDE 30.1321
 COUNTY Wakulla STORET # 22020050 LONGITUDE -84.4944
 DATE 11/16/2020 TIME 10:14 AM SAMPLING AGENCY FDEP-AEQAS
 SITE NAME Sopchoppy River
 FIELD ID/NAME SOPREF RECEIVING BODY OF WATER Ochlocknee River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>50</u> Silviculture <u>50</u> 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 _____ m/s _____ m/s _____ m/s _____ m deep _____ m deep _____ m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718m</u> Right Bank: <u>718m</u>				Hydrologic Modification Score (per FT 3101) <u>1-2</u>					
High Water Mark: <u>1.6m</u> + <u>.5m</u> = <u>6.5m</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)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Woody Debris (Snags) <u>14.5m²</u> <u>5</u> _____			Top:	<u>.1</u>	<u>19.0</u>	<u>7.16</u>	<u>6.6</u>	<u>71.1</u>	<u>128.9</u>	<u>.4</u>
Undercut Banks / Roots <u>6.5m²</u> <u>5</u> _____			Mid:							☐ VOB
Leaf Packs or Mat <u>21m²</u> <u>1</u> _____			Bottom:							TOTAL DEPTH
Aquatic Vegetation _____			Meter ID:	<u>Y9 154185</u>						
Rock or Shell Rubble.. <u>10.5m²</u> <u>5</u> _____			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐				
Sand..... <u>4</u> _____			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ <u>v. dark</u>				
Mud / Muck / Silt _____			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐				
Other _____			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) _____							
ABUNDANCE Not Obs. Rare Common Abundant			AMBIENT FIELD CONDITIONS / NOTES: <u>Sun, 60s to 70s°</u> <u>water level lower than 2019</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.							
Periphyton: ☒ ☐ ☐ ☐ Fish: ☒ ☐ ☐ ☐ Aquatic Plants: ☒ ☐ ☐ ☐ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐ <u>diatoms?</u>			SAMPLING TEAM <u>O'Neal, Patronis, Piacente</u>							
			SIGNATURE: <u>Abby O'Neal</u>				DATE: <u>11/16/2020</u>			

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

SAMPLING AGENCY: FDEP		STORET STATION NUMBER: 22020050	DATE (MM/DD/YY): 11/16/2020	RECEIVING BODY OF WATER: Ochlocknee
REMARKS:	COUNTY: Wakulla	LOCATION: Sopchoppy	FIELD ID/NAME: SOP REF	

USGS gauge 02327100@ 8.5 ft. - ideal for sampling

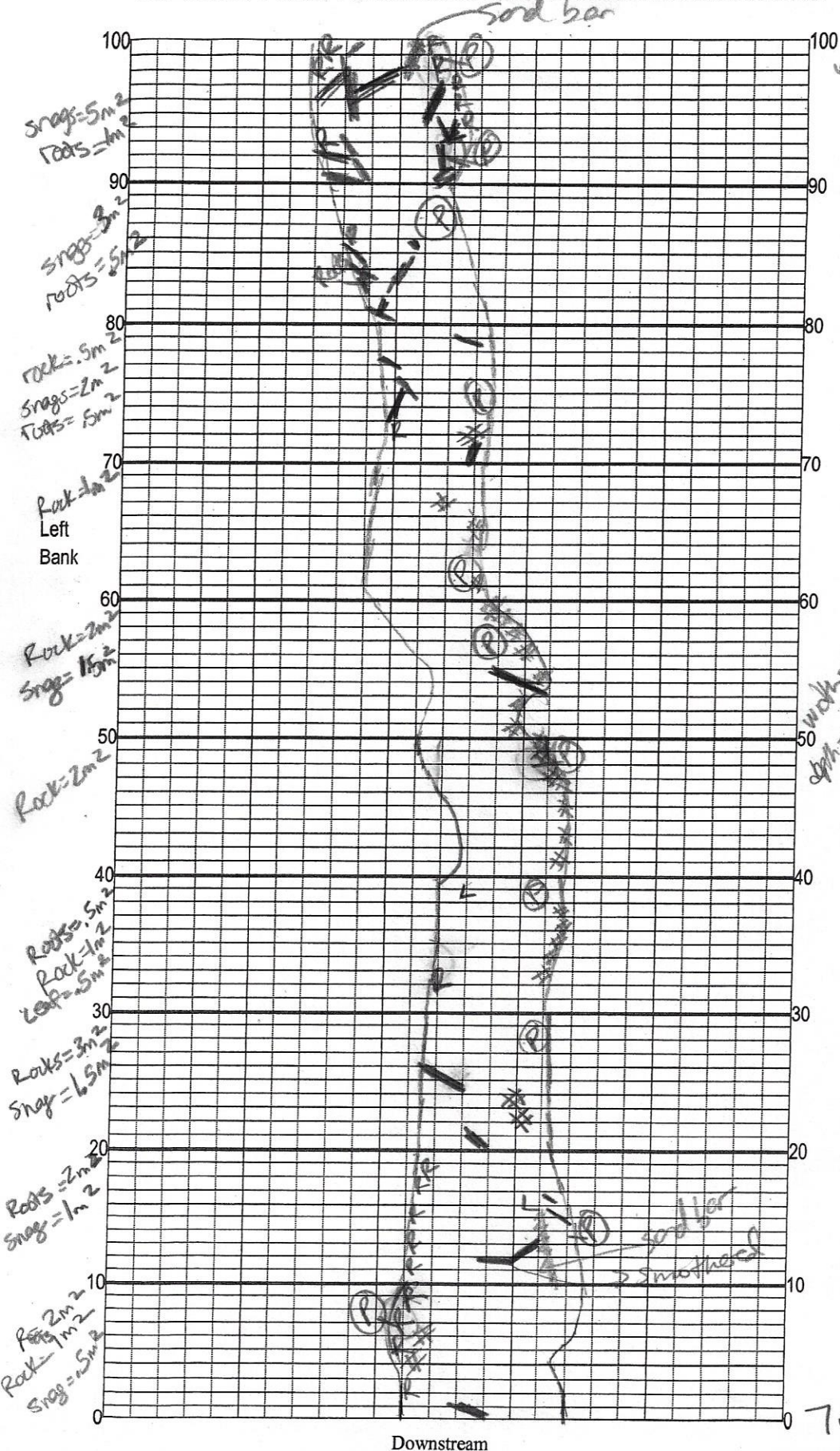
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components <i>rock, snag, rock</i> Substrate Diversity 14	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock) 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 5	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 11	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 17 Primary Score 47	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 Artificial Channelization 20	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 or straightening 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
Bank Stability Right Bank 6 Left Bank 6	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. 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 woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 9 Left Bank 16	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 Right Bank 10 Left Bank 10 Secondary Score 71	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

TOTAL SCORE

118

Date: 11/16/2020	Analyst: O'Neal, Patonis, Piacente	Signature: Ashley O'Neal
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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: Supchoppy
Date: 11/16/2020
Sampler: Jennifer Piacente & A. O'Neal, J. Patrons

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

Substrates: Code key, draw proportionate habitat abundance.		%
	Snags	_____
	Roots/undercut banks	_____
	Leaf Packs (or mats)	<u><1m²</u>
	Aquatic Macrophytes	_____
	Rock	_____
	Pools	total # observed = <u>11</u> # range expected = _____

Average width 7 m
Average depth .5 m

Velocity measured at 10 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:

totals
rock = 10.5m²
snags = 14.5m²
root = 6.5m²
31.5m²
700m²
.045
7m = width
7m = depth
25
6.5
31.5

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Sopchoppy River County: Wakulla Date: 11/16/2020 Investigators: Jennifer Piacente, AONeal
 STORET Station Number: 22020050 J. Piacente

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	n			60	1	n		
	2	n				2	n		
	3	n				3	n		
	4	n-est	✓			4	n		
	5	n-est	✓	76		5	n		
	6	n-est	✓			6	n		76
	7	n-est	✓			7	n		
	8	n-est	✓			8	n		
	9	n-est	✓			9	n		
10	1	n			70	1	n		
	2	n				2	n		
	3	n				3	n		
	4	n				4	n		
	5	n		68		5	n		80
	6	n				6	n		
	7	n-est	✓			7	n		
	8	n-est	✓			8	n		
	9	n-est	✓			9	n		
20	1	n-est			80	1	n		
	2	n-est				2	n		
	3	n-est				3	n		
	4	n				4	n		
	5	n-est		32		5	n		76
	6	n-est				6	n		
	7	n				7	n		
	8	n				8	n		
	9	n				9	n		
30	1	n	✓		90	1	n		
	2	n	✓			2	n		
	3	n	✓			3	n		
	4	n	✓	76		4	n		
	5	n	✓			5	n		72
	6	n	✓	32		6	n		
	7	n	✓			7	n		
	8	n	✓			8	n		
	9	n	✓			9	n		
40	1	n			100	1	n		
	2	n				2	n		
	3	n				3	n		
	4	n				4	n		
	5	n		72		5	n		
	6	n				6	n		80
	7	n				7	n		
	8	n				8	n		
	9	n				9	n		

Secchi depth .4
 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 ☒ no plants
 Habitat Assessment ☒
 SC/Biorecon ☒
 Water sample ☒
 RQ-2020-11-16-32

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

@50 water too deep for densimeter readings

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 densimeter 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%.

Waterbody: Sopchoppy River	Date: 11/16/2020	County: WAKULLA	Storet Number: 22020050
Analyst: A. O'Neal	Signature: Ashley O'Neal		

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.

Revision Date: January 2017

SITE NAME: Sopchoppy RiverDATE: 11/10/2020TIME 10:15 EST CSTDEPTH: 0.5 ft (m)FIELD ID: SOPREF

SAMPLING TEAM MEMBERS	WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
A O Neal	X			X	X
J Patronis			X		
J Piacente (trainee)		X			

SAMPLING EQUIPMENT	
☐ Sample Container	☐ Tubing type: _____
☐ Pole	☐ Other _____
☐ Pump ID#: _____	☐ Other _____
WATER QUALITY MEASUREMENTS	
Instrument ID: <u>YS154185</u>	
COLLECTION MODE	
☒ Wading	☐ Via Boat
☐ Diving	☐ Canoe
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Parameter Suite	Parameter(s)/Method	Matrix Code	Preservation**	Preservative Lot #	pH Check	# Bottles
Preserved Nutrients	☒ TKN ☒ TP ☒ NOx ☒ NH3 ☒ TOC ☐ Total N ☐ Other: _____	S W	☒ Ice ☒ H ₂ SO ₄	see notes	☒ <2	1
Filtered Nutrients	☒ OP ☐ Other: _____	S W	☒ Ice ☒ 45 um Filter			1
Unpreserved Nutrients	☐ NO ₂ ☐ NO ₃ ☐ SO ₄ ☐ Other: _____	W	☐ Ice			
Physical/Aggregate Properties	☒ TDS ☒ TSS ☐ TS ☒ Turbidity ☒ Alk ☒ Color ☐ Other: _____	S W	☒ Ice			1
Chlorophyll	☒ CHL-PPTN-W	S W	☒ Ice			1
BOD	☐ BOD-INHB ☐ BOD-UNIN	W	☐ Ice			
Microbiology	MF: ☒ E coli ☐ T Coli ☐ F Coli ☐ Entero ☐ F Strep	S W	☒ Ice			3
Macroinvertebrates	☒ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	S W	☒ Formalin			
Phytoplankton	☐ PKD-QN-C ☐ DTY-QN-C	W	☐ Lugol's			
Periphyton	☐ PRN-QL-C ☐ DTM-QL-C ☐ PRN-QN-C ☐ DTM-QN-C	W	☐ Formalin			
AGP	☐ AA-AGP ☐ AA-LIM-NUT	W	☐ Ice			
Metals	☒ W-ICP ☐ W-FIAS ☒ W-ICPMS ☐ W-ICP-Tr	S W	☒ HNO ₃		☒ <2	1
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO ₃ ☐ 45 um Filter		☐ <2	
Mercury	☐ W-HG-AF	W				
BaseNeutral / Acid Extractable	☐ W-BNA ☐ W-AE ☐ W-BN ☐ W-PAH ☐ W-FL-PRO ☐ W ☐ Other: _____	W	☐ Ice		☐ <2	
Pesticides	☐ W-PEST-CL ☐ W-PCB ☐ W-PEST-NP ☐ W-PSCL-PCB ☐ W-NP-AA-SF ☐ W-PC-AA-SF ☐ W-PSHRB-NP ☐ W-SLFN-UREA ☐ W-SULFN-LC ☐ Other: _____ ☐ W-ACIDHERB ☐ W-CARB	W	☐ Ice ☐ H ₂ SO ₄			
Purgeables	☐ W-VOC-MS ☐ W-VOC-MS-A	W	☐ Ice ☐ MCAA			
Bioassay	Specify Test: _____	W	☐ Ice ☐ HCl			
OTHER	W/phys/agg above ions Cl-IC, F, SO4-IC	S W	☒ Other: ice			phys/agg above

Notes:

Contains: 1:1 HNO₃
Lot No.: NA9354060
Expires: 12/20/20
See Safety Data Sheet (SDS)

Contains: 1:1 H₂SO₄
Lot No.: SA0038110
Expires: 02/07/21
See Safety Data Sheet (SDS)

Contains: 1:1 H₂SO₄
Lot No.: SA0038110
Expires: 02/07/21
See Safety Data Sheet (SDS)

Contains: 1:1 H₂SO₄
Lot No.: SA0038110
Expires: 02/07/21
See Safety Data Sheet (SDS)

Pesticides W-E 8321-D1?
W-E 8321-MS
W-PSNP-TQ 33
PCR - BACR ?
PCR - GFD
PCR - HF183

Use one line for each set of sample (as supplied by the laboratory) containers. Use separate sheet for field or laboratory duplicate or blank or different water depth

*Enter "S" for surface if collected at a depth less than or equal to 1 foot

*Matrix Codes (Insert prefix): SW = Surface Water GW = Groundwater DW = Drinking Water WW = Wastewater O = Other: _____

**PRESERVATIVES: 1 ml added unless otherwise noted

***Enter number of containers supplied by the laboratory for the test (e.g., 3 for volatile organics, etc.)

11-16-32

Request Number: RQ-2020-49-42-42

Reference Stream Sampling

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Page 1 of 3

last revised Jan 25, 2018

Customer: BSSP

Requester: Sarah Noble

Field Report Prepared By:

A. O'Neal

Project ID: SCIREF

Collected By:

A. O'Neal, J. Patrons

Sampling Agency:

FDEP

Location		☐ Comp		Collection (comp begin or grab)		☒ Eastern		Composite end		Bottle Group(s)	
Field ID		☐ Grab		Date		Time		Date		Time	
WINSTORET #		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☒ mg/L		Total Res. Chlorine		(See pg 2)	
Latitude		Temp (C)		pH		Sample Depth		Sp. Conductance (umho/cm)		A, B	
Longitude		Salinity (ppt)		Comments							
Location		☐ Comp		Collection (comp begin or grab)		☐ Eastern		Composite end		Bottle Group(s)	
Field ID		☐ Grab		Date		Time		Date		Time	
WINSTORET #		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L		Total Res. Chlorine			
Latitude		Temp (C)		pH		Sample Depth		Sp. Conductance (umho/cm)			
Longitude		Salinity (ppt)		Comments							
Location		☐ Comp		Collection (comp begin or grab)		☐ Eastern		Composite end		Bottle Group(s)	
Field ID		☐ Grab		Date		Time		Date		Time	
WINSTORET #		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L		Total Res. Chlorine			
Latitude		Temp (C)		pH		Sample Depth		Sp. Conductance (umho/cm)			
Longitude		Salinity (ppt)		Comments							
Location		☐ Comp		Collection (comp begin or grab)		☐ Eastern		Composite end		Bottle Group(s)	
Field ID		☐ Grab		Date		Time		Date		Time	
WINSTORET #		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L		Total Res. Chlorine			
Latitude		Temp (C)		pH		Sample Depth		Sp. Conductance (umho/cm)			
Longitude		Salinity (ppt)		Comments							
Location		☐ Comp		Collection (comp begin or grab)		☐ Eastern		Composite end		Bottle Group(s)	
Field ID		☐ Grab		Date		Time		Date		Time	
WINSTORET #		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L		Total Res. Chlorine			
Latitude		Temp (C)		pH		Sample Depth		Sp. Conductance (umho/cm)			
Longitude		Salinity (ppt)		Comments							
Location		☐ Comp		Collection (comp begin or grab)		☐ Eastern		Composite end		Bottle Group(s)	
Field ID		☐ Grab		Date		Time		Date		Time	
WINSTORET #		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L		Total Res. Chlorine			
Latitude		Temp (C)		pH		Sample Depth		Sp. Conductance (umho/cm)			
Longitude		Salinity (ppt)		Comments							
Location		☐ Comp		Collection (comp begin or grab)		☐ Eastern		Composite end		Bottle Group(s)	
Field ID		☐ Grab		Date		Time		Date		Time	
WINSTORET #		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen		☐ mg/L		Total Res. Chlorine			
Latitude		Temp (C)		pH		Sample Depth		Sp. Conductance (umho/cm)			
Longitude		Salinity (ppt)		Comments							

Relinquished By:

Date/Time

Shipping Method

Number of Coolers Shipped:

Received By:

Date/Time

Relinquished By: Shirley Howard 11/16/2020 4:17 pm

Shipping Method: hand delivery

Number of Coolers Shipped: 3

Received By: [Signature]

Date/Time: 11/16/2020 16:15

Group: B	Bottle Type:	PJ-2L	# of Bottles: 4	Preservative:	Formalin	Enter Number of Bottles Sent to Lab
	MI-FW-QLDC					3