

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

SAMPLE ID _____ ORG ID 21FLWQSP LATITUDE 30°29'30.5" N
 COUNTY Calhoun STORET # CAL14MAY1 LONGITUDE -85°12'39.5" W
 DATE 11/2/2017 TIME 1030 SAMPLING AGENCY FOEP/AEQA
 SITE NAME Mayo Mill Branch
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Chipola River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>100</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential _____ Commercial _____ Industry _____ Other (Specify) _____							Landscape Development Intensity Index (LDI) <u>1.59</u>
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy				Typical Width (m) Depth (m)/Velocity (m/sec) Transect <u>4.5</u> m wide			
Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy							
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18m</u> Right Bank: <u>>18m</u>				Hydrologic Modification Score (per FT 3101) <u>1-2</u>			
High Water Mark: <u>1.2</u> + <u>0.3</u> = <u>1.5</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 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.1</u> <u>16.2</u> <u>5.32</u> <u>9.11</u> <u>92.4</u> <u>27.4</u> <u>0.3</u> Mid: _____ Bottom: _____ Meter ID: <u>1483</u>		
Woody Debris (Snags) <u>5</u> <u>5</u> Undercut Banks / Roots <u>6.5</u> <u>5</u> Leaf Packs or Mat <u>7</u> <u>5</u> Aquatic Vegetation Rock or Shell Rubble..... Sand..... <u>81.5</u> <u>5</u> Mud / Muck / Silt 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>Sunny, clear, cool</u> <u>I qualify DO</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.		
SAMPLING TEAM <u>S. Parck, J Jackson, A. O'Neal</u>			SIGNATURE: <u>S. Parck</u>		DATE: <u>11/2/2017</u>

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

SAMPLING AGENCY: <u>FDEP/AEQA</u>		STORET STATION NUMBER: <u>CAL14MAY1</u>	DATE (MM/DD/YY): <u>11/2/2017</u>	RECEIVING BODY OF WATER: <u>Chipola R.</u>
REMARKS:	COUNTY: <u>Calhoun</u>	LOCATION: <u>Mayo Mill Branch</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>14</u>	20 19 18 17 16	15 <u>14</u> 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>13</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 <u>14</u> 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>15</u> <u>17</u> <u>JM</u> Primary Score <u>56</u> <u>58</u> <u>JM</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 <u>17</u> 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.	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>20</u>	20 19 18 17 16	15 14 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. 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
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 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>80</u>				

136 138 JM **TOTAL SCORE**

Date: <u>11/2/2017</u>	Analyst: <u>S. Pank / J. Jackson</u>	Signature: <u>J. Jackson</u>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Mayo Mill Branch County: Calhoun Date: 11/2/2017 Investigators: S. Dane K

STORET Station Number: CAL 14 MAY 1

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

Secchi depth 108
Estimated?

points ranked 4-6 0
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-2017-10-30-59

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 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Mayo Mill Branch

Date: 11/2/17

County: Calhoun

Storet Number: CAL 14 MAY 1964

Analyst: S. Pánek

Signature: Asab C. Pave 10

Comments: $< 2m^2$ no plants observed in water

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.

[illegible]

SAMPLING EQUIPMENT

☒ Sample Container
☐ Pole
☐ Pump ID#: _____
☐ Tubing type: _____
☐ Other _____
☐ Other _____

WATER QUALITY MEASUREMENTS

Instrument ID: 1483

COLLECTION MODE

☒ Wading
☐ Diving
☐ From Shore
☐ Other

Via Boat
☐ Canoe
☐ Electric Motor
☐ 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:	6 W	☒ Ice ☒ H2SO4	7163030	☒ <2	1
Filtered Nutrients	☐ oP ☐ Other:	W	☐ Ice ☐ .45 um Filter			
Unpreserved Nutrients	☐ NO2 ☐ NO3 ☐ SO4 ☐ Other:	W	☐ Ice			
Physical/Aggregate Properties	☒ TDS ☒ TSS ☐ TS ☒ Turbidity ☐ Alk ☒ Color ☐ Other: 1002, 87, 504	5 W	☒ Ice			1
Chlorophyll	☒ CHL-PPTN-W	5 W	☒ Ice			1
BOD	☐ BOD-INHB ☐ BOD-UNIN	W	☐ Ice			
Microbiology	MF: ☒ E coli ☐ T Coli ☐ F Coli ☐ Enteroc ☐ F Strep	5 W	☒ Ice			1
Macroinvertebrates	☒ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	5 W	☒ Formalin			3
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	5 W	☒ HNO3	7086060	☒ <2	1
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO3 ☐ .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			
Pesticides	☐ W-PEST-CL ☐ W-PCB ☐ W-PEST-NP ☐ W-PSCL-PCB	W	☐ Ice		☐ <2	
	☐ W-NP-AA-SF ☐ W-PC-AA-SF ☐ W-PSHRB-NP	W	☐ Ice			
	☐ W-SLFN-UREA ☐ W-SULFN-LC ☐ Other:	W	☐ Ice			
	☐ W-ACIDHERB	W	☐ Ice ☐ H2SO4			
Purgeables	☐ W-CARB	W	☐ Ice ☐ MCAA			
	☐ W-VOC-MS	W	☐ Ice			
	☐ W-VOC-MS-A	W	☐ Ice ☐ HCl			
Bioassay	Specify Test:	W	☐ Ice			
OTHER PCR	BACR, GFD, HF183	5 W	☒ Other: Ice			2

W-AHERB-AA SW ice 1 bottle

W-SUC-AA-R

W-4HERB-AA

Contains 1:1 Sulfuric Acid
Lot No.: SA7163030
Expires: 06/12/18
See Safety Data Sheet (SDS)

Contains
1:1
Nitric Acid
NA--7086060
EXP: 03/27/18
Warning!

Use one line for each set of sample (as supplied by the laboratory) containers. Use separate lines for each 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.)

Florida Department of Environmental Protection Central Laboratory Submittal Form

Customer: BSSP

Project ID: SCIREF

Requester: Sarah Panek

Field Report Prepared By: SARAH PANEK

Collected By: FDEP/AEQA

Sampling Agency: FDEP/AEQA

Location		Comp		Collection (comp begin or grab)		Time		Composite end		Bottle Group(s)	
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Grab	Date	Time	Eastern	Central	Date	mg/L	% sat	Total Res. Chlorine	(See pg 2)
Mayo Mill Branch	Fresh, surface	☒	11/2/2017	1030	☒	☐		9.11	☐	27.4	A, B
STORET #	Temp (C)	Salinity (ppt)	pH	Sample Depth							
CAL14MAY1	16.2	5.32	0.1								
Latitude	dd	dms	Longitude	dd	dms						
30°29'30.5"N	☒	85°12'39.5"W	☒								
Location	Chipola River										
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Grab <td>Date <td>Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th> </td></td>	Date <td>Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th> </td>	Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th>	Eastern	Central	Date	mg/L	% sat	Total Res. Chlorine	Bottle Group(s)
ChiporeF	Fresh, surface	☒	11/2/2017	1250	☒	☐		8.62	☐	263.9	A, B
STORET #	Temp (C)	Salinity (ppt)	pH	Sample Depth							
31020012	17.9	6.69	0.1								
Latitude	dd	dms	Longitude	dd	dms						
30°23'4.2"N	☒	85°10'17.06W	☒								
Location											
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Grab <td>Date <td>Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th> </td></td>	Date <td>Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th> </td>	Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th>	Eastern	Central	Date	mg/L	% sat	Total Res. Chlorine	Bottle Group(s)
		☐			☐	☐			☐		
STORET #	Temp (C)	Salinity (ppt)	pH	Sample Depth							
Latitude	dd	dms	Longitude	dd	dms						
Location											
Field ID	Matrix (type, e.g., Salt, Fresh, etc)	Grab <td>Date <td>Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th> </td></td>	Date <td>Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th> </td>	Time <th>Eastern</th> <th>Central</th> <th>Date</th> <th>mg/L</th> <th>% sat</th> <th>Total Res. Chlorine</th> <th>Bottle Group(s)</th>	Eastern	Central	Date	mg/L	% sat	Total Res. Chlorine	Bottle Group(s)
		☐			☐	☐			☐		
STORET #	Temp (C)	Salinity (ppt)	pH	Sample Depth							
Latitude	dd	dms	Longitude	dd	dms						
Location											

Relinquished By:

Sarah C Panek

Date/Time

11/2/2017, 1610

Shipping Method

hand delivered

Number of Coolers Shipped:

Received By:

Date/Time

Printed: 10/13/2017 1:41:34 PM

Page 1 of 2

Date of Request: 13-OCT-2017
Created By: PANEK_S On: 13-OCT-2017
Modified By: PANEK_S On: 13-OCT-2017
Customer: BSSP
Project: SCIREF
Division:
District:
Sampling Event: Reference Stream Sampling

Send Coolers To:

Phone: 850-245-8533
2600 Blair Stone Rd.

Tallahassee, FL 32399-2400
Attn: Sarah Panek

Program Module Number:
Priority: 3
Event Status: P
Criminal Investigation: NO
Chemistry Request Reviewed By:
Biology Request Reviewed By:
Sampling Kit Required: YES Ship on: 16-OCT-2017
Sampling Kit Shipped:
Sampling Kit Packed By:
Preservatives Needed: NO
Date to Receive Samples: 30-OCT-2017
Received By:

Send Final Report To:

2600 Blair Stone Rd.

Tallahassee, FL 32399-2400
Attn: Joy Jackson

Report Type: Final Only
FTP Data: NO
QC Report: YES
Date Log: NO
Authorization Log: NO

Comments: Kits will be picked up not shipped.

Bottle Group A (Water) With 2 Samples:

Bottle Type:	Number of Bottles:	Preserved With:
ALKALINITY Total Alkalinity	Template: DEFAULT	(SM 2320 B-97) Alkalinity in aqueous matrices as mg CaCO ₃ /L
CHLSUITE-W Chlorophyll-a, Corrected Chlorophyll-a, Uncorrected Phaeophytin-a	Template: DEFAULT	(SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry
ECOLI-18QT Escherichia Coli-Quant-Trace	Template: DEFAULT	(SM 9223 Quanti-Tray) Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems
PCR-BACR *BacR-qPCR	Template: DEFAULT	(SOP-PCR-1.4) Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction
PCR-GFD *GFD-purified-qPCR	Template: DEFAULT	(SOP-PCR-1.3) Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction
PCR-HF183 *HF183-qPCR	Template: DEFAULT	(SOP-PCR-1.0) Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction
TURBIDITY Turbidity	Template: DEFAULT	(EPA 180.1 Rev. 2.0) Turbidity in aqueous matrices
W-AHERB-AA *Triclopyr 2,4-D Bentazon MCP	Template: DEFAULT	(USGS O-2060-01) Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS
W-BR-IC *Bromide	Template: DEFAULT	(EPA 300.0) Bromide in aqueous matrices
W-CL-IC	Template: DEFAULT	(EPA 300.0 Rev. 2.1) Chloride in aqueous matrices