JB 6/15/15 74275

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

SAMPLE ID Bethel@MIL ORG ID TLH WQSP LATITUDE 30.252631
COUNTY Lafayette STORET # 21020030 LONGITUDE -83.26654
DATE 5-6-15 TIME 11:30 SAMPLING AGENCY AEQA
SITE NAME Bethel cr @ mill cr Rd
FIELD ID/NAME BETHEL@MIL RECEIVING BODY OF WATER Suwannee River

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)

Landscape Development Intensity Index (LDI): 1.42 (5/11)

Local Watershed Erosion (select one): ☐ None ☑ Slight ☐ Moderate ☐ Heavy
Local Watershed NPS Pollution: ☑ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side: Left Bank: >18 Right Bank: >18

Hydrologic Modification Score (per FT 3101): 2

High Water Mark: 6.6 (m) + 6.9 (above present water level) = 1.5 (present depth) (above bed)

Artificially Impounded: ☐ Yes ☑ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

5 m wide		
0.5 m/s	0.5 m/s	0.5 m/s
0.5 m deep	0.9 m deep	0.3 m deep

Artificially Channelized: ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☑	☐	☐
Silt Smothering:	☑	☐	☐	☐
Algae Smothering:	☑	☐	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☑ SCI ☐ RPS ☑ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	2	5	
Undercut Banks / Roots	3	5	
Leaf Packs or Mat	<1	2	
Aquatic Vegetation	0	—	
Rock or Shell Rubble..	50	5	
Sand.....	45	3	
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:	0.1	20.26	6.70	7.91	87.7	95	0.04	N/A
Mid:								☐ VOB
Bottom								TOTAL DEPTH

Meter ID: #7 — TOTAL DEPTH: .93 m

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: 5086050 Exp: 3/27/16

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:	☐	☑	☐	☐

System Type: Stream ☑ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐ _____

AMBIENT FIELD CONDITIONS / NOTES:
-100m: 30° 15' 9.5"; -83° 15' 56.7"
Very Dark water, 70's & sunny

☑ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM: S Claypool, M Niesen, R. Wiwi

SIGNATURE: [signature] DATE: 5-6-15

62-160.800, F.A.C.

Revision Date: March 1, 2014

FDEP FORM FD 9000-5: STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SAMPLING AGENCY:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
FDEP/AEQA	21020030	05/06/15	Suwannee

REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:
	La Fayette	Bethel Creek	Bethel@Mill

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 13	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 20	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 20	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 15 Primary Score 68	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 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 bankful 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 Right Bank 9 Left Bank 10	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

MN 139 ~~149~~ **TOTAL SCORE**

Date:	Analyst:	Signature:
5/6/15	J. Claypool M. Niesen, R. Wiwi	Jen Claypool

Revision Date: September 19, 2012

DEP FORM 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Bethel Creek	Date: 5.6.15	County: Lafayette	Storet Number: 21020030
Analyst: Meghann Niesen		Signature:	
Comments: 22m²			

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m^2 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.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides												Micranthemum glomeratum											
Bacopa caroliniana												Micranthemum umbrosum											
Bacopa monneri												Myriophyllum aquaticum											
Bidens mitis												Najas guadelupensis											
Boehmeria cylindrica												Nuphar luteum											
Centella asiatica												Orontium aquaticum											
Ceratophyllum demersum												Panicum hemitomon											
Chara												Panicum repens											
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides											
Colocasia esculenta												Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides											
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontedaria cordata											
Diodia virginiana												Potamogeton illinoensis											
Eichhornia crassipes												Ruellia simplex											
Eleocharis (wispy viviparous)												Sacciolepis striata											
Hydrilla verticillata												Sagittaria kurziana											
Hydrocotle												Sagittaria lancifolia											
Hygrophila polysperma												Sagittaria latifolia											
Hymenocallis												Salvinia minima											
Lachnanthes caroliniana												Samolus parviflora											
Landoltia punctata												Saururus cernuus											
Lemna												Sparganium americanum											
Limnophila sessiflora												Typha											
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
Ludwigia peruviana																							
Ludwigia repens																							
Luziola fluitans																							
If no Dominant or Co-Dominant were selected, indicate with "X"																							
Indicate % cover macrophytes per section																							
0-5% Macrophyte Coverage																							
>5 and ≤10% Macrophyte Coverage																							
>10 and ≤25% Macrophyte Coverage																							
>25 and ≤50% Macrophyte Coverage																							
> 50% Macrophyte Coverage																							

Form FD9000-28 fd9000-28

SITE NAME: Bethel Cr @ Mill Cr Rd DATE: 05/06/15 TIME 11:30 (military) EST CST DEPTH^: 0.9 ft (m) FIELD ID: Bethel@Mil

SAMPLING TEAM MEMBERS	WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
Meghann Niesen	✓				
Robert Wiwi		✓			
Jen Claypool			✓	✓	✓

SAMPLING EQUIPMENT

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

WATER QUALITY MEASUREMENTS

Instrument ID: #7

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:	5 W	☑ Ice ☑ H_2SO_4	SA508655	☑ <2	1
Filtered Nutrients	☐oP ☐Other:	W	☐ Ice ☐ .45 um Filter			
Unpreserved Nutrients	☐NO_2 ☐NO_3 ☐SO4 ☐Other:	W	☐ Ice			
Physical/Aggregate Properties	☑TDS ☑TSS ☐TS ☑ Turbidity ☑Alk ☑Color ☐Other:	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 ☐ Entero ☐ F Strep	5 W	☑ Ice			2
Macroinvertebrates	☐ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	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	W	☐ HNO_3		☐ <2	
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	☐ Ice			
	☐W-FL-PRO ☐W ☐Other:	W	☐ Ice ☐ H_2SO_4		☐ <2	
Pesticides	☐W-PEST-CL ☐W-PCB ☐W PEST-NP ☐W-PSCL-PCB	W	☐ Ice			
	☐W-NP-AA-SF ☐W-PC-AA-SF ☐W-PSHRB-NP ☐W-SLFN-UREA ☐ W-SULFN-LC ☐Other:	W	☐ Ice			
	☐W-ACIDHERB	W	☐ Ice ☐ H_2SO_4			
	☐ W-CARB	W	☐ Ice ☐MCAA			
Purgeables	☐ W-VOC-MS	W	☐ Ice			
	☐W-VOC-MS-A	W	☐ Ice ☐ HCl			
Bioassay	Specify Test:	W	☐ Ice			
OTHER	SUC-AA-R	5 W	☑ Other: Ice			1

Notes: _____

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.)

DEP Bureau of Laboratories Water Sample Collection Record

(Use with FDEP SOP-001/01 Form FD 9000-3 Physical/Chemical Characterization Field Sheet)

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Request Number: RQ-2015-04-13-46
SCI Reference sites

Event ID *

Customer: BSSP
Project ID: SCIREF
PMAS:

Requester: Larry Olney
Collected By: Meghann Niesen
Sampling Agency: AEQA

Field Report Prepared By:
Send Final Report To: Joy Jackson

Lab ID *

Location: Bethel Cr @ Mill Cr Rd
Field ID: Bethel@Mil
Matrix (include type e.g. Salt, Fresh, etc): SW - Fresh
Temp (C): 20.26
pH: 6.70
Latitude: 30.252631 ☑ dd ☐ dms
Longitude: -83.26654 ☑ dd ☐ dms

☐ Comp ☑ Grab
Collection (comp begin or grab) Eastern Central: Date 05/06/15 Time 11:30
Composite end Eastern Central: Date Time
Bottle Group(s)**: B/A
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L): 7.91
Storet Station Number: 21020030
Sample Depth ☑ m ☐ ft: 0.1
95
☐ Salinity (PPTh) ☑ Sp Conductance (umho/cm)
NPDES Number:
Comments:

Lab ID *

Location: Aucilla River @ 7 Bridges Rd
Field ID: Auc@7 Brdg
Matrix (include type e.g. Salt, Fresh, etc): SW - Fresh
Temp (C):
pH:
Latitude: 30.43422 ☑ dd ☐ dms
Longitude: -83.77214 ☑ dd ☐ dms

☐ Comp ☑ Grab
Collection (comp begin or grab) Eastern Central: Date 05/06/15 Time
Composite end Eastern Central: Date Time
Bottle Group(s)**:
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number: 2204130
Sample Depth ☐ m ☐ ft:
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
NPDES Number:
Comments: Did not sample - Need Boat

Lab ID *

Location:
Field ID:
Matrix (include type e.g. Salt, Fresh, etc):
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms

☐ Comp ☐ Grab
Collection (comp begin or grab) Eastern Central: Date Time
Composite end Eastern Central: Date Time
Bottle Group(s)**:
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Sample Depth ☐ m ☐ ft:
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
NPDES Number:
Comments:

Lab ID *

Location:
Field ID:
Matrix (include type e.g. Salt, Fresh, etc):
Temp (C):
pH:
Latitude: ☐ dd ☐ dms
Longitude: ☐ dd ☐ dms

☐ Comp ☐ Grab
Collection (comp begin or grab) Eastern Central: Date Time
Composite end Eastern Central: Date Time
Bottle Group(s)**:
Tot Res Chlorine (mg/L):
Diss Oxygen (mg/L):
Storet Station Number:
Sample Depth ☐ m ☐ ft:
☐ Salinity (PPTh) ☐ Sp Conductance (umho/cm)
NPDES Number:
Comments:

Relinquished By:	Date/Time	Shipping Method:	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
				5.6.15 15:58				

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003