



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

PAGE ____ OF ____

Data Qualified?
Yes / No

STORET Station Name: Little Withlacoochee Date: _____
(mm/dd/yyyy)

STORET Station ID: G4CE0091 Latitude: 28.575485
(Decimal Degrees)

WBID: 1381 RQ: 2016-05-23-57 ORG ID: 21FLUEN Longitude: -82.195704
(Decimal Degrees)

Receiving Body of Water: Withlacoochee River Field ID: G4CE0091 County: SUMTER

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
<u>Leif Boman</u> <u>Katie Williams</u>											☐ Sample Container	☐ Van Dorn	☐ Pole	
											☐ Carboy	☒ Syringe		
											☐ Dipper	☐ Other _____		
											Equipment ID _____			
											Collection Method			
											☐ Wading	☐ Via Boat		
											☐ From Shore	☐ Canoe/Kayak		
											☐ Other (note below)	☐ Electric Motor		
												☒ Gasoline Motor		

Water Level: Dry / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# Bathy Boof Photos: Yes / No Tide Falling: Yes / No / NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
<u>EST</u>	<u>1155</u>	<u>0.3</u>	<u>0.5</u>	<u>5.1</u>	<u>60</u>	<u>7.5</u>	<u>0.12</u>	<u>0.5(s)</u>	<u>249</u>	<u>23.4</u>
CEN										

Biological Samples Collected: None HA SCI LVS RPS LVI Other _____

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4			☐ <2
Metals	☐ W-JCPMS ☐ W-ICP	☐ Ice ☐ HNO2			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Kit A/C)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Kit B/D)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Contains
1:1
Sulfuric Acid
SA-5259020
EXP: 09/16/16
Warning!
See MSDS

Notes: <u>- Water level much lower than last sample & HA.</u> <u>- No LVS up to 2m² veg.</u>	Date: <u>05/23/16</u>	G4CE0091 Field ID ↑ STORET ↓ RQ-2016-05-23-57 G4CE0091
	Time: _____	
Signature: <u>K Williams</u>	Date: <u>5/23/16</u>	

Field Parameters Entered into LIMS: _____ (Initials/Date) Field Parameters QC in LIMS: _____ (Initials/Date)
Date Migrated to STORET: _____ (Initials/Date) Field Sheets Scanned/Saved: _____ (Initials/Date)

FDEP FORM FD 9000-3: PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID _____ ORG ID _____ LATITUDE 28.5754
 COUNTY Sumter STORET # C4CE0091 LONGITUDE -82.1957
 DATE 5/23/14 TIME _____ SAMPLING AGENCY ZIFLCCN
 SITE NAME Little Withlacoochee River
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Withlacoochee 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) <u>campground</u> <u>40</u> <u>5</u> <u>5</u>							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 <u>4</u> m wide <u>0.1</u> m/s <u>0.1</u> m/s <u>0.1</u> m/s <u>0.3</u> m deep <u>0.5</u> m deep <u>0.3</u> m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>12</u> Right Bank: <u>>18</u>		Hydrologic Modification Score (per FT 3101) ☐		High Water Mark: <u>1.5</u> + <u>0.5</u> = <u>2.0</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 % Coverage INVERT # Times Sampled PERI # Times Sampled Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation ☐ ☐ ☐ Rock or Shell Rubble.. ☐ ☐ ☐ Sand..... ☐ ☐ ☐ 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>0.3</u> <u>23.6</u> <u>7.5</u> <u>5.1</u> <u>60</u> <u>249</u> <u>0.12</u> <u>0.5</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB Bottom ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>Betty Boop</u> TOTAL DEPTH <u>0.5</u>		
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 Not Obs. Rare Common Abundant Periphyton: ☐ ☐ ☐ ☒ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐		
AMBIENT FIELD CONDITIONS / NOTES: <u>Water level much lower than last visit.</u> ☐ The antecedent hydrologic conditions have been met to my best knowledge.					
SAMPLING TEAM <u>LEB, KMW</u>			SIGNATURE <u>KWilliams</u>		DATE: <u>6/1/14</u>

Revision Date: September 19, 2012

* No LVS, < 2m²

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

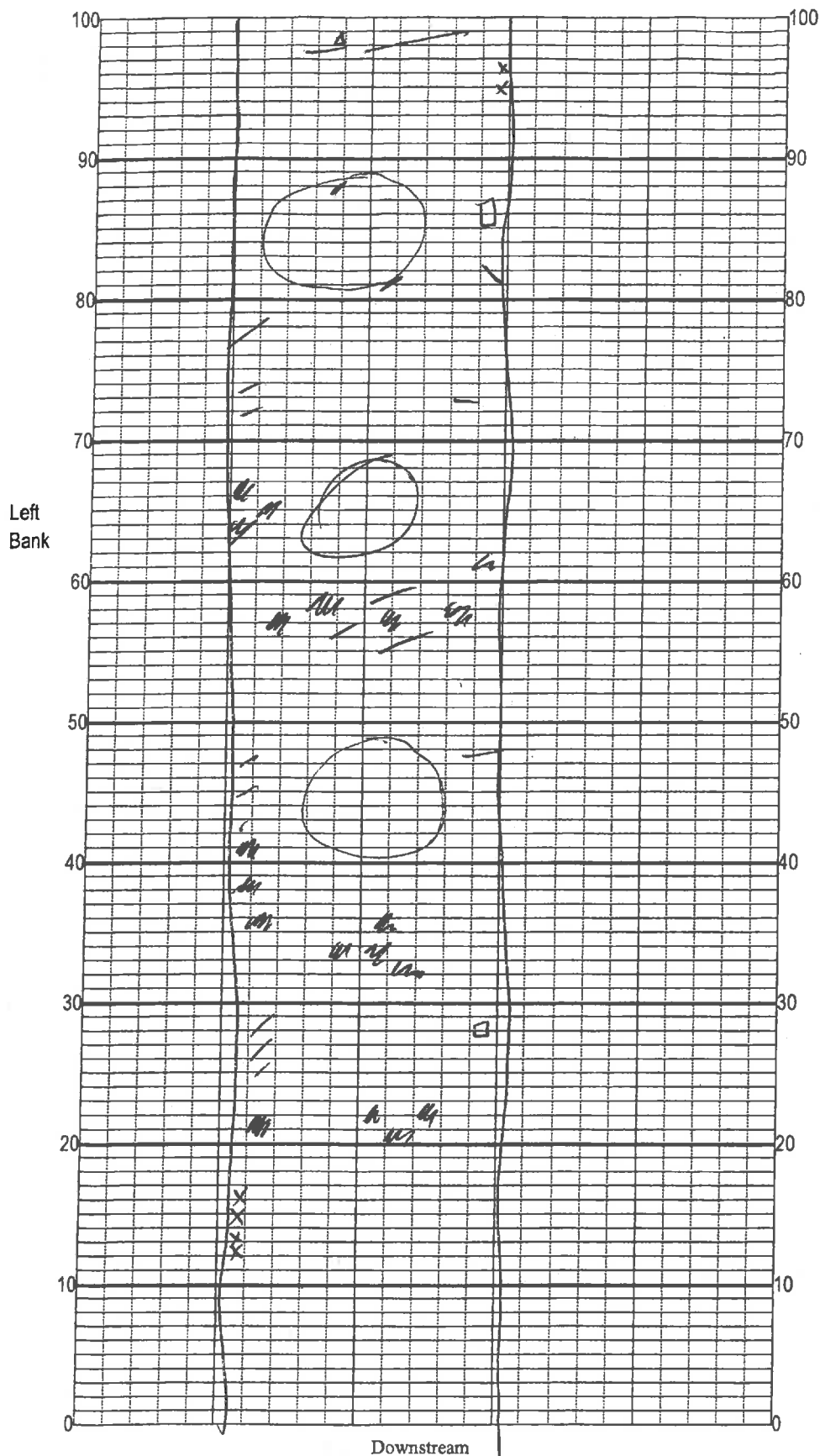
SAMPLING AGENCY: FDAP - CEROC		STORET STATION NUMBER: 64CE0091	DATE (MM/DD/YY): 5/23/16	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Sumter	LOCATION: Little Withlacoochee	FIELD ID/NAME:	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity 87	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 3	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 18 ----- Primary Score 32	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 8 Left Bank 8	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 Right Bank 10 Left Bank 8	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 64 74	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

Date: 5/23/16	Analyst: Katie Williams	Signature: KWilliams
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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: Little Withlacoochee River
Date: 5/23/16
Sampler: KRW, LGB

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 _____

☒ rocks _____

☐ _____

☒ Pools total # observed = _____
range expected = _____

Average width _____ m

Average depth _____ m

Velocity measured at _____ 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:

moss, silt, & algae smothering on rocks & logs

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Little Withlacoochee</u>					County: <u>Sumter</u>		Date: <u>5/23/14</u>		Investigators: <u>UGB/KMW</u>	
					STORET Station Number: <u>G4CE0091</u>					

(m)	1=right 9=left	Rank (N-6, X)	Estim	Cover	(m)	1=right 9=left	Rank (N-6, X)	Estim	Cover
0	1	N		64	60	1	N		68
	2	N				2	N		
	3	X				3	N		
	4	X				4	X		
	5	N	✓			5	N	✓	
	6	N	✓			6	N		
	7	3				7	3		
	8	N				8	3		
	9	N				9	N		
10	1	N		68	70	1	N		78
	2	N				2	N		
	3	N	✓			3	N		
	4	N	✓			4	X		
	5	N				5	X		
	6	X				6	X		
	7	X				7	X		
	8	N				8	N		
	9	N				9	N		
20	1	3		78	80	1	N		54
	2	3				2	N		
	3	N				3	N		
	4	N				4	X		
	5	N				5	X		
	6	X				6	X	✓	
	7	X				7	N		
	8	3				8	N		
	9	3				9	N		
30	1	N		85	90	1	N		42
	2	N				2	N		
	3	N	✓			3	N		
	4	N	✓			4	X		
	5	N	✓			5	X		
	6	N				6	X		
	7	N				7	X		
	8	N				8	N		
	9	3				9	N		
40	1	N		74	100	1	N		88
	2	N				2	N		
	3	N				3	N		
	4	N				4	3		
	5	N	✓			5	3		
	6	N	✓			6	3		
	7	N	✓			7	N		
	8	N				8	3		
	9	N				9	N		
50	1	3		82	Record "N" and check "Estimated" for points deeper than the presumed absent. Check "Estimated" if thickness estimated seen but not reached. Record "X" for points shallower than Secchi depth for which reached with the hand. No estimated rank. Record canopy cover as the number of small densiometer HAVE canopy cover. Measure facing upstream at point 4 Collect algal mat sample following DEP SOP FS 7240 if points with a thickness rank of 4, 5, or 6 is >20%.				
	2	3							
	3	X							
	4	X							
	5	X							
	6	X							
	7	X							
	8	X							
	9	3							

Secchi depth	1.7
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- 2016-05-23-57	

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