



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Little Charlie Bowlegs

Date: 10/30/2019

WIN/ Field ID: G3SD0155

WBID: 1857

Latitude: 27.489241

(mm/dd/yyyy)

(Decimal Degrees)

County: Highlands

ORG ID: 21FLFTM

Longitude: -81.59469

(Decimal Degrees)

Receiving Body of Water: Gulf of Mexico

RQ-2019- 10-28-72

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Nicole Reistad					X			X	☒ Sample Container	☐ Van Dorn	☐ Pole	
Gary Snorek				X		X			☐ Carboy	☒ Syringe		
Miranda Carroll / Chris Hornuth				X			X		☐ Dipper	☐ Other		
Water Level: Dry/ Pooled/ Low/ <u>Normal</u> / High / Flooded				Meter ID# <u>SNCR</u>				Matrix: <u>Fresh</u> / Marine / DI				
Photos: <u>Yes</u> / No				Flow: No Flow / Interstitial / <u>Flowing</u> / NA				Tide: Rising/ Falling/ Slack/ <u>NA</u>				
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 (µmhos/cm)	Temp. (C°)		
EST	1200	0.4	0.2	0.4	6.20	76.2	6.03	0.04	88.2	25.9		
CEN												
Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>RPS</u> Algae ID <u>LVS</u> LVI Other:												
SBIO ID Numbers: SBIO-ID: <u>80450</u> HA-ID: <u>16366</u> RPS-ID: <u>9474</u> Macrophyte-ID: <u>NA <2m</u> LIMS#: <u>2132691</u>												
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			☒ <2				
Metals	☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO3			☐ <2				
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice							
Chlorophyll	☒ CHLSUITE-W				☒ Ice							
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice							
Physical/Aggregate (Marine)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY				☐ Ice							
Macroinvertebrates	☐ MI-FW-QLDC				☐ Formalin							
Periphyton	☐ ALGAE-ID				☐ Ice							
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci				☒ Ice							
Molecular	☐ PCR-FILTER ☒ PCR-BacR ☐ PCR-GULL2				☒ Ice							
	☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD											
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											
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				☐ Ice							
Notes:					Field ID/WIN ID: <u>G3SD0155</u> Location: <u>Little Charlie Bowlegs</u>							
Signature: <u>Gary Snorek</u>					Date: <u>10/30/19</u>							

LIMS EVENT ID: 50-DIST-2019-10-31-01

WIN Import ID:

Enter Field Parameters, Verify Station ID in LIMS DMT: CH 11/4/19

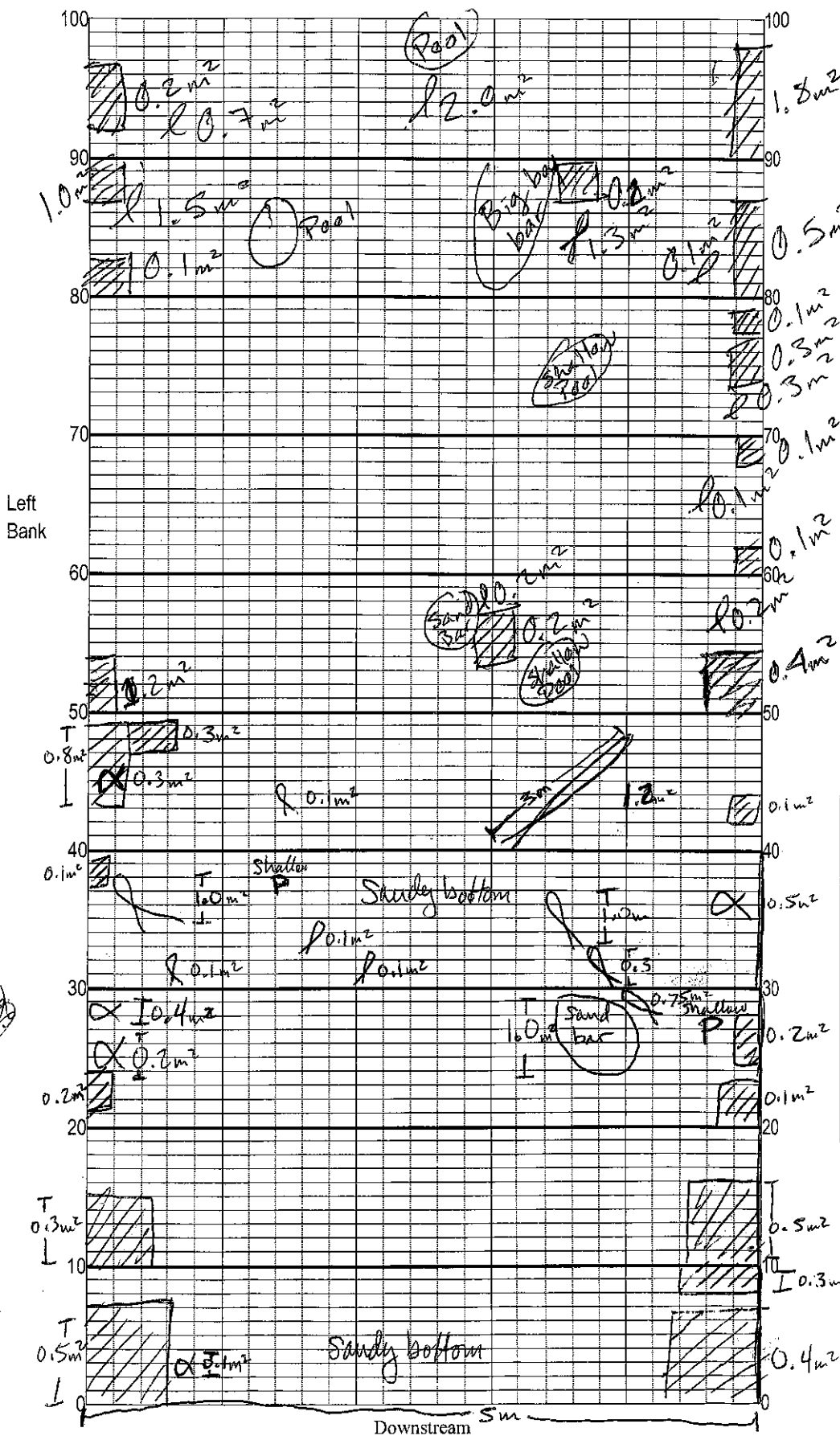
QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets CH 11/4/19 Migrate Data to WIN: (Initials/Date)

Verify Data in WIN: (Initials/Date)

(Initials/Date)

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Little Charlie Bouleze
 Date: 10/30/19
 Sampler: Miranda Carroll

100 m: Latitude 27.4893748
 Longitude -81.5436565
 0 m: Latitude 27.4890458
 Longitude -81.5943697

Substrates: Code key, draw proportionate habitat abundance.	%
☒ Snags	<u>2.51</u>
☒ Roots/undercut banks	<u>2.06</u>
☒ Leaf Packs (or mats)	<u>0</u>
☒ Aquatic Macrophytes	<u>0</u>
☒ rocks	<u>0</u>
☐	
☐ Pools	total # observed = <u>2</u> # range expected = <u>2-4</u>

Average width 5 m
 Average depth 0.4 m

Velocity measured at 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:

rate → 0m 6 sec.

rate → 40m 7 sec

rate → 100m 6 sec

$$6.333 = 0.16 \text{ m/s}$$

Length of grid represents 100 m of stream (not linear meters).
 (Horizontal scale is double vertical scale, draw proportionately).

Roots - 10.3 m²

Snags - 12.55 m²

500 m²
 total area

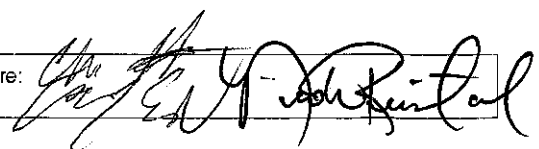
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YYYY):	RECEIVING BODY OF WATER:
REMARKS:	COUNTY:	LOCATION:	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>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 <u>8</u> 7 6	5 4 3 2 1
Substrate Availability <u>5</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 <u>5</u> 4 3 2 1
Water Velocity <u>13</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 <u>13</u> 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>12</u> ----- Primary Score <u>38</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 <u>12</u> 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 or straightening 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>16</u>	20 19 18 17 <u>16</u>	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 woody root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.
Right Bank <u>9</u> Left Bank <u>9</u>	10 <u>9</u>	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>10</u> Left Bank <u>10</u>	<u>10</u> 9	8 7 6	5 4	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.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>9</u> Left Bank <u>9</u> ----- Secondary Score <u>72</u>	10 <u>9</u>	8 7 6	5 4	3 2 1

110

TOTAL SCORE

Date: <u>10/30/19</u>	Analyst: <u>Chris Hornum, Miranda Carroll, Gary Snorek, Nicole Reistad</u>	Signature: 
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21FLFTM LATITUDE 27.489241
COUNTY Highlands STORET # _____ LONGITUDE -81.59469
DATE 10/30/2019 TIME 1200 SAMPLING AGENCY FDEP-SROC
SITE NAME Little Charlie Bowlegs @ Parnell Rd
FIELD ID/NAME G3SD0155 RECEIVING BODY OF WATER Gulf of Mexico

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>23</u> Silviculture _____ Field/Pasture <u>75</u> Agricultural _____ Residential <u>2</u> 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 <u>5</u> m wide <u>0.17</u> m/s <u>0.17</u> m/s <u>0.17</u> m/s <u>0.2</u> m deep <u>0.4</u> m deep <u>0.2</u> m deep			
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: _____ + _____ = _____ (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			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.2</u> <u>25.9</u> <u>6.03</u> <u>6.20</u> <u>76.2</u> <u>88.2</u> <u>0.04</u> <u>6.4</u> Mid: _____ _____ _____ _____ _____ _____ _____ ☒ VOB Bottom: _____ _____ _____ _____ _____ _____ _____ Meter ID: <u>SNEK</u> TOTAL DEPTH <u>0.4</u>		
Woody Debris (Snags) <u>2.51</u> Undercut Banks / Roots <u>2.06</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>0</u> Rock or Shell Rubble <u>0</u> Sand _____ Mud / Muck / Silt _____ Other _____ Other _____			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SA9129100</u> Exp: <u>5/9/20</u> 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 ☐ Globs ☐ 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: ☒ The antecedent hydrologic conditions have been met to my best knowledge.		

SAMPLING TEAM

Nicole Reistad, Gary Shorek, Miranda Carroll,
Chris Hormuth

SIGNATURE:

[Signature]

DATE:

11/26/19

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Little Charlie Boulders</u>					County:		Date: <u>10/30/19</u>		Investigators: <u>MC NR GS CH</u>	
					STORET Station Number:					
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	N		60	1	N	N		
	2					2				
	3					3				
	4					4				
	5			72		5			47	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N	N		70	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5			45	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N	N		80	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5			85	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N	N		90	1	N	N		
	2					2				
	3					3				
	4					4				
	5			85		5			48	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N	N		100	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5			89	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N	N		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%.					
	2									
	3									
	4									
	5			89						
	6									
	7									
	8									
	9									

Secchi depth
Estimated?

points ranked 4-6
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-

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