



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Brothers River

Date: 6/13/2019
(mm/dd/yyyy)

WIN/ Field ID: G2TLHR0024

WBID: 3751

Latitude: 29.94442

(Decimal Degrees)

County: Gulf

ORG ID: 21FTLHR

Longitude: 85.04166

(Decimal Degrees)

Receiving Body of Water: Apalachicola River

RQ: 2019-07-18-31

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jon Woods					X		X		
Ben Harden						X	X	X	

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with VSI		
Equipment ID 154177		

Collection Method		
☐ Wading	☐ Canoe/Kayak	
☐ From Shore	☐ Electric Motor	
☐ Other	☒ Gasoline Motor	

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded

Meter ID# 154177

Matrix: Fresh / Marine / DI

Photos: Yes No

Flow: No Flow / Intertidal / Flowing / NA

Tide: Rising/ Falling/ Slack/ NA

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 (umhos/cm)	Temp. (C°)
EST	1050		0.3	0.3	6.27	80.4	7.54	0.06	126	26.2
CEN	1054	8.0	7.5		6.21	79.6	7.44	0.06	126	26.2

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: HA-ID: RPS-ID: Macrophyte-ID: LIMS#:

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	7163030	10/30/17	☒ <2
Metals	☒ W-ICPMS ☐ W-ICP	☒ Ice ☒ HNO3	9099030	4/9/20	☒ <2
Filtered Nutrients	☐ W-PQ4-F ☐ Field Filtered 0.45 um Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY / ☐ W-CI-IC / ☐ 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 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☒ W-PSNP-TQ ☐ W-CT-CL-R ☒ W-E8321-DI ☐ W-PCL-SQ-R ☒ WE8321-MS ☐ W-CARB-AA	☒ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes:

Place Label Here

Signature: [Signature]

Date: 6/13/19

LIMS EVENT ID:

WIN Import ID:

Enter Field Parameters, Verify Station ID in LIMS DMT:

QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets

6-14-19
(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

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

SAMPLE ID _____ ORG ID 8034 LATITUDE _____
 COUNTY _____ STORET # _____ LONGITUDE _____
 DATE 6/13/19 TIME 1050 SAMPLING AGENCY _____
 SITE NAME Brookings River
 FIELD ID/NAME WATLH00024 RECEIVING BODY OF WATER Apalachicola River

RIPARIAN ZONE / STREAM FEATURES

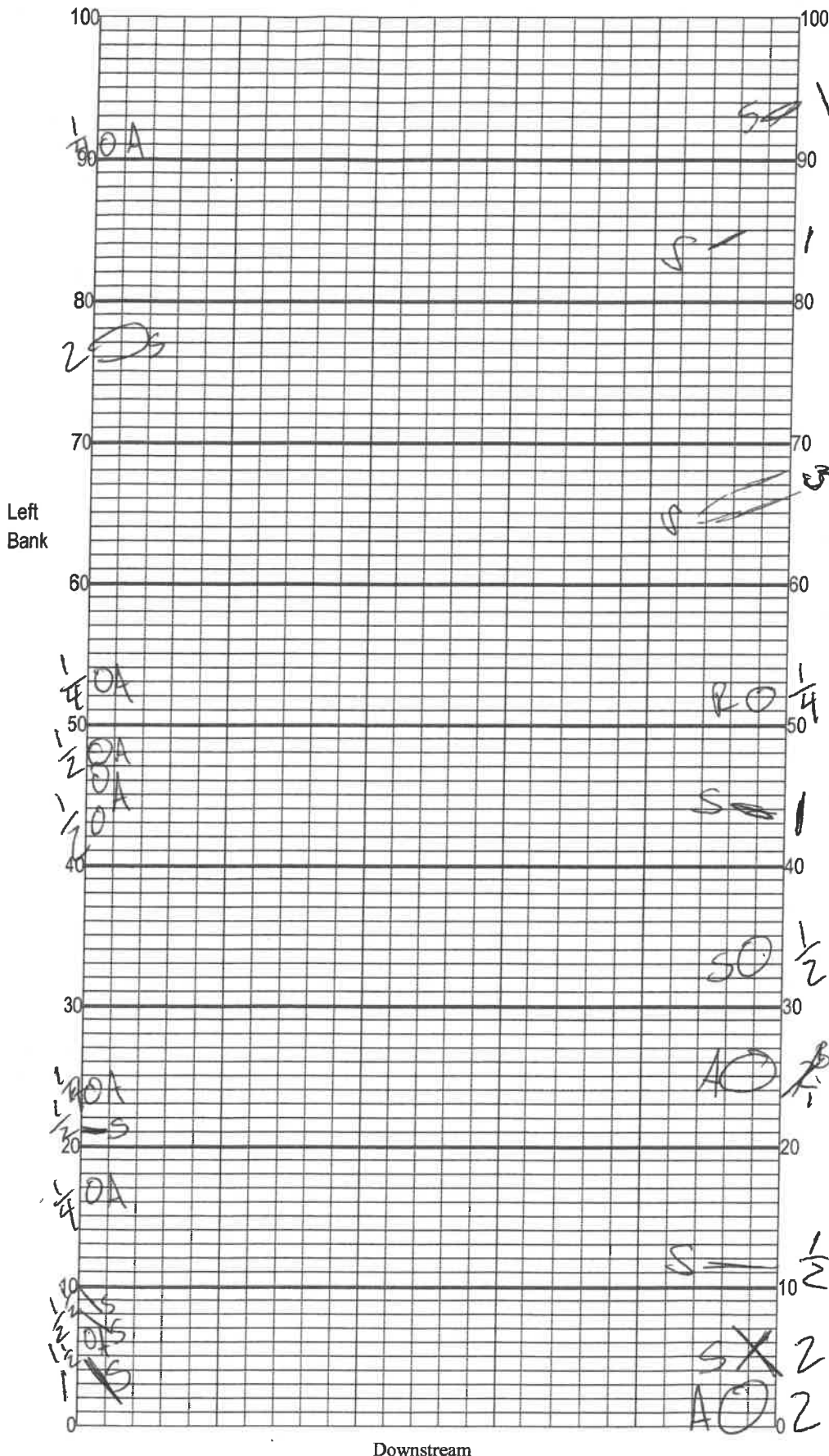
PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>60</u> Silviculture <u>20</u> Field/Pasture _____ Agricultural <u>15</u> Residential <u>5</u> Commercial _____ Industry _____ Other (Specify) _____							Landscape Development Intensity Index (LDI) _____
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>20</u> m wide <u>0.33</u> m/s <u>0.33</u> m/s <u>0.25</u> m/s <u>1.0</u> m deep <u>8.0</u> m deep <u>2.0</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) _____			
High Water Mark: <u>0.3</u> + <u>8.0</u> = <u>8.3</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 ☐
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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>0.3</u>	<u>26.2</u>	<u>7.54</u>	<u>6.77</u>	<u>80.4</u>	<u>128</u>	<u>0.06</u>	<u>0.3</u>			
Mid:									☐ VOB		
Bottom:	<u>7.5</u>	<u>26.2</u>	<u>7.44</u>	<u>6.21</u>	<u>79.6</u>	<u>128</u>	<u>0.06</u>		TOTAL DEPTH		
Meter ID:	<u>154177</u>								<u>8.0</u>		
Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐				Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐							
Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>763030</u> Exp: <u>10/3/19</u>				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				System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>River</u>							
Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☒ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐				AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.							
SAMPLING TEAM <u>Woods/Harden</u>				SIGNATURE: _____		DATE: _____					

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



Location: Brothers River
 Date: 6/13/19
 Sampler: Jon Woods/Ben Harden

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

Substrates: Code key, draw proportionate habitat abundance. %

☐ S	Snags	<u>0.75</u>
☐ R	Roots/undercut banks	<u>0.013</u>
☐ L	Leaf Packs (or mats)	_____
☐ A	Aquatic Macrophytes	<u>0.01</u>
☐ K	Rock	_____
☐	_____	_____
☐	Pools	total # observed = _____ # range expected = _____

Average width 20 m
 Average depth 8 m

Velocity measured at 0 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:

0.33 m/s
15 S
8 A
0.25 R

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

[illegible]

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Brothers River

County:

Date: 06/13/19

Investigators:

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			8		5			40	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N	✓		70	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			12		5			28	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N	✓		80	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			0		5			12	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N	✓		90	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			16		5			4	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N	✓		100	1	N	✓		
	2					2				
	3					3				
	4					4				
	5			48		5			0	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N	✓			1	N	✓		
	2					2				
	3					3				
	4					4				
	5			92		5				
	6					6				
	7					7				
	8					8				
	9					9				

STORET Station Number:

Secchi depth 0.3
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-299-02-18-31

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 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>8034</u>		STORET STATION NUMBER: <u>02TLR0024</u>	DATE (MM/DD/YY): <u>6/13/19</u>	RECEIVING BODY OF WATER: <u>Apalachicola River</u>
REMARKS:	COUNTY:	LOCATION: <u>Brothers River</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>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>1</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>20</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 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>14</u> Primary Score <u>43</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 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 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>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 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>10</u> Left Bank <u>10</u>	10 9	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>	10 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>8</u> Left Bank <u>8</u> Secondary Score <u>76</u>	10 9	8 7 6	5 4	3 2 1

119 **TOTAL SCORE**

Date: <u>6/13/19</u>	Analyst: <u>Woods</u>	Signature: <u>[Signature]</u>
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