

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:	UNNAMED BRANCH AT HARDAWAY RD 2				Sample Date:	9/27/2023	
WIN / Field ID:	G2TLHR0041	ORG ID:	21FTLHR	ENR:	-		
County:	GADSDEN	WBID:	488	STREAM			
Receiving Body of Water:	Flat Creek				RQ-	2023-01-09-50	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Paul Blair		x		x	x
Jeffrey Feinberg	x		x		

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
	Syringe	Pole	
	Syringe Lot# 1091364	Filter Lot#	
	Secchi Equipment ID:	#1	
Collection Method			
	Wading	Canoe/Kayak	
x	From Shore	Electric Motor	
		Gasoline Motor	
	Depth Measured With	Meter	

Water Level:	Normal
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	No
Meter ID:	153484
Depth Gauge ID:	depth_gauge

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPTth)
EST	1130	0.04	0.02	8.19	95.6	23	6.3	0.04	25.4	0.01
								VOB (s)		

Biological Samples Collected: NoneSBIO Visit ID: HA ID: RPS ID: Macrophyte ID: LIMS Sample ID
In The Macrophyte Module:

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
	Type	Lot#	Expiration Date	pH Check				
Microbiology	E. coli			ICE				
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
Nutrients	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			ICE				
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE	Syringe Lot#:1091364; Filter Lot#:			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	3193140	07/31/2024	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	3123030	05/10/2024	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS		Ice	MCAA***			
Macroinvertebrates								
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R			*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular								
Periphyton								
Phytoplankton								
BOD								
DOC					SyringeLot#		FilterLot#	
Other(s)								
Field Comments:	Overcast							
Comments on COC:								
Relinquish Date:	09/27/2023	Signature:						

LIMS EVENT ID: WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:

Save Field Sheets on Network: Migrate Data to WIN:

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

SAMPLE ID G2TLHR0041 ORG ID _____ LATITUDE _____
 COUNTY Gadsden STORET # _____ LONGITUDE _____
 DATE 9-27-23 TIME 11:30 SAMPLING AGENCY 21FLTLHR
 SITE NAME Unnamed Branch @ Hardaway Rd 2
 FIELD ID/NAME G2TLHR0041 RECEIVING BODY OF WATER NA

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>40</u> Silviculture <u>30</u> Field/Pasture _____ Agricultural _____ Residential <u>30</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 _____ m wide _____ m/s _____ m/s _____ m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>218</u> Right Bank: <u>218</u>				Hydrologic Modification Score (per FT 3101) _____				_____ m/s _____ m/s _____ m/s
High Water Mark: <u>0.2</u> + <u>0.1</u> = <u>0.3</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				_____ m deep _____ m deep _____ m deep
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 Invert ☐ PERI % Coverage # Times Sampled # 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: _____ Mid: _____ Bottom: _____ Meter ID: <u>153484</u>		
Woody Debris (Snags) <u>5.5</u> Undercut Banks / Roots <u>2</u> Leaf Packs or Mat <u>1.25</u> Aquatic Vegetation <u>0.25</u> Rock or Shell Rubble... Sand..... 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: <u>3193140</u> Exp: <u>7-31-23</u>		
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: * field readings on digital field sheet ☒ The antecedent hydrologic conditions have been met to my best knowledge.		

SAMPLING TEAM

Blair/Feinberg

SIGNATURE

Paul

DATE:

9-27-23

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>G2TLHR0041</u>					County: <u>Gadsden</u>		Date: <u>9-27-23</u>		Investigators: <u>Paul Blair</u>	
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	STORET Station Number:
0	1	N			60	1	N			Secchi depth <u>6.2</u> Estimated?
	2					2				
	3					3				
	4					4				
	5			72		5			80	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			# points ranked 4-6 <u>6</u> total points assessed <u>99</u> % points ranked 4-6 <u>0</u>
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N			Check accompanying data collected at same site/date: Algal mat sample Linear Veg Survey ☒ Habitat Assessment ☒ SCI/Biorecon Water sample ☒ RQ- <u>2023-01-09-50</u>
	2					2				
	3					3				
	4					4				
	5			86		5			86	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			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
	2					2				
	3					3				
	4					4				
	5			96		5			78	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2					2				
	3					3				
	4					4				
	5			89		5			90	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	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									

[illegible]

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

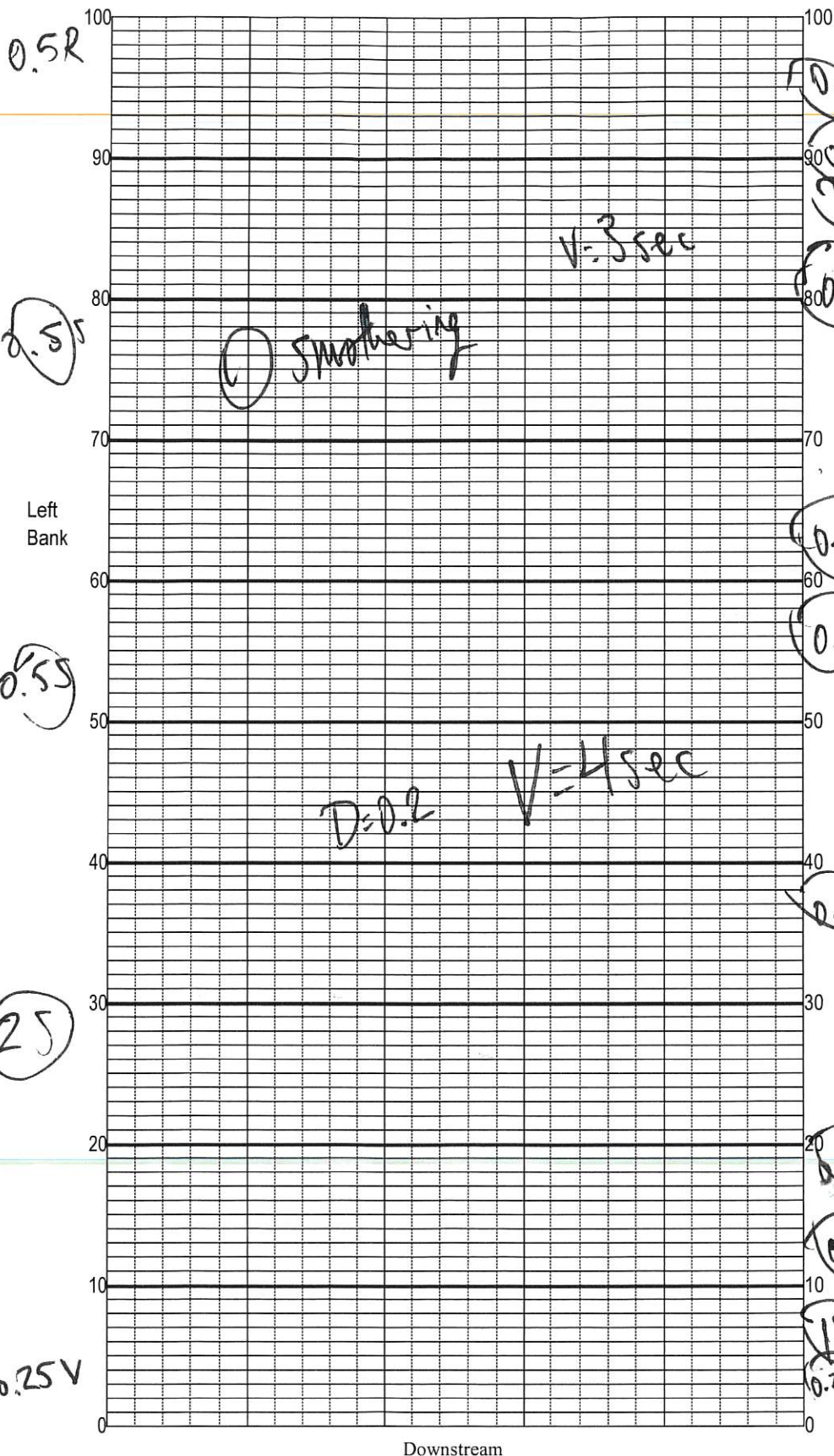
SAMPLING AGENCY: <u>21FLTLHR</u>		STORET STATION NUMBER:	DATE (MM/DD/YY): <u>9-27-23</u>	RECEIVING BODY OF WATER: <u>N/A</u>
REMARKS:	COUNTY: <u>Gadsden</u>	LOCATION: <u>G2TLHRO041</u>	FIELD ID/NAME: <u>G2TLHRO041</u>	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components <u>8</u>	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>16</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 5 4 3 2 1
Water Velocity <u>17</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>15</u> ----- Primary Score <u>53</u> <u>45</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 Artificial Channelization <u>20</u>	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 <u>6</u> Left Bank <u>6</u>	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 <u>10</u> Left Bank <u>10</u>	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 <u>8</u> Left Bank <u>8</u> ----- Secondary Score <u>68</u>	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

113 121 16 TOTAL SCORE

Date: <u>9-27-23</u>	Analyst: <u>Paul Blair</u>	Signature: <u>Paul Blair</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: G2TLH R0041
 Date: 9-27-23
 Sampler: Paul Blair

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

Substrates: Code key, draw proportionate habitat abundance.		%
<u>S</u>	Snags	<u>5.5</u>
<u>R</u>	Roots/undercut banks	<u>2</u>
<u>L</u>	Leaf Packs (or mats)	<u>1.25</u>
<u>V</u>	Aquatic Macrophytes	<u>0.25</u>
<u>K</u>	<u>rock</u>	_____
_____	_____	_____
_____	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:

S = 5.5
L = 1.25
R = 2
V = 0.25

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

← 1.0 m →