

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:		UNNAMED CREEK HWY 90				Sample Date:		5/2/2023	
WIN / Field ID:	G1TLHR0186	ORG ID:	21FLTLHR	ENR:	-	Latitude:	30.54235		
County:	JEFFERSON	WBID:	459	STREAM		Longitude:	-83.90442		
Receiving Body of Water:		Ward Creek				RQ-	2023-04-24-73		

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jade Burtchett	x		x		
Chris Green		x		x	x

Sampling Equipment			
x	Sample Container		Carboy
	Dipper		Van Dorn
x	Syringe		Pole
Syringe Lot# 1091364		Filter Lot# 17347262	
Secchi Equipment ID:		#1	
Collection Method			
x	Wading		Canoe/Kayak
	From Shore		Electric Motor
			Gasoline Motor
Depth Measured With		Meter	

Water Level:	Normal
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	154177
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	1000	0.6	0.3	8.82	94.2	18.5	6.71	0.6	71.1	0.03
								VOB (s)		

Biological Samples Collected:		HA		SCI	
SBIO Visit ID:	HA ID:	RPS ID:	Macrophyte ID:	LIMS Sample ID Entered Into The Macrophyte Module:	

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type	Lot#	Expiration Date	pH Check	
Microbiology	E. coli			ICE				
Chlorophyll	CHLSUITE-W							
Physical/Aggregate	ALKALINITY, TURBIDITY, W-F, W-TSS							
Nutrients	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS							
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE	Syringe Lot#:1091364; Filter Lot#:17347262			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	3013020	01/24/25	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	2230040	09/01/23	HNO3 pH<2
Organics (LC)	W-E8321-DI	W-E8321-MS						
Macroinvertebrates	MI-FW-QLDC			Formalin	8.280122TR			
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R		Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular								
Periphyton								
Phytoplankton								
BOD								
DOC								
Other(s)					SyringeLot#		FilterLot#	
Field Comments:	Clear / SCI Collection Time: 1010							
Comments on COC:								
Relinquish Date:	05/02/2023	Signature:						

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ QC Station ID, Field Parameters In LIMS DMT: _____
(Initials/Date) (Initials/Date)Save Field Sheets on Network: _____ Migrate Data to WIN: _____
(Initials/Date) (Initials/Date)

SAMPLE ID	ORG ID <u>21FLTLHR</u>	LATITUDE
COUNTY <u>Jefferson</u>	STORET #	LONGITUDE
DATE <u>05/02/23</u>	TIME	SAMPLING AGENCY <u>8034</u>
SITE NAME <u>Unnamed Creek HWY90</u>		
FIELD ID/NAME		RECEIVING BODY OF WATER <u>Ward Crk</u>

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>20</u> Silviculture <u>35</u> Field/Pasture <u>40</u> Agricultural <u>5</u> Residential <u>5</u> Commercial <u>5</u> Industry <u>5</u> Other (Specify) <u>5</u>							Landscape Development Intensity Index (LDI) <u>5</u>
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>3</u> m wide 0.3 m/s 0.6 m/s 0.3 m/s 0.2 m deep 0.25 m deep 0.2 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) <u>5</u>			
High Water Mark: <u>0.3</u> + <u>0.6</u> = <u>0.9</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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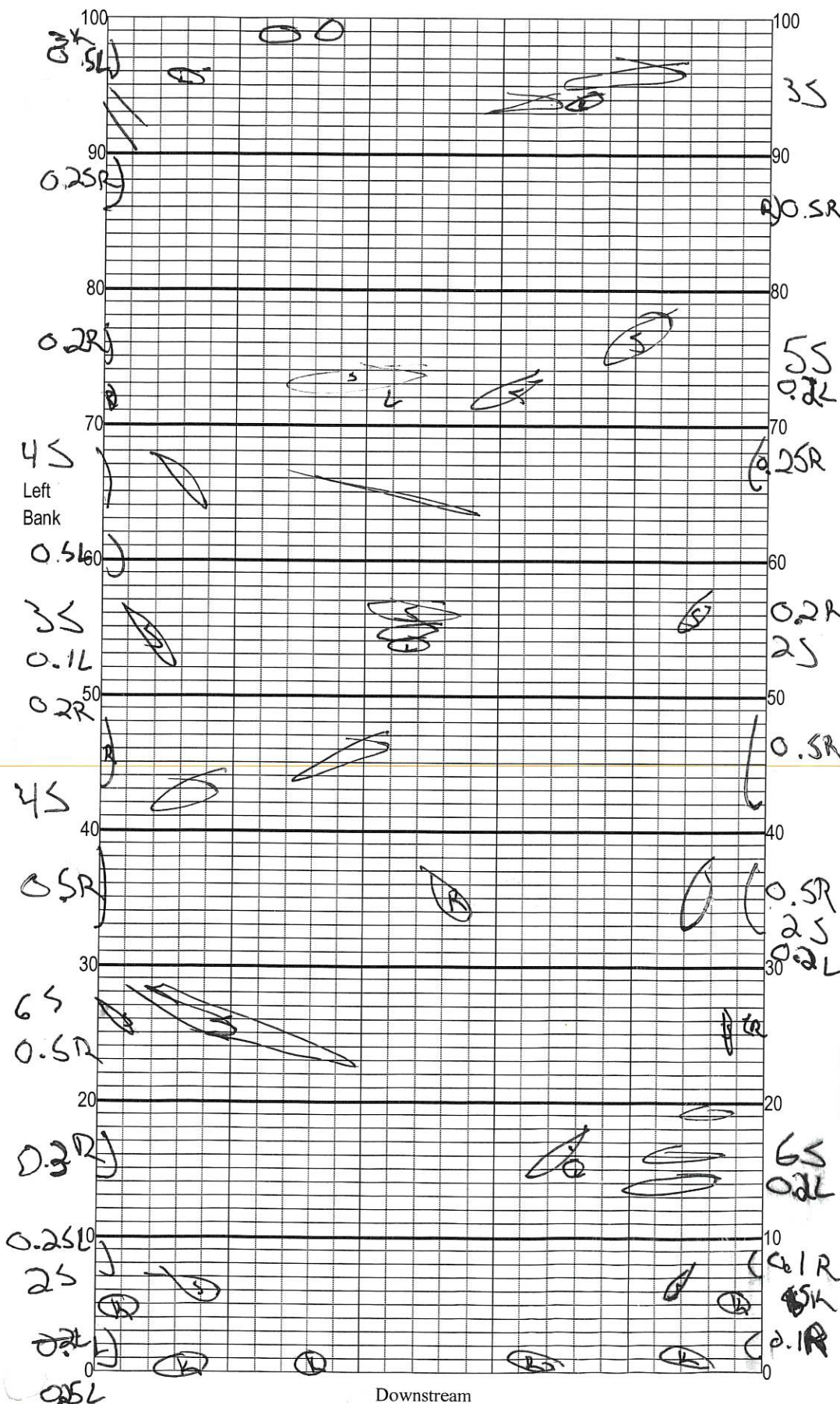
SUBSTRATE TYPE

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>12.33</u> <u>45</u> <u>4</u> <u>1.37</u> <u>4</u> <u>0.73</u> <u>3</u> <u>2.67</u> <u>4</u> Mid: <u>1.37</u> <u>4</u> <u>0.73</u> <u>3</u> <u>2.67</u> <u>4</u> Bottom: <u>0.73</u> <u>3</u> <u>2.67</u> <u>4</u> Meter ID: <u>154177</u>	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: _____ Exp: _____	Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐
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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: ☒ The antecedent hydrologic conditions have been met to my best knowledge.
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SAMPLING TEAM <u>J. Burtchell, C. Green</u>	SIGNATURE: <u>[Signature]</u>	DATE: <u>05/02/23</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: GTLHR0186
 Date: 5/2/23
 Sampler: J. Burtchell

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ S Snags 12.33

☐ R Roots/undercut banks 1.37

☐ L Leaf Packs (or mats) 0.73

☐ V Aquatic Macrophytes _____

☐ Sam Sand 82.9

☐ K Rock 2.67

☐ Pools total # observed = _____
 # range expected = _____

Average width 3 m

Average depth 0.6 m

Velocity measured at 30 meter mark.

WQ & chemistry taken at 30 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: Low h₂O

$$S = 37 = 12.33$$

$$R = 4.1 = 1.37$$

$$L = 2.2 = 0.73$$

$$K = 8 = 2.67$$

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

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

18432

SAMPLING AGENCY: <u>21FELHR</u> <u>8034</u>		STORET STATION NUMBER:	DATE (MM/DD/YY): <u>05/02/23</u>	RECEIVING BODY OF WATER: <u>Ward crk</u>
REMARKS:	COUNTY: <u>Jefferson</u>	LOCATION: <u>Unnamed Creek HWY 90</u>	FIELD ID/NAME: <u>G-ITLHR0186</u>	

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>16</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>11</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>15</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>12</u> Primary Score <u>54</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. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening 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
Artificial Channelization <u>20</u>				
Bank Stability Right Bank <u>3</u> Left Bank <u>3</u>	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. 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 woody 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>10</u> Left Bank <u>10</u> Secondary Score <u>66</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

120

TOTAL SCORE

Date: <u>05/02/23</u>	Analyst: <u>J. Burchett</u>	Signature: <u>[Signature]</u>
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10105

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

 Site: GITLH30186 County: Jefferson Date: 05/02/23 Investigators: J. B. Artch, J. Green

STORET Station Number:

W31D 459

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	N				2			
	3					3			
	4					4			
	5			96		5			89
	6					6			
	7					7			
	8					8			
	9					9			
10	1	N			70	1	N		
	2					2			
	3					3			
	4					4			
	5			94		5			93
	6					6			
	7					7			
	8					8			
	9					9			
20	1	N			80	1	N		
	2					2			
	3					3			
	4					4			
	5		✓	96		5			84
	6		✓			6		✓	
	7					7		✓	
	8					8			
	9					9			
30	1	N			90	1	N		
	2					2			
	3					3			
	4		✓			4		✓	
	5		✓	90		5			90
	6					6			
	7					7			
	8					8			
	9					9			
40	1	N			100	1	N		
	2		✓			2			
	3					3			
	4			92		4			
	5					5			78
	6					6			
	7					7			
	8					8			
	9					9			
50	1	N				1	N		
	2					2			
	3					3			
	4					4			
	5			94		5			
	6					6			
	7					7			
	8					8			
	9					9			

 Secchi depth 0.6
 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-2023-04-24-73

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%.