



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes / No

WIN Station Name:	SWEETWATER CREEK AT 75M E OF MARVILLE CR				Sample Date:	3/21/2024	
WIN / Field ID:	G5CE0051	ORG ID:	21FLCEN	ENR:	-	Latitude:	29.0996
County:	VOLUSIA	WBID:	2666A	STREAM		Longitude:	-81.0181
Receiving Body of Water:	-				RQ-	2024-03-04-42	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Katie March		x		x	x
Victoria Schwartz	x		x		

Sampling Equipment			
x	Sample Container		Carboy
	Dipper		Van Dorn
x	Syringe		Pole
	Syringe Lot# 3066762		Filter Lot# 17769663
	Secchi Equipment ID:	Crusty	
Collection Method			
x	Wading		Canoe/Kayak
	From Shore		Electric Motor
			Gasoline Motor
	Depth Measured With	Secchi	

Water Level:	Normal
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	Yes
Meter ID:	Scud Bucket
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	1145	0.4	0.2	6.92	74.3	19.2	7.3	0.4	483.3	0.23
								VOB (s)		

Biological Samples Collected:

HA RPS SCI

SBIO Visit ID:

88651

HA ID:

RPS ID:

10282

Macrophyte ID:

N/A

LIMS Sample ID

In The Macrophyte Module:

2477204

Parameter Suite	Parameter Methods (LIMS Test Codes)	Preservation				
		Type	Lot#	Expiration Date	pH Check	
Microbiology						
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#:3066762; Filter Lot#:17769663			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	ICE	H2SO4*	SA3340020	12/11/2024	H2SO4 pH<2
Metals	W-ICPMS W-ICP W-HARD	ICE	HNO3**	NA3193130	07/27/2024	HNO3 pH<2
Organics (LC)	W-E8321-DI W-E8321-MS		MCAA***			
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)						
Field Comments:	Sunny / SCI Collection Time: 1230					
Comments on COC:						
Relinquish Date:	03/21/2024	Signature:				

LIMS EVENT ID: CEN-DIST-2024-03-22-01

WIN Import ID: 48912

Enter Field Parameters, Verify Station ID In LIMS DMT: KWM 4/26/24

QC Station ID, Field Parameters In LIMS DMT: VLS 5/13/24

Save Field Sheets on Network: KWM 6/26/24 (Initials/Date)

Migrate Data to WIN: KWM 6/26/24 (Initials/Date)

(Initials/Date)

(Initials/Date)

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

SAMPLING AGENCY:		STORET STATION NUMBER: <u>G5CE0051</u>	DATE (MM/DD/YY): <u>3/21/24</u>	RECEIVING BODY OF WATER: <u>Spring Creek</u>
REMARKS:	COUNTY: <u>Volusia</u>	LOCATION: <u>Sweetwater Creek</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>7</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>4</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>18</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>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.
Primary Score <u>41</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	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>17</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>5</u> Left Bank <u>7</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>3</u> Left Bank <u>7</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>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 4	3 2 1

88

TOTAL SCORE

Date: <u>3/21/24</u>	Analyst: <u>R. March, V. Schwartz</u>	Signature: <u>R. March</u>
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID _____ LATITUDE _____
COUNTY Johanna STORET # 65CE0051 LONGITUDE _____
DATE 3/21/24 TIME _____ SAMPLING AGENCY _____
SITE NAME Sweetwater Creek
FIELD ID/NAME _____ RECEIVING BODY OF WATER Spume Creek

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>5</u> <u>95</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>2.4</u> m wide m/s <u>0.29</u> m/s m/s m deep <u>0.4</u> m deep m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>719</u> Right Bank: <u>5</u>				Hydrologic Modification Score (per FT 3101)					
High Water Mark: <u>1.5</u> + <u>0.4</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 # 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: <u>0.2</u> <u>19.2</u> <u>7.3</u> <u>6.92</u> <u>74.3</u> <u>483.3</u> <u>0.23</u> Mid: ☒ VOB Bottom: Meter ID: <u>Crusty</u>					
Woody Debris (Snags) <u>7</u> Undercut Banks / Roots <u>7</u> Leaf Packs or Mat Aquatic Vegetation <u>3</u> Rock or Shell Rubble.. Sand..... <u>3</u> Mud / Muck / Silt Other Other			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: Average depth difficult to assess, depth varies wildly w/in 100 m stretch, many pools. ☐ The antecedent hydrologic conditions have been met to my best knowledge.					

SAMPLING TEAM

Victoria Schwartz, Katie March

SIGNATURE :

K March

DATE :

3/21/24

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Investigators <i>Victoria Schwartz</i>										County:	
STORET Station Number: <i>WIN 6560051</i>											
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				60	1					
	2					2					
	3					3					
	4					4					
	5	N		86		5	N		84		
	6					6					
	7					7					
	8					8					
	9					9					
10	1				70	1					
	2					2					
	3					3					
	4					4					
	5	N		78		5			62		
	6					6					
	7					7					
	8					8					
	9					9					
20	1	X			80	1					
	2		✓			2					
	3					3					
	4					4					
	5	N		65		5	N		52		
	6					6					
	7					7					
	8					8					
	9					9					
30	1	X			90	1					
	2					2					
	3		✓			3					
	4					4					
	5	N		41		5			64		
	6					6					
	7					7					
	8					8					
	9					9					
40	1	X			100	1					
	2					2					
	3					3					
	4					4					
	5	N		71		5			71		
	6					6					
	7					7					
	8					8					
	9					9					
50	1	X				1					
	2					2					
	3					3					
	4					4					
	5	N		47		5					
	6					6					
	7					7					
	8					8					
	9					9					

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 densimeter 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%.

Secchi depth *0.4*
Estimated?

points ranked 4-6 *0*
total points assessed *93*
% points ranked 4-6 *0*

Check accompanying data collected at same site/date.
Algal mat sample
Linear Veg Survey
Habitat Assessment ☒
SCI/Biorecon ☒
Water sample ☒
RQ- 2024-03-04-42

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

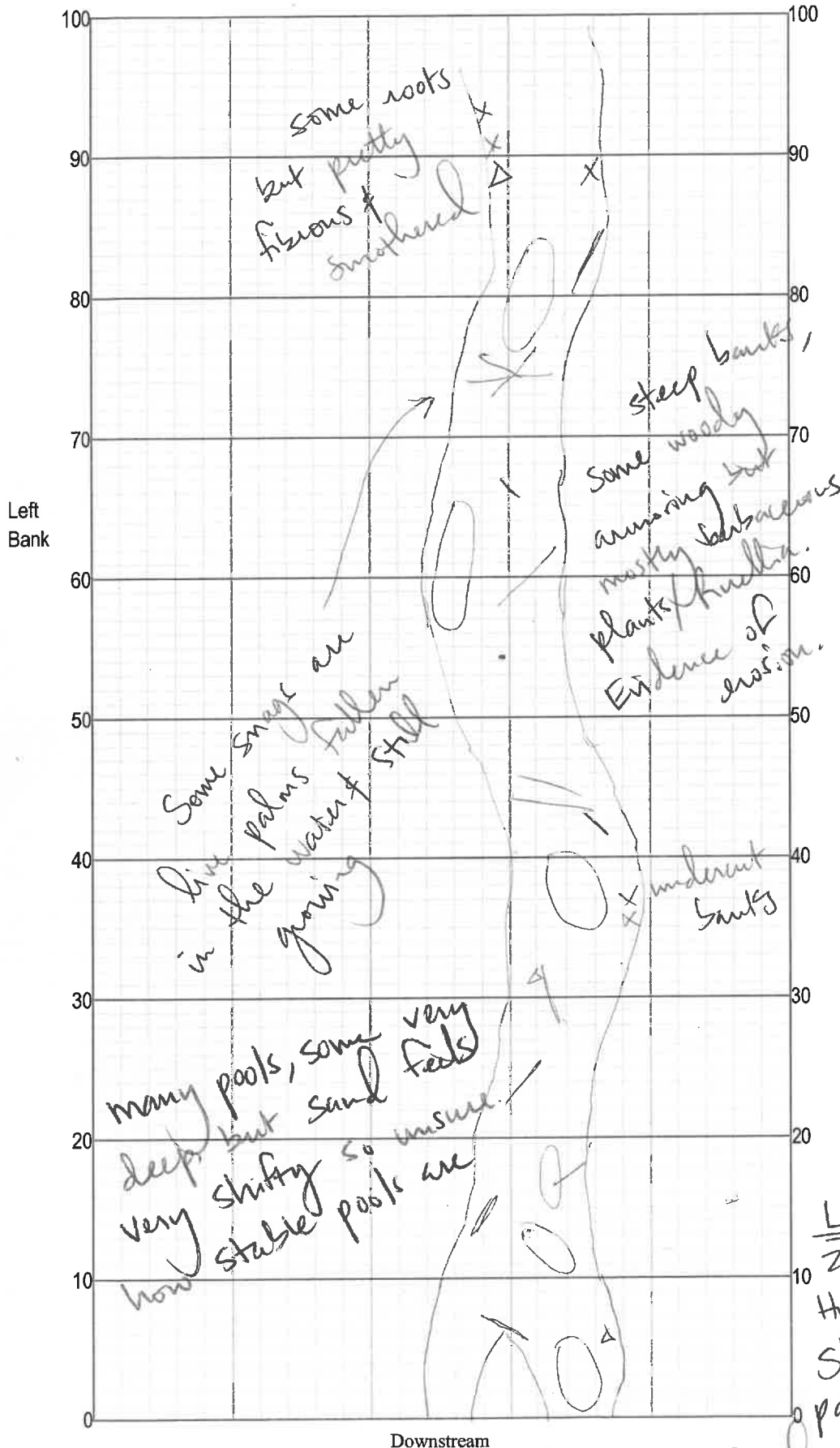
- Deep pools made some access difficult
- Aquatic moss common on submerged snags
- Algae ^{obs} observed near 100m smothering roots

Waterbody: See Sticker

Signature:

Analyst: Felix March[illegible]

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



Location: Sweetwater
 Date: 3/21/24
 Sampler: _____

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	_____ %
☐	_____ %
☐	_____ %
☐ Pools	total # observed = _____ # range expected = _____
Average width <u>3</u> m	
Average depth <u>0.7</u> m	
Velocity measured at <u>20</u> meter mark.	
WQ & chemistry taken at <u>80</u> 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:

Lots of Ruellia in riparian zone. Colocasia, Cabomba, Hydrilla, Rumex, Saururus, Sambucus, Quercus, Sabal palm, Alternanthera philax.

Sand smothering, shifty sand

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

★ This site is just downstream of historic STORET site, not exactly the same.