

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes / No

WIN Station Name:	PELLICER CREEK above Schoolhouse Br				Sample Date:	12/12/2022	
WIN / Field ID:	G5NE0598	ORG ID:	21FLA	ENR:	-		
County:	St. Johns	WBID:	2580C	STREAM	3F		
Receiving Body of Water:	ICWW St Johns County. Flagler County				RQ-	2022-11-28-10	

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jeremy Parrish	x	x	x		
Brian Davis				x	x

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
	Syringe	Pole	
Syringe Lot#		Filter Lot#	175533
Secchi Equipment ID:		D#3	
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:	No
Meter ID:	Desi
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 (PPT)
EST	1030	0.72	0.3	6.75	70.9	17.7	7.33	0.4	224	0.11

Biological Samples Collected: None**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			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		Syring Lot#.; Filter Lot#:175533		
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	Sa2229010	8/30/22	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE		Na2126030	6/2/23	
Organics (LC)	W-E8321-DI	W-E8321-MS						
Macroinvertebrates	MI-FW-QLDC			Ice/Formalin		10303130202BCS		
Organics (GC)	W-PSNP-TQ	W-TR-SQ-R		Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise			
Molecular								
Periphyton								
Phytoplankton								
BOD								
DOC								
					SyringLot#		FilterLot#	
Other(s)								

Field Comments:**Comments on COC:**

Relinquish Date:	12/12/2022	Signature:	
-------------------------	------------	-------------------	--

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ (Initials/Date) QC Station ID, Field Parameters In LIMS DMT: _____ (Initials/Date)

Save Field Sheets on Network: _____ (Initials/Date) Migrate Data to WIN: _____ (Initials/Date)

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

SAMPLE ID _____ ORG ID 21FLA LATITUDE _____
 COUNTY St Johns STORET # 65NE0598 LONGITUDE _____
 DATE 12/12/22 TIME 1030 SAMPLING AGENCY DEAR FDEP
 SITE NAME Pellice Creek above School House Br
 FIELD ID/NAME _____ RECEIVING BODY OF WATER ICW

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) ☐

Landscape Development Intensity Index (LDI)

Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank: 718 Right Bank: 718

Hydrologic Modification Score (per FT 3101)

High Water Mark: 0.3 + 0.8 = 1.1
 (m) (above present water level) (present depth) (above bed)

Artificially Impounded
☐ Yes ☒ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

4.0 m wide

0.25 m/s 0.8 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
 % # Times # Times
 Coverage Sampled Sampled

Woody Debris (Snags) 2.5 7

Undercut Banks / Roots 2.0 3

Leaf Packs or Mat 2.5 7

Aquatic Vegetation 3

Rock or Shell Rubble.. 3

Sand..... 3

Mud / Muck / Silt 3

Other 3

Other 3

WATER QUALITY

Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)

Top: 0.3 17.7 7.32 6.75 70.9 224 0.11 0.4

Mid: 0.8 17.7 7.32 6.75 70.9 224 0.11 0.4

Bottom: 0.8 17.7 7.32 6.75 70.9 224 0.11 0.4

Meter ID: Desi

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 ☐

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

< 2m Veg
☐ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

BP, JP

SIGNATURE:

B - JP

DATE:

12/12/22

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Pelican Creek above Schoolhouse Bn</u>					County: <u>San Joaquin</u>		Date: <u>12/12/22</u>		Investigators: <u>BP, JP</u>		
STORET Station Number: <u>GSNE0598</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		
0	1	N			60	1	N				
	2		✓			2			✓		
	3					3					
	4					4				95	
	5					5					
	6					6					
	7					7					
	8					8					
	9					9					
10	1	N			70	1	N				
	2		✓			2			✓		
	3					3					
	4					4				96	
	5					5					
	6					6					
	7					7					
	8					8					
	9					9					
20	1	N			80	1	N				
	2		✓			2			✓		
	3					3					
	4					4					
	5					5				95	
	6					6					
	7					7					
	8					8					
	9					9					
30	1	N			90	1	N				
	2		✓			2			✓		
	3					3					
	4					4					
	5					5				85	
	6					6					
	7					7					
	8					8					
	9					9					
40	1	N			100	1	N				
	2		✓			2			✓		
	3					3					
	4					4					
	5					5				91	
	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 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%.						
	2		✓								
	3										
	4										
	5										
	6										
	7										
	8										
	9										

Secchi depth 0.4
Estimated? N

points ranked 4-6 0
total points assessed 99
% 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-2022-11-28-10

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

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

SAMPLING AGENCY: <u>FDEP DEAR</u>		STORET STATION NUMBER: <u>65NE0598</u>	DATE (mm/dd/yyyy): <u>12/12/22</u>	RECEIVING BODY OF WATER: <u>ICW</u>
REMARKS:	COUNTY: <u>St Johns</u>	LOCATION: <u>Pellion above schoolhouse</u>	FIELD ID/NAME:	

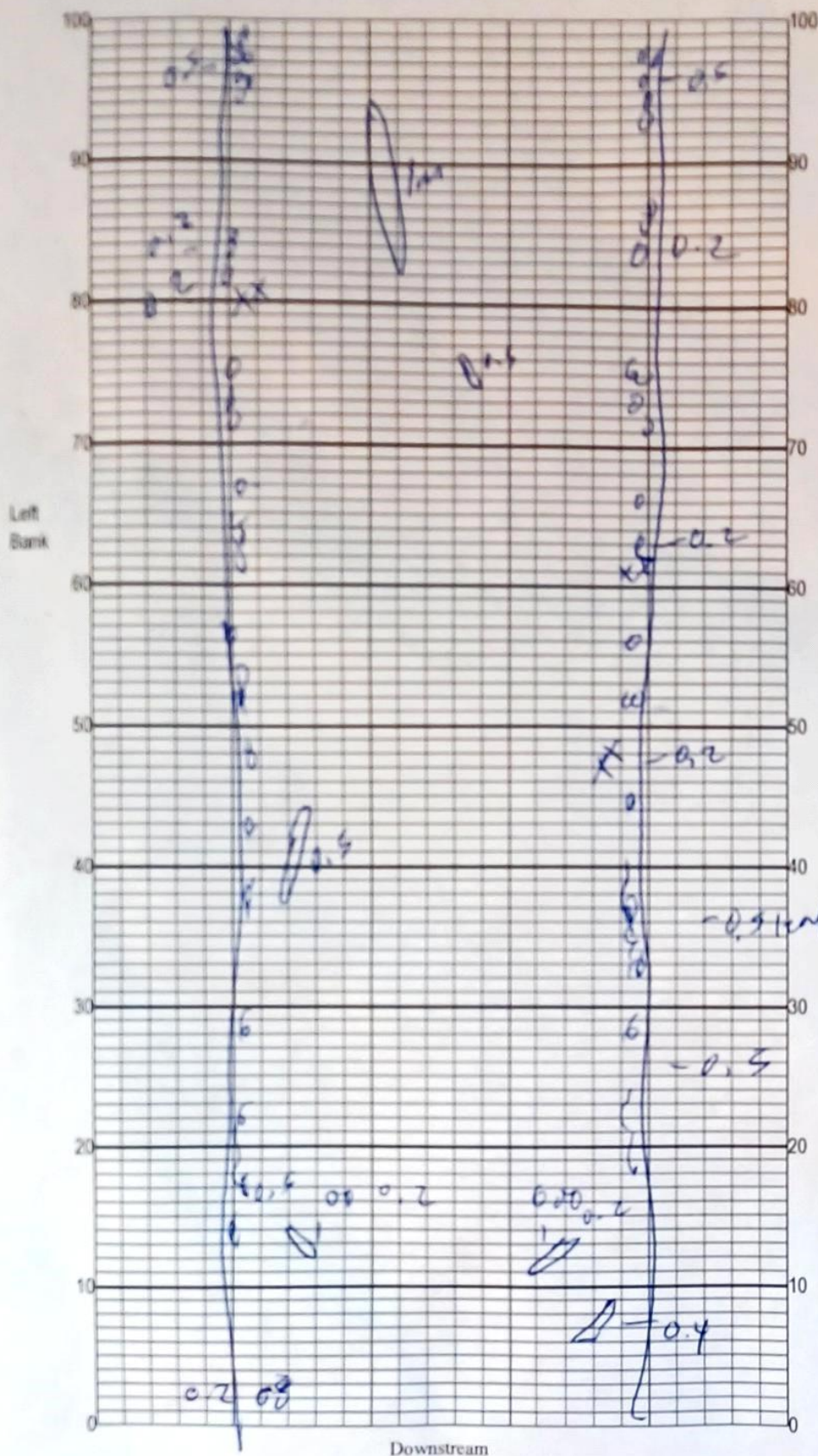
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>10</u>	20 19 18 17 16	15 14 13 12 11	<u>10</u> 9 8 7 6	5 4 3 2 1
Substrate Availability <u>6</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 <u>6</u>	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 <u>15</u> 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>46</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 <u>14</u> 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. <u>20</u> 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
Bank Stability Right Bank <u>9</u> Left Bank <u>9</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 <u>9</u>	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 <u>10</u> 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>9</u> Left Bank <u>9</u> ----- Secondary Score <u>76</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. <u>10</u> <u>9</u>	>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

122

TOTAL SCORE

Date: <u>12/12/22</u>	Analyst: <u>J. Park / B. Davis</u>	Signature: <u>[Signature]</u>
-----------------------	------------------------------------	-------------------------------

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



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

Location: Pellier's Creek
Date: 12/12/22
Sampler: JP/BD

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

Substrates: Code key, draw proportionate habitat abundance.	%
Snags	<u>2.5</u>
Roots/undercut banks	<u>< 1</u>
Leaf Packs (or mats)	<u>2.5</u>
Aquatic Macrophytes	_____
_____	_____
_____	_____
Pools	total # observed = <u>1</u> # range expected = <u>1-2</u>

Average width 4.0 m

Average depth 0.8 m

Velocity measured at 10m meter mark.

WQ & chemistry taken at 0m 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:

< 2m² Veg

4m wide
0.25 m/sec