



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV

Yes ☒ No ☐

WIN Station Name:		Cedar Creek below Green rd.				Sample Date:		8/22/2023	
WIN / Field ID:	G4NW0053	ORG ID:	21FLPNS	ENR:		Latitude:	30.89282		
County:	Santa Rosa	WBID:	114	STREAM		Longitude:	-86.83653		
Receiving Body of Water:		Blackwater Bay				RQ-	2023-07-24-20		

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
C. Stopher Slade	x	x	x	x	x
Lauren McNally					

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

Water Level:	Low
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	
High Tide:	
Low Tide:	
Photos:	No
Meter ID:	154179 (ProDSS)
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)
CEN	1200	0.2	0.1	7.53	95.9	27.8	4.45	0.2	11.6	0
								VOB (s)		

Biological Samples Collected:		HA LVS RPS SCI	
SBIO Visit ID: 87868	HA ID: 18618	RPS ID: 10148	Macrophyte ID: 12546
LIMS Sample ID		In The Macrophyte Module: 2433088	

Parameter Suite	Parameter Methods (LIMS Test Codes)	Preservation				
		Type	Lot#	Expiration Date	pH Check	
Microbiology	E. coli	ICE				
Chlorophyll	CHLSUITE-W	ICE				
Physical/Aggregate Nutrients	ALKALINITY, TURBIDITY, W-F, W-TSS	ICE				
	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS	ICE				
Filtered Nutrients	W-PO4-F		Syringe Lot#; Filter Lot#:			
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	ICE	H2SO4*	SA 2229010	08/30/2023	H2SO4 pH<2
Metals	W-ICPMS	ICE		NA2230040	09/01/2023	
Organics (LC)	W-E8321-DI					
Macroinvertebrates	MI-FW-QLDC					
Organics (GC)	W-PSNP-TQ	Ice	*2.0 ml of H2SO4 Used Unless Noted Otherwise			
Molecular						
Periphyton						
Phytoplankton						
BOD						
DOC						
Other(s)		SyringeLot#		FilterLot#		
Field Comments:	/ SCI Collection Time: 1330					
Comments on COC:						
Relinquish Date:	08/22/2023	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 87868 ORG ID 21FLPNS LATITUDE 30.89230
 COUNTY Santa Rosa WIN ID/STORET # 644W0014 LONGITUDE 86.83625
 DATE 8/22/23 TIME 1200 CTZ G44W0053 SAMPLING AGENCY FL DEP - NWROC
 SITE NAME Cedar Creek Below Green Rd RQ 2023-07-24-20
 FIELD ID/NAME CEDARCKSMP RECEIVING BODY OF WATER Blackwater Bay WBID 114 Project: Smp
 LIMS ID: 2433088

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) <u>N/A</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>90m</u> <u>2</u> m wide <u>0.25</u> m/s <u>0.3</u> m deep		
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718m</u> Right Bank: <u>718m</u>				Hydrologic Modification Score (per FT 3101) <u>0-2</u>				
High Water Mark: <u>20</u> + <u>0.3</u> = <u>2.3</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				
Artificially Channelized: ☒ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ Recent, severe				Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%) ☒ Moderate Shaded (46-80%) ☐ Heavily Shaded				

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			WATER QUALITY <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.1</u></td> <td><u>27.8</u></td> <td><u>4.30</u></td> <td><u>9.53</u></td> <td><u>95.9</u></td> <td><u>11.6</u></td> <td><u>0.00</u></td> <td><u>0.2</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td><u>4.45</u></td> <td></td> <td></td> <td></td> <td></td> <td>☒ VOB</td> </tr> <tr> <td>Bottom:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>							Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:	<u>0.1</u>	<u>27.8</u>	<u>4.30</u>	<u>9.53</u>	<u>95.9</u>	<u>11.6</u>	<u>0.00</u>	<u>0.2</u>	Mid:			<u>4.45</u>					☒ VOB	Bottom:								
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Bottom:																																												
Woody Debris (Snags) <u>9.7</u> <u>5</u> Undercut Banks / Roots <u>8.8</u> <u>5</u> Leaf Packs or Mat <u>0.5</u> <u>2</u> Aquatic Vegetation <u>1.6</u> <u>5</u> Rock or Shell Rubble.. <u> </u> <u> </u> Sand..... <u>99%</u> <u>2</u> Mud / Muck / Silt <u>30%</u> <u>1</u> Other <u> </u> <u> </u> Other <u> </u> <u> </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 ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																						
ABUNDANCE <table border="1"> <thead> <tr> <th></th> <th>Not Obs.</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Fish:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☒</td> </tr> <tr> <td>Aquatic Plants:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>				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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Periphyton:	☐	☐	☒	☐																																								
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SAMPLING TEAM: <u>Stophor Glade, Lauren McNally</u>			SIGNATURE: <u>[Signature]</u>			DATE: <u>8/22/23</u>																																						

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (June 1, 2001)

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

STORET: G4NW0014
Location: Cedar Creek
Below Green Rd
Project: SNP
Sampled By: S. Slade
Date: 8/22/87

100	BF	Snag 2.0+1	Depth 0.3
~%S	Root 0.4	Width 2	
+Vg	LP 0.1		
90	Plant 0.2+1		
BF	OTR		
~%S	Snag 0.8+0.8	Depth 0.25	
+Vg	Root 0.8	Width 1.8	
80	LP 0.1		
BF	Plant 2.0	Depth 0.3	
+%S	OTR	Width 2.5	
+Vg	Snag 1.1+1.5		
70	Root 0.5	Depth 0.1	
BF	LP	Width 4.0	
~%S	Plant		
+Vg	OTR	Depth 0.2	
60	Snag 2.0+2	Width 2	
BF	Root 5.3		
~%S	LP 0.1	Depth 20.8	
+Vg	Plant	Width 2	
50	OTR		
BF	Snag 0.6+1.0	Depth 0.2	
~%S	Root 1.8	Width 2.0	
+Vg	LP 0.1+0.3		
40	Plant	Depth 0.8	
BF	OTR	Width 2.6	
~%S	Snag 0.5+1.1		
+Vg	Root 2.0	Depth 0.3	
30	LP 0.1	Width 3	
BF	Plant		
~%S	OTR		
+Vg	Snag 1.2	Depth 0.4	
20	Root 0.2+1.2	Width 1.1	
BF	LP 0.2		
~%S	Plant	Depth 0.3	
+Vg	OTR	Width 1.1	
10	Snag 0.4+0.6		
BF	Root 6	Depth 0.4	
~%S	LP	Width 1.3	
+Vg	Plant		
	OTR		

Substrates: Code key, draw proportionate habitat abundance.

☒	Snags	23.3 m ²
☒	Roots/undercut banks	9.7%
☒	Leaf Packs (or mats)	21.2 8.8%
☒	Macrophytes	1.1 0.5%
☐		3.2 1.6%
☐		20.6%
☐		

Velocity:
Note where velocity measures were taken: 90 m

Habitat Smothering:
Note areas (on map) where sand or silt is something 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.

Average width 2.4 m
Average depth 0.36 m
WQ & chemistry taken @ 100 m
0 m Latt. 30.89916 30.892
0 m Long. 86.83690 86.8363
100 m Latt. 30.89282
100 m Long. 86.83653

Left Bank

Downstream

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

SAMPLING AGENCY: <u>FLOPP NWROC</u>		STORET STATION NUMBER: <u>G4NW0053</u>	DATE (MM/DD/YY): <u>8/22/23</u>	RECEIVING BODY OF WATER: <u>Blackwater Bay</u>
REMARKS:	COUNTY: <u>Santa Rosa</u>	LOCATION: <u>Cedar Creek Below Ground</u>	FIELD ID/NAME: <u>G4NW0053</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>14</u>	20 19 18 17 16	15 <u>14</u> 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>12</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 <u>12</u> 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 <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>13</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 <u>13</u> 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 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>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>8</u> Left Bank <u>7</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. <u>8</u> 4 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 <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>10</u> Left Bank <u>10</u> ----- Secondary Score <u>75</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> 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

129 TOTAL SCORE

Date: <u>8/22/23</u>	Analyst: <u>S. Slade</u>	Signature: <u>[Signature]</u>
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SBW ID 87868 HAIN 18618

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Cedar Creek below Green Rd County: Santa Rosa Date: 8/22/23 Investigators: S. S. L. McNeill

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	N		60	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N	96		5	N	N	93
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
10	1	N	N		70	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N	96		5	N	N	48
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
20	1	N	N		80	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N	94		5	N	N	50
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
30	1	N	N		90	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N	96		5	N	N	50
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
40	1	N	N		100	1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N	96		5	N	N	91
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
50	1	N	N			1	N	N	
	2	N	N			2	N	N	
	3	N	N			3	N	N	
	4	N	N			4	N	N	
	5	N	N	95		5	N	N	
	6	N	N			6	N	N	
	7	N	N			7	N	N	
	8	N	N			8	N	N	
	9	N	N			9	N	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%.

STORET Station Number: G4WCOE3

Secchi depth 0.2
Estimated? ☐

points ranked 4-6 2
total points assessed 99
% points ranked 4-6 2.2

Check accompanying data collected at same site/date.

Algal mat sample ☐

Linear Veg Survey ☐

Habitat Assessment ☐

SCI/Biorecon ☐

Water sample ☐

RQ- 2023-07-24-20

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

SBIO Visit ID: 87868

RPS ID LD148

RPS Score 9.09

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Cedar Creek	Date: 8/12/23	County: Santa Rosa	Storet Number: 64M40053
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Analyst: S. S. Hale Signature: S. S. Hale

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

[illegible]

Field ID ~~87868~~

RPS ID 10148

SBIO ID 87868

Vascular - 70
VPDB-ID: ~~12546~~
12546

LIMS ID 2433088

RQ-2023-07-24-20