



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name:

Big Coldwater Creek West Fork upstream of Walling Rd

Date:

6/12/19
(mm/dd/yyyy)

WIN/ Field ID:

G4NW0436

WBID:

11

Latitude:

30.843099

(Decimal Degrees)

County:

Santa Rosa

ORG ID:

21FLPNS

Longitude:

-87.088227

(Decimal Degrees)

Receiving Body of Water:

Coldwater Creek

RQ-2019-

06-10-34

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
MIKE KING					☒	☒	☒	☒	☒
STEPHER SWADE					☒	☒	☒	☒	☒
MYRANDA CLARK					☒	☒	☒	☒	☒

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with <u>Y&I</u>		
Equipment ID		
Collection Method		
☒ Wading	☐ Canoe/Kayak	
☐ From Shore	☐ Electric Motor	
☐ Other	☐ Gasoline Motor	

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded

Meter ID#

185077

Matrix:

Fresh/ Marine/ DI

Photos: Yes / No

Flow: No Flow / Intertidal / Flowing / NA

Tide: Rising/ Falling/ Slack/ NA

Tide Times: High

Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (umhos/cm)	Temp. (C°)
EST	11:11	0.7	0.3	0.7	7.73	90.1	5.25	0.02	51.8	22.8
CEN				0.5						

Biological Samples Collected: None HA SCI RPS Algae LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 79879 HA-ID: 16116 RPS-ID: 9387 Macrophyte-ID: 11399

Parameter Suite	Parameter Methods	Preservation
Preserved Nutrients	☐ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☐ Ice ☒ H2SO4
Metals	☒ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 um Filter	☐ Ice <u>15159019</u>
Chlorophyll	☒ CHLSUITE-W	☐ Ice
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CI-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice
Physical/Aggregate (Marine)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin
Periphyton	☐ ALGAE-ID	☐ Ice
Microbiology	☒ E Coli ☐ F Coli ☐ Enterococci	☐ Ice
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice
Tracers	☒ W-E8321-DI ☐ W-E8321-MS	☐ Ice
Pesticides	☒ W-PSNP-TQ ☒ W-CT-CL-R ☐ W-E8321-DI ☒ W-PCL-SQ-R ☒ W-E8321-MS ☐ W-CARB-AA	☒ Ice
Phytoplankton	☐ DITY-QN-C ☐ PKD-QN-C	

H2504

LOT# SA8344070

EXP: 12/10/2019

HNO3

LOT# NA9099030

EXP: 04/09/20

pH Check

☒ <2

☒ <2

Place Preservative Sticker(s) Here
(If Available)

Notes: LIMS ID 2095108

Signature: [Signature]

Field/WIN ID → G4NW0436

Location: Big Coldwater Creek West Fork upstream of Walling Rd

Date: 6/10/2019

LIMS EVENT ID: WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: Q3 Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

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

SAMPLE ID 79879 ORG ID 21FLPNS LATITUDE 30.843099
COUNTY Santa Rosa STORET # G4NW0436 LONGITUDE -87.088227
DATE 6/12/19 TIME 1111 SAMPLING AGENCY FDEP NW ROC
SITE NAME Big Coldwater Creek West Fork upstream of Walling Rd
FIELD ID/NAME G4NW0436 RECEIVING BODY OF WATER Coldwater Creek

RIPARIAN ZONE / STREAM FEATURES

LIMS ID 2095108

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)

1.94

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: 5.8 Right Bank: 5.8

Hydrologic Modification Score (per FT 3101)

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

9 m wide

0.33 m/s 0.33 m/s 0.33 m/s

High Water Mark: ☐ + ☐ = ☐
(m) (above present water level) (present depth) (above bed)

Artificially Impounded

☐ Yes ☐ No

0.3 m deep 0.5 m deep 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
% Coverage INVERT PERI
Times # Times
Sampled Sampled

Woody Debris (Snags) 16 4
Undercut Banks / Roots 0.6 4
Leaf Packs or Mat 0.6 4
Aquatic Vegetation 10 4
Rock or Shell Rubble.....
Sand..... 4
Mud / Muck / Silt
Other
Other

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 22.8 5.25 7.73 90.1 51.8 0.02 0.7

Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB

Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ TOTAL DEPTH

Meter ID: 155077 0.7

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:

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

M. King R. M. M. King

SIGNATURE:

[Signature]

DATE:

6/12/19

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).

100	BF	Snag 5
	%S	Root 0.5
	Vg	LP 1.5
90	BF	Plant 12
	%S	OTR
	Vg	Snag 20
80	BF	Root 0.5
	%S	LP 0.2
	Vg	Plant 8
70	BF	OTR
	%S	Snag 25
	Vg	Root 0.5
60	BF	LP 0.5
	%S	Plant 10
	Vg	OTR
50	BF	Snag 12
	%S	Root 0.5
	Vg	LP 0.75
40	BF	Plant 8
	%S	OTR
	Vg	Snag 13
30	BF	Root 0.5
	%S	LP -
	Vg	Plant 4
20	BF	OTR
	%S	Snag 10
	Vg	Root 0.3
10	BF	LP 0.3
	%S	Plant 7
	Vg	OTR
	BF	Snag 16
	%S	Root 0.5
	Vg	LP 0.1
	BF	Plant 14
	%S	OTR
	Vg	Snag 19
	BF	Root 0.5
	%S	LP 0.3
	Vg	Plant 8
	BF	OTR
	%S	Snag 15
	Vg	Root 0.5
	BF	LP 0.5
	%S	Plant 9
	Vg	OTR
	BF	Snag 13
	%S	Root 1
	Vg	LP 1.5
	BF	Plant 7
	%S	OTR
	Vg	

Left Bank

Downstream

9m

STORET: A4NW0436

Location: Big Coldwater Cr West

Fork upstream of Walling Rd

Project: SMP

Sampled By: MIKE KING

Date: 6/12/19

Substrates: Code key, draw proportionate habitat abundance.



Snags



Roots/undercut banks



Leaf Packs (or mats)



Macrophytes



Velocity:

Note where velocity measures were taken: 30 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 7 m

Average depth 0.9 m

WQ & chemistry taken @ m

0 m Latt. 30.84264

0 m Long. 87.088746

100 m Latt. 30.84301

100 m Long. 87.08858

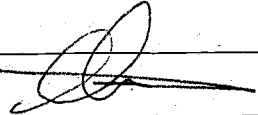
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: FDED NW ROC		STORET STATION NUMBER: G4NW0436	DATE (MM/DD/YY): 6/12/19	RECEIVING BODY OF WATER: Cold water Creek
REMARKS:	COUNTY: Santa Rosa	LOCATION: Big Coldwater Creek West fork upstream of Walling Rd		FIELD ID/NAME: G4NW0436

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>17</u>	20 19 18 <u>17</u> 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>14</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 <u>14</u> 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>20</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 <u>20</u> 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>20</u> ----- Primary Score <u>71</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. <u>20</u> 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.	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>10</u> Left Bank <u>10</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. <u>10</u> 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 <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>8</u> ----- Secondary Score <u>77</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 <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. <u>8</u> 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

148

TOTAL SCORE

Date: 6/12/19	Analyst: MIKE KING	Signature: 
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SBIO ID 79879

HA ID 16116

62-160.800, F.A.C.

Revision Date: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>G4NW0436</u>					County: <u>Santa Rosa</u>		Date: <u>6/12/19</u>		Investigators: <u>MIKE KIRBY</u>	
					STORET Station Number: <u>G4NW0436</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	2		60	1	N	N		
	2					2				
	3					3				
	4					4				
	5			20		5				24
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2					2	N			
	3					3	X			
	4					4				
	5			20		5				36
	6					6				
	7					7				
	8					8	N			
	9					9	N			
20	1	N			80	1	X			
	2					2	X			
	3					3	N			
	4					4				
	5			24		5				40
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	X			
	2					2	X			
	3					3	X			
	4					4	X			
	5			20		5	N			20
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	X			
	2					2				
	3					3				
	4					4				
	5			24		5	N			24
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N				1				
	2					2				
	3					3				
	4					4				
	5			30		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 0.7
Estimated? Y

points ranked 4-6 1
total points assessed 88
% points ranked 4-6 1

Check accompanying data collected at same site/date

Algal mat sample	
Linear Veg Survey	☒
Habitat Assessment	☒
SC/Biorecon	
Water sample	☒

RQ- 2019-06-10-34

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 ID 79879

RPS ID 9387

Waterbody: Big Coldwater Creek West Fork	Date:	County: Santa Rosa	Storet Number: G4NW0436
Analyst: MIKE RYAN	Signature:		
Comments:			

[illegible]