



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

REFERENCE STREAMS FIELD SHEET

January 2022

Meter Passed End

of Day CCV

Yes/No



WIN Station Name: McCostill Mill Creek Below Ebenezer Church

Date: 8/23/2023

Road WIN/Field ID: 33020147

WBID: 118

ENR:

Latitude: 30.9185

County: Santa Rosa

Org ID: 21FLPNS

Longitude: -87.24782

Receiving Body of Water: Escambia River

RQ: 2023-08-07-65

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Frank Butera	x		x		
☒	Nathan Mulkey		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Meter	
Secchi Equipment ID: 155077	
Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: ☐ Normal ☒ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 155077 (ProDSS)						
Photos: YES	Flow: FLOW			Tide:		Tide Times: High: Low:						
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:												
SBIO ID Numbers: SBIO ID 87704. HA ID 18606, RPS ID 10140. Macro ID N/A, Benth ID. 45641						LIMS ID 2433420						
Notes: / SCI COLLECTION TIME: 1030												

Duplicate Sample

Time Zone: CEN	Time:	Field ID: N/A	(WIN ID_DUP)
WIN DMT Activity ID:			

Blank

Time Zone: CEN	Time: 1010	Field ID: FB_08232023	(Blank Type_DDMMYYYY)
DI Source: NWROC	Location: Pensacola Ice Room		
DI Type: Field Blank	Equipment ID:		
DI Container (Name/ID):		DI Container Type: Chum_Bucket	

LIMS EVENT ID: WIN Import ID:

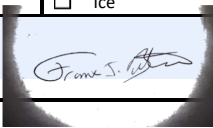
Enter Field Parameters, Verify Station ID In LIMS DMT: QC Station ID, Field Parameters In LIMS DMT:

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



RQ-2023-08-07-65
Customer: NW-DIST
Project ID: REFERENCE STREAMS

Collected By: Frank Butera, Nathan Mulkey
Field Report Prepared By: Frank Butera
Sampling Agency: FDEP

Place Label Here WIN ID/Field ID:  33020147 Location: McCostill Mill Creek Below Ebenezer Church Road						Comments: Microbiology sample(s) submitted to contract laboratory.				
Matrix: Fresh						(Check one) ☒ GRAB ☐ COMPOSITE				
Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)
	1000 CEN	8.27	93.7	21.5	4.39	0.03	0.06 ☒ VOB (S)	0.06	46.5	0.02
8/23/2023							Central Lab please use top row for login purposes			
	CEN									
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)		☐ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☒ <2	1	A
		Lot #	SA3013020		Exp:	01/13/2024				
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☐ <2	1	A
		Lot #	NA2230040		Exp:	09/01/2023				
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A
		Filter Lot #	17460495		Syringe Lot#	136514				
Biochemical Oxygen Demand (BP-1L)		BODTEST OV-BODUNIN				ICE				
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice			1	A
Physical/Aggregate (Marine) (P-1L)		☐ Alkalinity / W-F / W-TSS / TURBIDITY				☐ Ice				
Macroinvertebrates (PJ-2L)		☐ MI-FW-QLDC		Formalin Lot #	-		☒ Formalin		2	B
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice				
Microbiology (Contract Lab Bottle)		☒ E Coli ☐ F Coli ☐ Enterococci ☒ Contract Lab				☒ Ice			1	A
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD				☐ Ice				
Tracers (BG-500ML)		☐ W-E8321-DI ☐ W-E8321-MS				☐ Ice		MCAA Exp. Date		
Pesticides (BG-500ML) (BG-1L)		☒ W-E8321-DI ☒ WE8321-MS		☒ W-PSNP-TQ		W-CT-Cl-R		MCAA Lot#	5	A
		W-PCL-TQ-R		W-CARB-AA (5 ml of MCAA** Buffer Solution)		W-TR-SQ-R				
Phytoplankton/Periphyton		W-PCB-TQ-R		PKD-QN-BV		☐ Ice				
Name: Frank Butera Nathan Mulkey		Signature: 				Date: 08/23/2023				

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

SAMPLE ID 87704 ORG ID 21FLPNS LATITUDE 30.91825
 COUNTY Santa Rosa WIN ID/STORET # 33020147 LONGITUDE 87.24782
 DATE 8/23/2023 TIME 10:00 CTZ SAMPLING AGENCY FL DEP - NWROC
 SITE NAME McCostill Mill Creek Below Ebenezer Church RQ-2023-08-07-65
 FIELD ID/NAME MCSTLMCLR RECEIVING BODY OF WATER Escambia River WBID 118 Project: ECO REG REF STREAMS

RIPARIAN ZONE / STREAM FEATURES

LIMS ID: 2433420

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>1.7</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>3</u> m wide <u>0.2</u> m/s <u>0.4</u> m/s <u>0.25</u> m/s <u>5 sec</u> <u>2.5 sec</u> <u>4 sec</u> <u>0.2</u> m deep <u>0.2</u> m deep <u>0.1</u> 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>1-2</u>			
High Water Mark: <u>2.3</u> + <u>0.3</u> = <u>2.6</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%)			

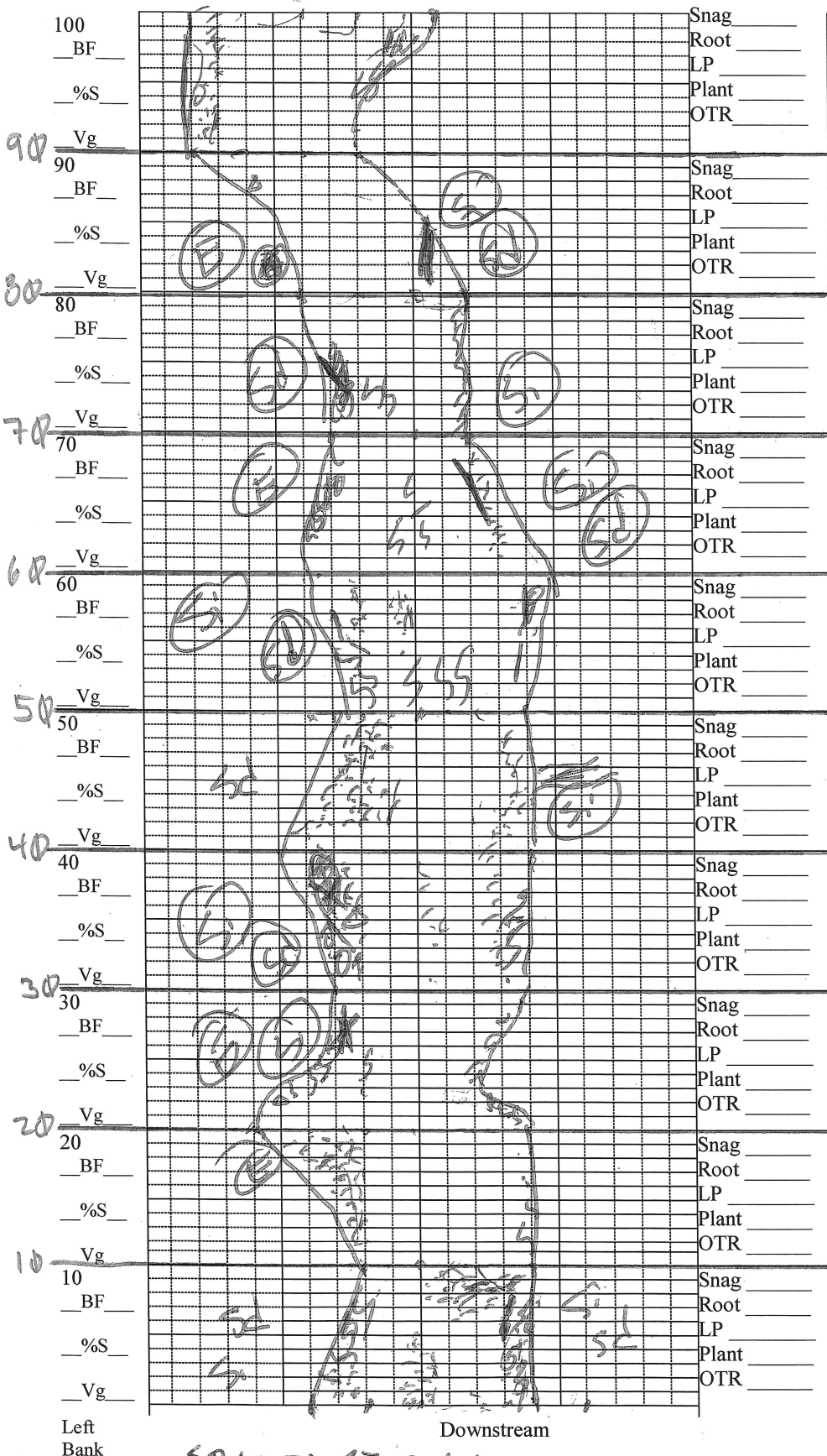
SEDIMENT / SUBSTRATE

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 INVERT # Times Sampled PERI # Times Sampled Woody Debris (Snags) <u>2.1</u> <u>5</u> Undercut Banks / Roots <u>6.8</u> <u>5</u> Leaf Packs or Mat <u>2.2</u> <u>5</u> Aquatic Vegetation <u>0.1</u> <u>—</u> Rock or Shell Rubble.. <u></u> <u></u> Sand..... <u>79.1</u> <u>3</u> <u>82.8%</u> GRAVEL → Mud / Muck / Silt <u>9.7</u> <u>2</u> <u></u> Other <u>Gravel</u> <u></u> <u></u> Other <u></u> <u></u> <u></u>		WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top : <u>0.03</u> <u>26.5</u> <u>4.39</u> <u>8.27</u> <u>93.7</u> <u>46.5</u> <u>0.02</u> <u>0.06</u> Mid: <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> Bottom <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> Meter ID: <u>155077</u>			
Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐		Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ 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: Frank Butera, <u>Nathan Muller</u>			SIGNATURE: <u>[Signature]</u>		DATE: <u>8/23/2023</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).

McCostill Mill Creek Below Ebenezer Church Rd.



WIN ID 33020147

Substrates: Code key,
draw proportionate habitat
abundance.

- ☒ Snags $\frac{75}{380} = 2.1\%$
- ☒ Roots/undercut banks $\frac{25.9}{380} = 6.8\%$
- ☒ Leaf Packs (or mats) $\frac{8.4}{380} = 2.2\%$
- ☒ Macrophytes
- ☒ Gravel $\frac{37}{380} = 9.7\%$
- ☒ BAR
- ☒ Sand $\frac{300}{380} = 79.1\%$

Velocity:

Note where velocity
measures were taken. 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 3.8 m

Average depth 0.2 m

WQ & chemistry taken @ 100 m

Station Name:

McCostill Mill Creek Below

Ebenezer Church Rd.

Project. Eco Reg Ref Streams

Sampled By/Date: 8/23/2023

0 m Latt. 30.91778

0 m Long. 87.24866

100 m Latt 30.91818

100 m Long 87.24778

SB10 ID 87704

McCostill Mill Creek blw Ebenezer Rd

0-10 meter [A]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.2	Bankfull	Bankfull
0m width (m) 4.7	Root 4.0	+	+
10m width 3.3	Leaf 0.3	Slope	Slope
Avg. Depth 1.2	Veg -	+	+
Max Depth 1.2	Gravel 7.0	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	S. sd		

10-20 meter [B]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.8	Bankfull	Bankfull
20m width 4.7	Root 2.0	-	-
	Leaf 0.4	Slope	Slope
Avg. Depth 1.2	Veg -	+	+
Max Depth 1.3	Gravel 1.0	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	S. sd		

20-30 meter [C]	Habitat Area (M)	Left Bank	Right Bank
	Snag 5.0	Bankfull	Bankfull
30m width 3.7	Root 2.3	-	-
	Leaf 1.0	Slope	Slope
Avg. Depth 1.25	Veg 0.1	+	+
Max Depth 1.3	Gravel 1.0	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	(E) (G) (I) (K)		

30-40 meter [D]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.2	Bankfull	Bankfull
40m width 5.2	Root 2.0	+	-
	Leaf 2.0	Slope	Slope
Avg. Depth 0.1	Veg -	+	+
Max Depth 0.1	Gravel 1.5	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	(S) (SL)		

40 - 50 meter [E]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.3	Bankfull	Bankfull
50m width 3.0	Root 0.1	+	+
	Leaf 0.1	Slope	Slope
Avg. Depth 0.1	Veg -	+	+
Max Depth 0.2	Gravel -	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	(S) (SL) (FSu)		

50-60 meter [F]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.5	Bankfull	Bankfull
60m width 4.5	Root 0.5	+	+
	Leaf 0.1	Slope	Slope
Avg. Depth 0.2	Veg -	+	+
Max Depth 0.2	Gravel -	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	FSu		

60-70 meter [G]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.3	Bankfull	Bankfull
70m width 2.5	Root 6.5	+	-
	Leaf 3.0	Slope	Slope
Avg. Depth 1.2	Veg -	+	+
Max Depth 1.2	Gravel -	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	(S) (SL) (E)		

70-80 meter [H]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.5	Bankfull	Bankfull
80m width 3.0	Root 6.5	+	+
	Leaf 0.7	Slope	Slope
Avg. Depth 0.2	Veg -	+	+
Max Depth 0.2	Gravel -	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	(S) (SL) (E) (K)		

80-90 meter [I]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.4	Bankfull	Bankfull
90m width 3.0	Root 1.0	-	-
	Leaf 0.3	Slope	Slope
Avg. Depth 0.2	Veg 0.1	+	+
Max Depth 0.2	Gravel -	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	(E) (S) (SL) (K)		

90 - 100 meter [J]	Habitat Area (M)	Left Bank	Right Bank
	Snag 0.1	Bankfull	Bankfull
100m width 4.5	Root 1.3	-	-
	Leaf 0.5	Slope	Slope
Avg. Depth 0.2	Veg -	+	+
Max Depth 0.2	Gravel 5.0	Veg +	Veg +
Rip. Buff L 718	Rock -	+	+
Rip. Buff R 718	(FSu) (S) (SL) (K) HW23		

Station Name

McCostill Mill Creek blw Ebenezer Rd

Storet: 33020147

Date 8/23/2023

0 meter (Dec Deg)

30.91778

87.24866

100 meter (Dec Deg)

30.91818

87.24778

Water Quality Measured at

100m

Stream Velocity and location.

0.4 m/s 90 meter mark

Number of Pools & Location

0 pools

High Water: 2.3

Silt smothering @

A-J

Sand Smothering @

A-J

Algae Smothering @

A-J

Degraded Banks @

B, C, G, I, J

Fe/Sulfur Bact. @

F, J, E

Total Habitat	Sq. Meters	Percent
Snags	8.0	2.1
Roots	25.9	6.8
Leaf	8.4	2.2
Veg	0.2	0.1
Rock		
Gravel	37.0	9.7
Sand	300.5	79.1
Other		
Sum 1 st Habitat		11.2

Avg. Depth	Max. Depth	Avg. Width
0.2	0.3	2.8

Bank Stability Score. Left Bank 1.8 Right Bank 2.4 Category Left Bk Marginal Right Bk Sub-Optimal
Add all plus signs (Max. 30 possible) and Divide by 10. Scoring. Poor: 0.0 - 0.9 pts. Marginal: 1.0-1.9 pts. Suboptimal: 2.0 - 2.9 Optimal: 2.1+

Notes.

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

SAMPLING AGENCY: 21FLPNS. DEAR NWROC		STORET STATION NUMBER: 33020147	DATE (MM/DD/YY): 8/23/23	RECEIVING BODY OF WATER: Escambia R.
REMARKS: WBID 118	COUNTY: Santa Rosa	LOCATION: McCostill Mill Creek Below Ebenezer Church Rd.	FIELD ID/NAME: MCSTMLCR	

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>12</u>	20 19 18 17 16	15 14 13 <u>12</u> 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>8</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 <u>8</u> 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>2.4</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>7</u> ----- Primary Score <u>47</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 <u>7</u> 6	<u>Stable pools are absent.</u> Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1
Secondary Habitat Components Artificial Channelization <u>15</u>	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 in the past (>25 yrs) but mostly recovered. <u>15</u> 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>8</u> Left Bank <u>5</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. 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>14</u> Left Bank <u>14</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>14</u> Left Bank <u>14</u> ----- Secondary Score <u>68</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

115

TOTAL SCORE $\frac{115}{160} = 71.9\%$

Date: 8/23/2023	Analyst: F. Buter	Signature: 
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SBIO ID: 87704

HA ID: 18606

62-160.800, F.A.C.

Revision Date: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: McCostill Mill Creek Below Ebenezer Church Rd.					County: Santa Rosa		Date: 8/23/2013		Investigators: F. Butler	
					STORET Station Number: 33020147					
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	96	60	1	N	N	96	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
10	1	N	N	96	70	1	N	N	96	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
20	1	N	N	96	80	1	N	N	96	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
30	1	N	N	96	90	1	N	N	96	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
40	1	N	N	96	100	1	N	N	96	
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	9									
50	1	N	N	96		1	N	N		
	2									
	3									
	4									
	5									
	6									
	7									
	8									
	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 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%.

Secchi depth	
Estimated?	N

# points ranked 4-6	0
total points assessed	9
% 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-2023-08-07-65	

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.	87704
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RPS ID.	10140
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[illegible]

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