CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there are qualified data on this page

Meter ID: 155077 RQ- 2020-12-14-28 2020-10-26-46 Project: SMP Background Assessment

Notes: (1) Always wait for meter to stabilize before recording any readings.
(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400 — Date of Last Temperature Verification 10/13/20

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	H Schmidt	12/15/20	0723	20.0	764	9.1	9.16	100.3			P / F	L / F
ICV	↓	↓	0724	20.0	764	9.1	9.16	100.4			P / F	L / F
CCV			1449	19.5	761	9.2	9.38	101.7			P / F	L / F
CCV											P / F	L / F

DO Acceptance criteria from Table ± 0.3 mg/L. Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75
Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	H Schmidt	12/15/20	0725	20124B	2121	1000	1000	P / F	L / F
ICV	↓	↓	0726	201013A	10/21	100	104.9	P / F	L / F
CCV			1451	201013A	10/21	100	101.5	P / F	L / F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	H Schmidt	12/15/20	0729	2704882	3/21	7.02	19.9	7.02	-22.6	P / F	L / F
Calibr.			0730	203620	6/22	4.00	20.3	4.00	153.8	P / F	L / F
Calibr.			0732	201473	5/22	10.06	20.3	10.06	-203.6	P / F	L / F
ICV			0734	203620	6/22	4	19.4	4.08	150.2	P / F	L / F
CCV			1450	2704882	3/21	7	19.7	6.93	-17.8	P / F	L / F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50;
If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)
If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 10/13/20
If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	H Schmidt	12/15/20		0.00	0.00	P / F	L / F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater

COMMENTS:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CHAIN OF CUSTODY FORM

Date:	12/15/2020	**Collected By:**	Heather Schmuki, Frank Butera
Customer:	NW-DIST	**Sampling Agency:**	FDEP
RQ:	RQ-2020-10-26-46	**Project ID**:	SMP

PLEASE RETURN THE ORIGINAL OF THIS FORM WITH SAMPLE SUBMITTAL FORMS AND THE COOLER PACKING WORKSHEET TO THE LAB

Number of Coolers Shipped: 1

FIELD ID (Labels) submitted under this RQ for this collection date.

Site Location	Field ID/WIN ID
Mcdavid Creek 100 M Upstream Sr99	G5NW0150

RELINQUISHED BY(SIGNATURE): Heather Schmuki **DATE/TIME**: 12/15/2020; 1500

THIS SECTION TO BE COMPLETED BY LABORATORY

Rec'd/Inspected By: **Rec'd/Inspected Date**:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End of Day CCV [Yes] / No

WIN Station Name: Mcdavid Creek 100 M Upstream Sr99 **Date:** 12/15/2020

WIN/Field ID: G5NW0150 **WBID:** 149 **ENR:** **Latitude:** 30.73974078

County: ESCAMBIA **Org ID:** 21FLPNS **Longitude:** -87.44805258

Receiving Body of Water: Perdido **RQ-** 2020-10-26-46

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
[x] Heather Schmuki	x		x		
[x] Frank Butera		x		x	x
[ ]					
[ ]					

Sampling Equipment

- [x] Sample Container
- [ ] Dipper
- [x] Syringe
- [ ] Carboy
- [ ] Van Dorn
- [ ] Pole

Depth measured with: Meter

Secchi Equipment ID:

Collection Method

- [x] **Wading**
- [ ] **From Shore**
- [ ] **Other** _____
- [ ] **Canoe/Kayak**
- [ ] **Electric Motor**
- [ ] **Gasoline Motor**

Water Level: [X] Normal [ ] Low [ ] High [ ] Dry [ ] Pooled [ ] Flooded

Meter ID# 155077 (PRODSS)

Photos: NO **Flow:** FLOW **Tide:**

Tide Times: High: Low:

Biological Samples Collected: [ ] None [X] HA [X] SCI [X] RPS [ ] Algae ID [X] LVS [ ] LVI Other:

SBIO ID Numbers: SBIO ID 81701. HA ID 16712. RPS ID 9628. Macro ID N/A

Notes: **Biology collected. No LVS , vegetation less than 2 square meters in reach.**

Duplicate Sample

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

WIN DMT Activity ID: _____

Blank

Time Zone: _____ **Time:** N/A **Field ID:** N/A (Blank Type_DDMMYYYY)

DI Source: N/A **Location:** N/A

DI Type: N/A **Equipment ID:** N/A

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)

Scan/Save Field Sheets _____ (Initials/Date) **Migrate Data to WIN:** _____ (Initials/Date) **Verify Data In WIN:** _____ (Initials/Date)

RQ-2020-10-26-46
Customer: WQAP
Project ID: SMP

Collected By: Heather Schmuki, Frank Butera
Field Report Prepared By: Heather Schmuki
Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID: G5NW0150

Location: Mcdavid Creek 100 M Upstream Sr99

Comments: Microbiology sample(s) submitted to contract laboratory

Matrix: Fresh

(Check one) ☒ GRAB ☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C⁰)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTh)
12/15/2020	950 CEN	9.43	89.4	13.2	4.26	0.25	0.47 ☒ VOB (S)	0.47	22.7	0.01
	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 ☐ H_2SO_4*	☒ <2	1	A
	Lot #	Sa9354050	**Exp:**	12/20/20			
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD			☒ Ice ☒ HNO_3*	☒ <2	1	A
	Lot #	Na9364060	**Exp:**	12/20/20			
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter			☒ Ice		1	A
	Filter Lot #	17097890					
	Syringe Lot #	0079929					
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-BR-IC / W-F / W-TSS / TURBIDITY			☐ Ice			
Macroinvertebrates (PJ-2L)	☒ MI-FW-QLDC			☒ Formalin		3	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			
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☒ WE8321-MS ☒ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)			☒ Ice		5	A
				☐ Ice			

Name:
Heather Schmuki
Frank Butera

Signature: Heather Schmuki

Date: 12/15/2020

*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 81701 ORG ID 21FLPNS LATITUDE ~~30.47423~~ 30.73974 (FB)

COUNTY Escambia WIN ID/STORET # G5NW0150 LONGITUDE ~~87~~.448057

DATE 12/15/2020 TIME 9:50 CTZ SAMPLING AGENCY FL DEP - NWROC

SITE NAME McDavid Creek 100 m upstream SR99 RQ-2020-10-26-46

FIELD ID/NAME G5NW0150 RECEIVING BODY OF WATER. Perdido River WBID 149 Project: Ecoreg Ref Streams

RIPARIAN ZONE / STREAM FEATURES

LIMS ID:

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): 1.49 5010 2010 3301005 Y

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: 5 m wide

Width of Riparian Vegetation (m) on Each Buffer Side: Left Bank: 718 Right Bank: 718

Hydrologic Modification Score (per FT 3101): 1-2

	.33 m/s	
	0.6 m deep	

High Water Mark: 73.0 (m) + 71.5 (above present water level) = 74.5 (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%) ☒ 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

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☒	☐	☐
Silt Smothering:	☐	☒	☐	☐
Algae Smothering:	☒	☐	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	19.8	5	
Undercut Banks / Roots	1.4	5	
Leaf Packs or Mat	2.4	5	
Aquatic Vegetation	0.1	2	
Rock or Shell Rubble..			
Sand.....	76.3	3	
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:	0.25	13.2	4.26	9.83	89.4	22.7	0.01	0.5
Mid:	0.5							☒ VOB
Bottom	~~0.6~~							TOTAL DEPTH
								0.5

Meter ID: 155077 ~~13~~

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) ☐

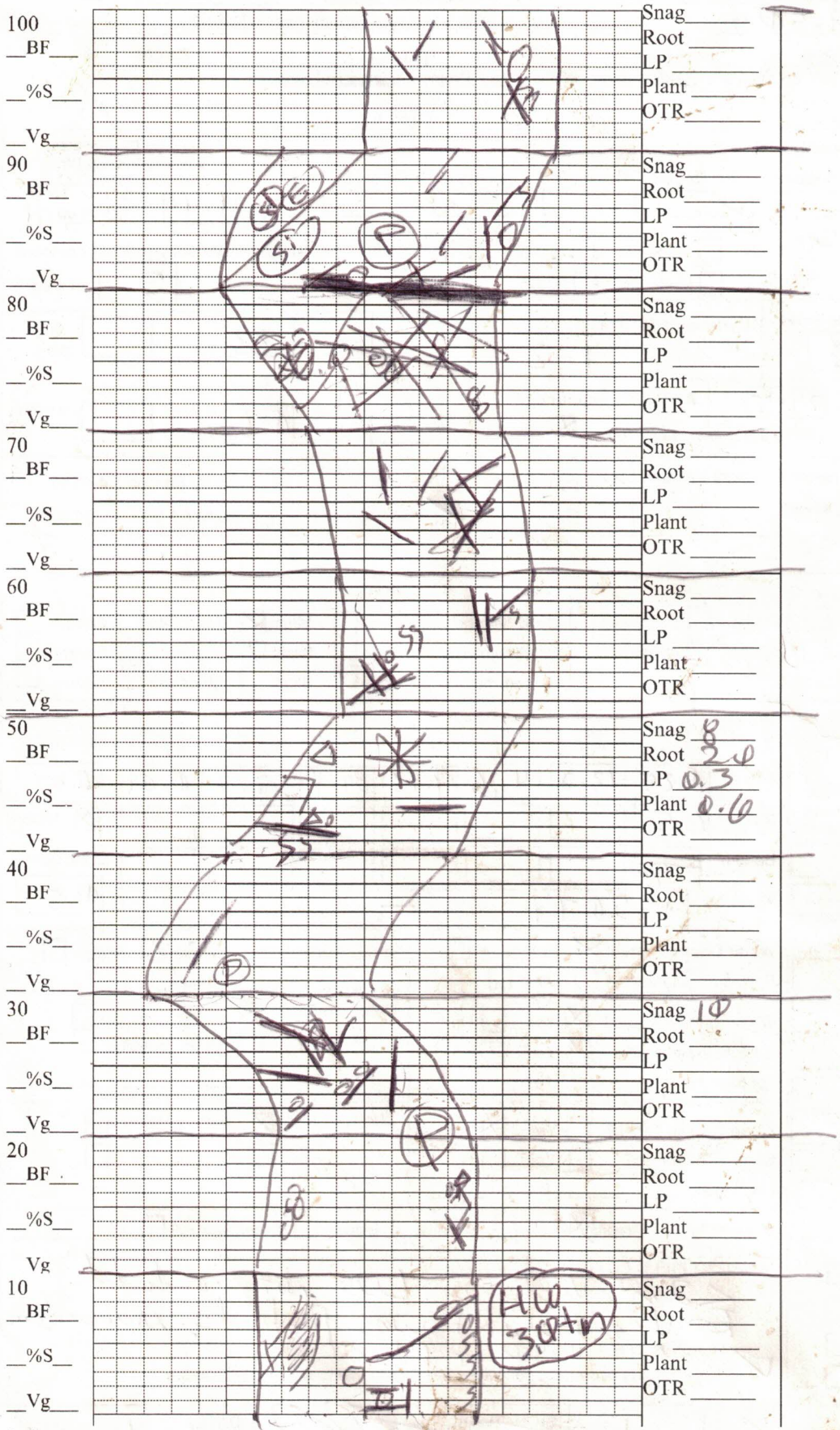
AMBIENT FIELD CONDITIONS / NOTES:

<2 m² Vegetation. LVS not conducted. ~~For~~ Veg. habitat was for inds, macrods. not vascular plant

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

SAMPLING TEAM: Frank Butera, Heather Schmuki SIGNATURE: [signature] DATE: 12/15/2020

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).



WIN ID G5NW0150

Substrates: Code key, draw proportionate habitat abundance.

- Snags
- Roots/undercut banks
- Leaf Packs (or mats)
- Macrophytes
- _____
- _____
- _____

Velocity:
Note where velocity measures were taken. 70 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 5.1 m
Average depth 0.8 m
WQ & chemistry taken @ 0 m

McDavid Creek 100M upstream SR99
Project. Reference Streams
Sampled By/Date: 12/15/2020
FB, HS

0 m Latt. 30.73932
0 m Long. 87.44823
100 m Latt 30.7960
100 m Long 87.44780

0-10 meter [A]	Habitat Area (M)	Left Bank	Right Bank
	Snag 5.0	Bankfull	Bankfull
0m width (m) 5.5	Root 2.0	+	—
10m width 5.1	Leaf 0.4 1.0	Slope +	Slope +
Avg. Depth 0.6	Veg		
Max Depth 0.9	Gravel	Veg +	Veg +
Rip. Buff L 71?	Rock		
Rip. Buff R 71?			

50-60 meter [F]	Habitat Area (M)	Left Bank	Right Bank
	Snag 10	Bankfull +	Bankfull +
60m width 5.0	Root 0.5		
	Leaf 0.2	Slope +	Slope +
Avg. Depth 1.0	Veg		
Max Depth 71.5	Gravel	Veg +	Veg +
Rip. Buff L 71?	Rock		
Rip. Buff R 71?			

10-20 meter [B]	Habitat Area (M)	Left Bank	Right Bank
	Snag 3	Bankfull +	Bankfull +
20m width 5.4	Root 1.0		
	Leaf 2.0	Slope +	Slope +
Avg. Depth 0.6	Veg 0.1		
Max Depth 0.9	Gravel	Veg +	Veg +
Rip. Buff L 71?	Rock		
Rip. Buff R 71?	(P)	Embeddedness	

60-70 meter [G]	Habitat Area (M)	Left Bank	Right Bank
	Snag ~~10~~ 2.0	Bankfull +	Bankfull —
70m width 5.0	Root 0.5		
	Leaf 1.0	Slope +	Slope +
Avg. Depth 0.6	Veg		
Max Depth 0.8	Gravel	Veg +	Veg +
Rip. Buff L	Rock		
Rip. Buff R	(B)		

20-30 meter [C]	Habitat Area (M)	Left Bank	Right Bank
	Snag 10	Bankfull +	Bankfull +
30m width 5.0	Root 0.5		
	Leaf 5.0	Slope +	Slope +
Avg. Depth 0.8	Veg 0.1		
Max Depth 71.5	Gravel	Veg +	Veg +
Rip. Buff L 71?	Rock		
Rip. Buff R 71?			

70-80 meter [H]	Habitat Area (M)	Left Bank	Right Bank
	Snag 25	Bankfull +	Bankfull +
80m width 6.0	Root 0.5		
	Leaf 1.0	Slope +	Slope +
Avg. Depth 0.6	Veg		
Max Depth ~~0.9~~	Gravel	Veg +	Veg +
Rip. Buff L 71?	Rock		
Rip. Buff R 71?	(F)		1.1 MAX

30-40 meter [D]	Habitat Area (M)	Left Bank	Right Bank
	Snag 6.0	Bankfull —	Bankfull +
40m width 5.0	Root 0.5		
	Leaf 1.0	Slope +	Slope +
Avg. Depth 1.0	Veg		
Max Depth	Gravel	Veg +	Veg +
Rip. Buff L 71?	Rock		
Rip. Buff R 71?			

80-90 meter [I]	Habitat Area (M)	Left Bank	Right Bank
Max Dpth 7.5	Snag 1.2	Bankfull +	Bankfull +
90m width 4.0	Root 0.5		
	Leaf 0.3	Slope +	Slope +
Avg. Depth ~~0.6~~ 0.4	Veg		
Max Depth ~~0.9~~ 1.5	Gravel	Veg —	Veg —
Rip. Buff L 71?	Rock		
Rip. Buff R 71?	(SD) (E)	(SD)	(SD)

40 - 50 meter [E]	Habitat Area (M)	Left Bank	Right Bank
12	Snag ~~6.0~~	Bankfull —	Bankfull +
50m width 6.0	Root 0.5		
	Leaf 0.2	Slope —	Slope +
Avg. Depth 1.0	Veg 0.4		
Max Depth 71.5	Gravel	Veg +	Veg +
Rip. Buff L 71?	Rock		
Rip. Buff R 71?			

90 - 100 meter [J]	Habitat Area (M)	Left Bank	Right Bank
	Snag 6.0	Bankfull —	Bankfull +
100m width 5.0	Root 0.5		
	Leaf 0.5	Slope +	Slope —
Avg. Depth 0.8	Veg		
Max Depth 1.2	Gravel	Veg +	Veg +
Rip. Buff L	Rock		
Rip. Buff R			

McDavid Creek 100 m upstream SR99

Storet: **G5NW0150**

Date 12/15/2020

0 meter (Dec Deg)
30.73932
87.44823

100 meter (Dec Deg)
30.7960
87.44780

Water Quality Measured at 0m

Stream Velocity and location.
~~3.0~~ .33 m/s 74 meter mark

Number of Pools & Location 2 (B-C), (H-I)

High Water: 73.0 (A)

Silt smothering @ (FB) I

Sand Smothering @ ~~(FB)~~ (FB) I

Algae Smothering @

Degraded Banks @ ~~I~~ FB I

Fe/Sulfur Bact. @

Total Habitat	Sq. Meters	Percent
Snags	101	19.8
Roots	7	1.4
Leaf	12.2	2.4
Veg	0.6	0.1
Rock		
Gravel		
Sand	389.2	76.3
Other		
Sum 1° Habitat		23.7

Avg. Depth	Max. Depth	Avg. Width
0.8	71.5	5.1

Bank Stability Score. Left Bank 2.5 Right Bank 2.6 Category Left Bk Sub Optmd Right Bk 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:** ~~3.0~~

2.5 2.5

Notes.

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

SAMPLING AGENCY: 21FLPNS		STORET STATION NUMBER: G5NW0150	DATE (MM/DD/YY): 12/15/20	RECEIVING BODY OF WATER: Perdido River
REMARKS: WBID 149	COUNTY: Escambia	LOCATION: Black Ck Upstream of Hwy 20		FIELD ID/NAME: G5NW0150

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 12	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 (12) 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 13	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 20	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 18 Primary Score 63	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 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** 20	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. 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 9 Left Bank 8	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 10 Left Bank 10	Width of vegetation greater than 18 m 10 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 10 Left Bank 10 Secondary Score 77	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 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

140 **TOTAL SCORE**

Date: 12/15/20	Analyst: F. Butera	Signature:

SBIO ID: 81701 HA ID: 16712

62-160.800, F.A.C.

Revision Date: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: McDavid Creek 100 m upstream SR99 | County: Escambia | Date: 12/15/2020 | Investigators: F. Butera

STORET Station Number: G5NW0150

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N	No	
	2			
	3			
	4			
	5			72
	6			
	7			
	8			
	9			
10	1	N	No	
	2			
	3			
	4			
	5			95
	6			
	7			
	8			
	9			
20	1	N	No	
	2			
	3			
	4			
	5			50
	6			
	7			
	8			
	9			
30	1	N	No	
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
40	1	N	No	
	2			
	3			
	4			
	5			90
	6			
	7			
	8			
	9			
50	1	N	No	
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N	No	
	2			
	3			
	4			
	5			90
	6			
	7			
	8			
	9			
70	1	N	No	
	2			
	3			
	4			
	5			91
	6			
	7			
	8			
	9			
80	1	N	No	
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
90	1	N	No	
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
100	1	N	No	
	2			
	3			
	4			
	5			90
	6			
	7			
	8			
	9			

Secchi depth	0.0
Estimated?	No

# 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	NA
Habitat Assessment	✓
SCI/Biorecon	✓
Water sample	✓
RQ-2020-10-26-46	

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. 81701

RPS ID. 9628

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%.

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

Waterbody: McDavid Creek 100 m upstream SR99	Date:	County: Escambia	Storet Number: G5NW0150
Analyst: F. Butera		Signature:	

Comments: <2m² Vegetation. LVS NOT appropriate

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m^2 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.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage											
>5 and ≤10% Macrophyte Coverge											
>10 and ≤25% Macrophyte Covrge											
>25 and ≤50% Macrophyte Covrg											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											

Field ID	RPS ID	SBIO ID	VPDB ID N/A
LIMS ID		RQ-2020 -10-26-46	

62-160.800, F.A.C.

Revision Date: March 1, 2014

SAMPLE TRANSMITTAL FORM

Document Reference # 0s.1.0

Project: FDEP | Laboratory: Wetlands Research Laboratory | Sampler's initials: FB

Method of transport: on ice by hand | Page 1 of 1

Samples delivered by: H Schmidt of FDEP | Date/Time: 12/15/20 ; 1341

Sample received by: [signature] of WRL | Date/Time: 12/15/2020 ; 1341

Instructions: Fill in all fields except "Lab ID" on sample transport form completely. Each sample container must use a separate line. Place this form in a waterproof bag and place it with the samples for transport. If a field log or other chain of custody is attached, that information may be referenced on this form and the log or COC attached.

Lab ID	Sample ID	Matrix[1]	Type[2]	Container Type	Analyses Requested	Preservative	Sample (°C)[3]	Sampling Date/Time
20-47246	GSNW0150. McDavid Creek 100m Upstream SR99. Freshwater	SW	G	Sterile plastic	E. coli (NW-UWF-ECQ)	ice/$Na_2S_2O_3$	4.0	12/15/20 ; 0950

Comments: **Sample Container lot#** L20020 #

RQ - 2020-10-26-46

Contact organization: FDEP | Contact name: Mike King | Phone:

Address: 160 Governmental Center, suite 308, Pensacola, FL 32502 | Sampler's name: Frank Bivins

[1]Matrix examples: SW = surface water, PW = pore water, GW = ground water, FW = Freshwater, MW = Marine Water, BW = Brackish Water, S = soil/sediment, Other: X =

[2]Type codes: G = grab, C = composite, X =

[3]Recorded using IR1-2

Site Name __McDavid Creek 100 M Upstream SR99___ Date: _12/15/2020___

Field ID _G5NW0150_____ Storet_G5NW0150_ Project: _ECOREGREF STREAMS

Visit ID _81701_____ RQ: 2020-10-26-46_____

RPS ID _9628_____ LIMS ID: _____

Macro ID _N/A_____ WBID: _149_____

HA ID _16712_____

☒ SCI

☒ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem entered in SBIO

☒ HA entered in SBIO Initial _FB 12/22/2020 ☐ Date and Initial QA: _~~12/22/2020, FB~~_

☒ RPS entered in SBIO Initial _FB 12/22/2020 ☐ Date and Initial QA: _~~12/22/220, FB~~_

☐ LVS entered in SBIO Initial _____ ☐ Date and Initial QA: _____

☐ < 2 m² vegetation

☐ Plants getting verified Date submitted: _____

☐ Plants verified Date returned: _____

☐ RPS authorized in SBIO ☐ Date and Initial: _____

☐ RPS score: _____

☐ Macro authorized in SBIO ☐ Date and Initial: _____

☐ LVS Score: _____

☐ SCI complete: _____ SCI Score: _____

☒ Add SBIO-ID, HA-ID, RPS-ID, MACROPHYTE-ID and LIMS# to field sheet in database

Reference Bioassessment	County	WBID	Kit	Qty	Bottle Group	WIN ID	Latt	Long
McDavid Creek 100 m upstream SR99	Escambia	149	Fresh	1	A	G5NW0150	30. ~~30.47923~~ 7397	87.448057
			Metals	1				
			Escherichia coli	1				
			Pesticides	1				
			SCI	3	B			
			ALGAL-ID	1				
RQ-2020-10-26-46								

NW RUN	County	WBID	Kit	Qty	Bottle Group	WIN ID	Latt	Long
G4NW0345. Sevenmile Creek upstream of Alderbrook Blvd. 8150	Santa Rosa	10G	Tracers: W-E8321-DI, MS	1	A	G4NW0345	30.66666	87.21651
			Escherchia coli	1				
RQ-2020-12-14-28								

UWF Bottle Lot No. L200200# 021 Expiration: 02/15/2023

Sulfuric Acid Lot. ~~SA0293040~~ Expiration: ~~10/19/2021~~

Nitric Acid Lot. ~~NA0038050~~ Expiration: ~~02/07/2021~~

Syringe Lot. 0079929

Filter Lot. 17097890

RQ-2020-10-26-46			
Bottle Group	Category	Test	Bottles
A	Kit A	Nutrients	1
		Chlorophyll	1
		Alkalinity...	1
		Ortho-Phos	1
	Metals	ICPM/ICPMS	1
	Bacteria	UWF - E. coli	1
	Pesticides	PNSP-TQ	4
		W-E3821-DI/MS	1
	Biology	QLDC	3
		Algal ID	1
Total			15

RQ-2020-12-14-28			
Bottle Group	Category	Test	Bottles
A	Tracers	W-E3821-DI/MS	1
	Bacteria	UWF - E. coli	1

Sulfuric Acid

Lot SA9354050

Exp 12/20/2020

Nitric Acid

Lot NA9354060

Exp. 12/20/2020

UPS Trackers

* 1Z 1YR 217 84 9995 6752 ✓ 12/16
(Pesticides / Tracers)

* 1Z 1YR 217 84 9537 9142 ✓ 12/16
SCI - Nutrient kit.