



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Wakulla River At Boat Tram **Date:** 1/19/2021
WIN/Field ID: 44059 **WBID:** 1006 **ENR:** **Latitude:** 30.2345805
County: WAKULLA **Org ID:** 21FLWQA **Longitude:** -84.294477
Receiving Body of Water: Ochlockonee - St. Marks **RQ:** 2021-01-18-10

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Avril Wood-McGrath	x	x	x		
☒	Blake Spencer		x		x	x
☐						
☐						

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

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# EXO #1							
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: 81805 HA: 16769 RPS: 9660 LVS: 11771													
Notes:													

Duplicate Sample

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

Blank

Time Zone: EST	Time: 1217	Field ID: FB_011921 (Blank Type_DDDMMYY)
DI Source: Lab building C	Location: Lab Building C	
DI Type: FB	Equipment ID:	
DI Container (Name/ID): Carboy 1A		DI Container Type: Carboy

LIMS EVENT ID: WAS-SECT-2021-01-19-01 **WIN Import ID:** 21FLWQA_WAS-SECT-2021-01-19-01_05-11-2021.TXT
Enter Field Parameters, Verify Station ID In LIMS DMT: SBS 2/25/21 **QC Station ID, Field Parameters In LIMS DMT:** ESB 3/3/21
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets SBS 2/25/21 **Migrate Data to WIN:** DFT 5/11/21 **Verify Data In WIN:**
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-01-18-10

Customer: WQAP

Project ID: Wakulla BMAP

Collected By: Avril Wood-McGrath, Blake Spencer

Field Report Prepared By: Avril Wood-McGrath

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



44059

Location: Wakulla River At Boat Tram

Comments:

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)
1/19/2021	1141 EST	3.09	33.6	20.28	7.46	0.3	1 ☒ VOB (S)	1	306.9	0.15
	EST						Central Lab please use top row for login purposes			

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 # Sa0293040 Exp: 10/19/21				
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO3*	☒ <2	1	A
	Lot # Na0038050 Exp: 02/07/21				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # 16930646				
	Syringe Lot # 7086795				
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		2	B
Periphyton (PT-50ML)	☒ ALGAE-ID	☒ Ice		1	B
Microbiology (Contract Lab Bottle)	☐ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab	☐ Ice			
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		1	A
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☒ W-PSNP-TQ ☐ W-CT-CL-R	☒ Ice		4	A
	☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDRIN				
Phytoplankton/Periphyton	DTM-QL-C ☐ PEN-QL-C ☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			
	DTM-QN-C ☐ PRN-QN-C ☐ PKD-QN-BV ☐				

Name:
Avril Wood-McGrath
Blake Spencer

Signature:

Date:

1/19/21

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



RQ- 2021-01-18-10

Customer: WQAP

Project ID: SMP

Collected By: Avril Wood-McGrath, Blake Spencer

Field Report Prepared By: Avril Wood-McGrath, Blake
Spencer

Sampling Agency: FDEP

BLANK



Field ID: FB_011921

Comments:

Matrix: FB

(Check one) ☐ COMPOSITE ☒ GRAB

Date

Time

DI Source: Lab building C

1/19/2021

1217

EST

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	C
	Lot # Sa0293040 Exp:	10/19/21			
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ H2SO4	☒ <2	1	C
	Lot # Na0038050 Exp:	02/07/21			
Filtered Nutrients (P125ML)	☒ W-PO4-F Filter ☒ Field Filtered 0.45 µm	☒ Ice		1	C
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	Syringe Lot # 7086795				
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-IC / TDS	☒ Ice		1	C
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Tracers (BG-500ML)	☒ W-E8321-DI ☒ W-E8321-MS	☒ Ice		1	C
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☒ W-PSNP-TQ ☐ W-CT-CL-R	☒ Ice		2	C
	☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐ W-DIELDIN				
Name: Avril Wood-McGrath Blake Spencer		Signature: 			Date: 1/19/21

*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 81805 ORG ID 2JFLWQA LATITUDE 30.23458
COUNTY Wakulla STORET # 44059 LONGITUDE -84.29447
DATE 1/19/21 TIME 11:41 SAMPLING AGENCY FOEP
SITE NAME Wakulla River @ Boat Train
FIELD ID/NAME 44059 RECEIVING BODY OF WATER St. Marks River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):							Landscape Development Intensity Index (LDI)
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify) <u>water</u>
<u>78</u>		<u>2</u>	<u>0.9</u>	<u>17</u>	<u>0.7</u>	<u>0.9</u>	<u>0.5</u>
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy							Typical Width (m) Depth (m)/Velocity (m/sec) Transect
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy							
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)			
Left Bank: <u>>18</u> Right Bank: <u>>18</u>				<u>3-4</u>			
High Water Mark: <u>0.6</u> + <u>1.0</u> = <u>1.6</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No			
Artificially ☒ No ☐ Mostly recovered, more sinuous				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%)			
Channelized: ☐ Some recovery ☐ Recent, severe				☐ 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																																										
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System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>Spring Run</u>																																										
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.																																										
SAMPLING TEAM <u>Blake Spencer + Avril Wood-McGrath</u>		SIGNATURE: <u>Blake</u>																																								
		DATE: <u>1/19/21</u>																																								

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

QC ESB 3/3/21

SRID: 81805

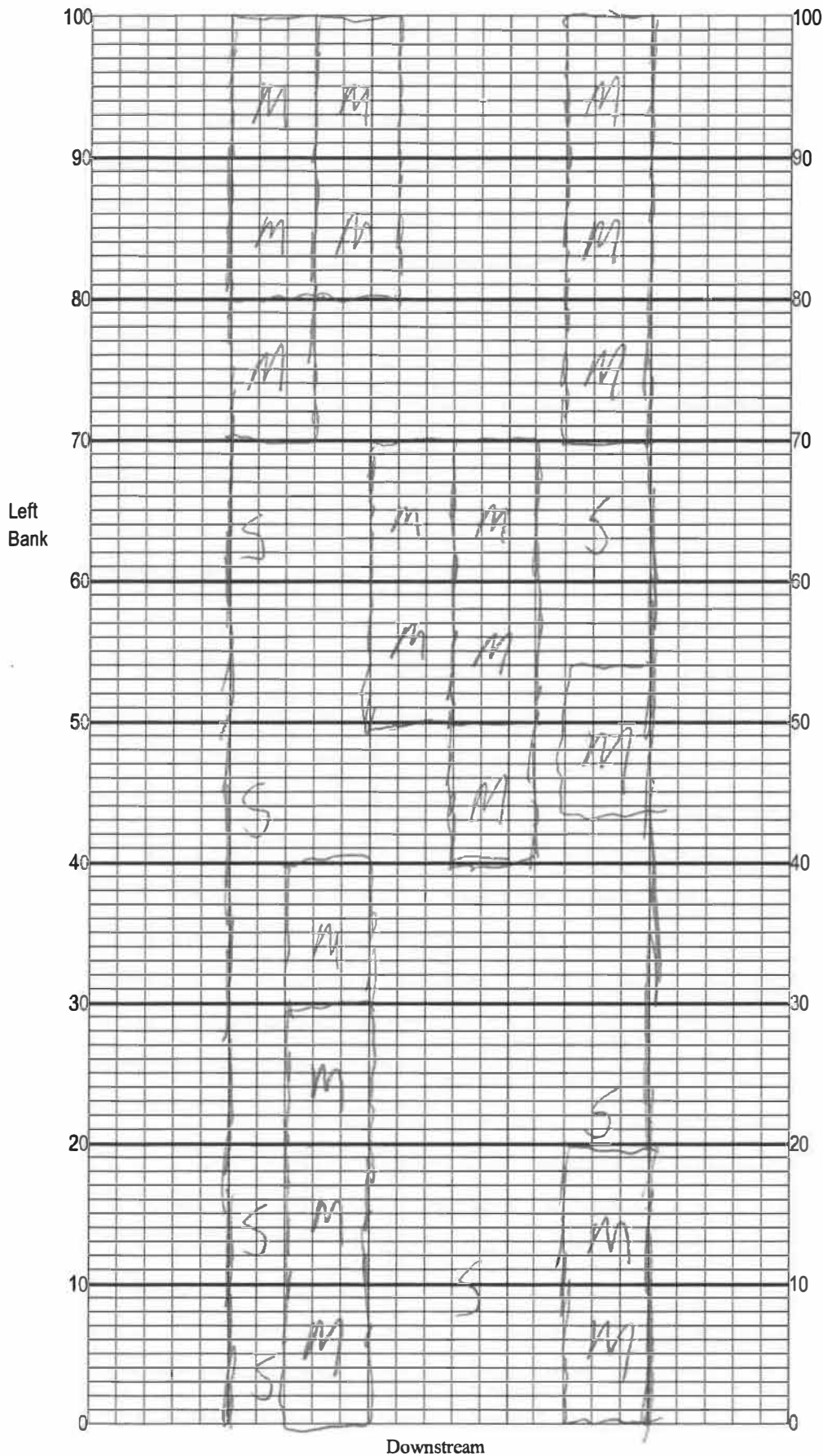
SAMPLING AGENCY: <i>FDEP</i>		STORET STATION NUMBER: <i>44059</i>	DATE (MM/DD/YY): <i>11/19/21</i>	RECEIVING BODY OF WATER: <i>St. Marks River</i>
REMARKS: <i>HA: 16769</i>	COUNTY: <i>Walulla</i>	LOCATION: <i>Walulla River @ Boat Tram</i>	FIELD ID/NAME: <i>44559</i>	

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 <i>9</i>	20 19 18 17 16	15 14 13 12 11	10 <i>(9)</i> 8 7 6	5 4 3 2 1
Substrate Availability <i>20</i>	Greater than 30% major productive habitat present at site <i>(20)</i> 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 <i>20</i>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥ 0.33 0.31 0.29 0.27 > 0.25 <i>(20)</i> 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 <i>11</i>	Adequate number of stable pools (1-2 per 12 times width) and < 25% of habitats affected by sand, silt, or algae.	Adequate number of stable pools (1-2 per 12 times width) and > 25% of habitats affected by sand, silt, or algae.	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (< 2 x prevailing depth).	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.
Primary Score <i>60</i>	20 19 18 17 16	15 14 13 12 <i>(11)</i>	10 9 8 7 6	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 or straightening 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 <i>20</i>	<i>(20)</i> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability	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.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.
Right Bank <i>10</i> Left Bank <i>10</i>	<i>(10)</i> 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation > 12 to 18 m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <i>10</i> Left Bank <i>10</i>	<i>(10)</i> 9	8 7 6	5 4	3 2 1
Riparian Zone Vegetation Quality	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.	> 50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <i>10</i> Left Bank <i>10</i> Secondary Score <i>40</i>	<i>(10)</i> 9	8 7 6	5 4	3 2 1

*140***TOTAL SCORE**

Date: <i>11/19/21</i>	Analyst: <i>Blake Spencer</i>	Signature: <i>[Signature]</i>
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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: Wickville River @ Root Tram

Date: 1/19/21

Sampler: Blake Spencer

100 m: Latitude 30.234248
Longitude -84.294324

0 m: Latitude 30.23458
Longitude -84.29447

Substrates: Code key, draw proportionate habitat abundance. %

S Snags 19%

R Roots/undercut banks 0

L Leaf Packs (or mats) 0

M Aquatic Macrophytes >30%

 Pools total # observed =
range expected =

Average width 8.5 m

Average depth 1.5 m

Velocity measured at 50 meter mark.

WQ & chemistry taken at 50 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:

SATO: 81805 RPS: 9660

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Wakulla River (a) Boat Tram					County: Wakulla		Date: 1/19/21		Investigators: Blake Spencer + April Wood-McGrath	
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	STORET Station Number:
10	1	N			60	1	N			0
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N				5	N			
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
20	1	N			70	1	N			0
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N				5	N			
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
30	1	N			90	1	N			0
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N				5	N			
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
40	1	N			100	1	N			0
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N				5	N			
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			
50	1	N				1	N			
	2	N				2	N			
	3	N				3	N			
	4	N				4	N			
	5	N				5	N			
	6	N				6	N			
	7	N				7	N			
	8	N				8	N			
	9	N				9	N			

Secchi depth 108
Estimated? N

points ranked 4-6 37
total points assessed 83
% points ranked 4-6 45%

Check accompanying data collected at same site/date.
 Algal mat sample ☒
 Linear Veg Survey ☒
 Habitat Assessment ☒
 SCI/Biorecon ☒
 Water sample ☒
 RQ- 2021-01-18-10

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

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%.

Waterbody: <u>Wakulla River @ Post Train</u>	Date: <u>1/15/21</u>	County: <u>Wakulla</u>	Storet Number: <u>44059</u>
Analyst: <u>Blake Spencer</u>	Signature: <u>[Signature]</u>		
Comments:			

[illegible]

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
CHAIN OF CUSTODY FORM

Date: 1/19/2021
Customer: WAS
RQ: RQ-2021-01-18-10

Collected By: Avril Wood-McGrath, Blake Spencer
Sampling Agency: FDEP
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: 2

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

Site Location	Field ID/WIN ID
Wakulla River At Boat Tram	 44059
FB	 FB_011921

RELINQUISHED BY(SIGNATURE):



DATE/TIME: 1/19/21
1355

THIS SECTION TO BE COMPLETED BY LABORATORY

Rec'd/Inspected By:

Rec'd/Inspected Date:

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:

Exo #1

RQ:

2020-2021-01-19-10

Project:

Wetulla BMAP

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

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.	Blake Spencer	1/19/21	0659	18.6	765.3	10.02	10.02	101.1	-	1.05	P/F	L/F
ICV	Blake Spencer	1/19/21	0702	18.86	765.3	9.96	10.05	101.6	-	-	P/F	L/F
CCV	Amil Wood-McGath	1/19/21	15:19	19.32	764.9	9.22	9.05	99.6	-	-	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 μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	Blake Spencer	1/19/21	0704	191120A	3/21	1000	1001	P/F	L/F
ICV	Blake Spencer	1/19/21	0706	191120A	3/21	1000	1002	P/F	L/F
CCV	Amil Wood-McGath	1/19/21	15:22	2911093	11/21	100	101.5	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

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.	Blake Spencer	0711	1/19/21	200407B	10/21	7.03	19.1	7.03	-11.2	P/F	L/F
Calibr.	Blake Spencer	0708	1/19/21	200221A	09/2021	4.00	19.0	4.00	156.3	P/F	L/F
Calibr.	Blake Spencer	0713	1/19/21	200407A	10/2021	10.07	19.0	10.07	-125.1	P/F	L/F
ICV	Blake Spencer	0715	1/19/21	200407A	10/2621	10.07	19.0	10.07	-177.8	P/F	L/F
CCV	Amil Wood-McGath	1/19/21	15:26	200221A	09/21	4.01	19.3	3.99	155.2	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 $+180 \pm 50$;

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: _____

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						P/F	L/F

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

COMMENTS:

Cooler Packing Worksheet for Request: RQ-2021-01-18-10

Wakulla BMAP

Ship Cooler On: 1/14/2021

Customer/Project: WAS-SECT/BMAP

Assigned To: REYNOLDS_T

Requester: Curtis Musson

Priority: 3

850-245-8453

2600 Blair Stone Rd

Tallahassee, FL 32399

Attn: Curtis Musson

Comments:

Group A: Nutrients, chlorophyll, Metals, Tracers, Q-PSNP-TQ

Group B: SCI, Algae_ID

Group C: Nutrients, Metals, Tracers, Q-PSNP-TQ

Packing Notes:

No FedEx Labels

No Trash Bag

1 Case H2SO4

Sampler Note:

Group A & B: Sample

Group C: Field Blank

Requested Analyses:

Bottle Group: A

of Sites: 1

Container ID: P-1L

Qty: 1

Preservation: ICE

Lot #

00078451

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

W-CL-IC

W-COLOR

W-F

W-SO4-IC

W-TDS

W-TSS

Description

Alkalinity in aqueous matrices as mg CaCO3/L

Turbidity in aqueous matrices

Chloride in aqueous matrices

True Color measured at 450 nm (not valid for NPDES monitoring)

Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)

Sulfate in aqueous matrices

Total Dissolved Solids in aqueous matrices

Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample

Container ID: BP-1L

Qty: 1

Preservation: ICE

Lot #

128330

Description: Brown Plastic Bottle 1L

Analysis

Description

Container ID: BG-500ML

Qty: 1 Preservation: ICE

Lot # 00078534

Description: Brown Glass Bottle 500ML

Affix BLUE dot to container.

Analysis

W-E8321-DI

W-E8321-MS

Description

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Container ID: P-500ML

Qty: 1 Preservation: HNO3

Lot # 00078385

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

Analysis

W-HARD

W-ICP

W-ICPMS

Description

Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3

Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

Container ID: P-500ML

Qty: 1 Preservation: ICE And H2SO4

Lot # 00078388

Description: Plastic Bottle 500 mL

Affix YELLOW sulfuric acid dot to container.

Analysis

W-NH3

W-NO2NO3

W-S-A-TP

W-TKN

W-TOC

Description

Ammonia in aqueous matrices as mg N/L

Nitrite/Nitrate in aqueous matrices as mg N/L

Total Phosphorus in aqueous matrices as mg P/L

Total Kjeldahl Nitrogen in aqueous matrices

Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML

Qty: 1 Preservation: FILTER-ICE

Lot # 00078744

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Container ID: BG-1L

Qty: 4 Preservation: ICE

Lot # 00077472

Description: Brown Glass Bottle 1L

Affix BLUE dot to container.

Analysis

W-PSNP-TQ

Description

Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS

Bottle Group: B**# of Sites: 1**

Container ID: PT-50ML

Qty: 1 Preservation: ICE

Lot # 03775003

Description: Plastic Tube 50 mL

Analysis

ALGAL_ID

Description

Qualitative assessment of algal taxa present without counts

Container ID: PJ-2L

Qty: 2 Preservation: Formalin

Lot # 03LOWASH

Description: Plastic Jar 2 L

Analysis

MI-FW-QLDC

Description

No. Taxa of FW macroinverts, qual samp, 20 dipnets.

Bottle Group: C**# of Sites: 1**

Container ID: P-1L

Qty: 1 Preservation: ICE

Lot # 05W78451

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

W-CL-IC

W-COLOR

W-F

W-SO4-IC

W-TDS

W-TSS

Description

Alkalinity in aqueous matrices as mg CaCO3/L

Turbidity in aqueous matrices

Chloride in aqueous matrices

True Color measured at 450 nm (not valid for NPDES monitoring)

Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)

Sulfate in aqueous matrices

Total Dissolved Solids in aqueous matrices

Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample

Container ID: BG-500ML

Qty: 1 Preservation: ICE

Lot # 05W78534

Description: Brown Glass Bottle 500ML

Affix BLUE dot to container.

Analysis

W-E8321-DI

W-E8321-MS

Description

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Container ID: P-500ML

Qty: 1

Preservation: HNO3

Lot # 007885

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

Analysis

W-HARD

W-ICP

W-ICPMS

Description

Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3

Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

Container ID: P-500ML

Qty: 1

Preservation: ICE And H2SO4

Lot # 007138

Description: Plastic Bottle 500 mL

Affix YELLOW sulfuric acid dot to container.

Analysis

W-NH3

W-NO2NO3

W-S-A-TP

W-TKN

W-TOC

Description

Ammonia in aqueous matrices as mg N/L

Nitrite/Nitrate in aqueous matrices as mg N/L

Total Phosphorus in aqueous matrices as mg P/L

Total Kjeldahl Nitrogen in aqueous matrices

Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML

Qty: 1

Preservation: FILTER-ICE

Lot # 0078144

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Container ID: BG-1L

Qty: 2

Preservation: ICE

Lot # 0077472

Description: Brown Glass Bottle 1L

Affix BLUE dot to container.

Analysis

W-PSNP-TQ

Description

Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS

Cooler Packed By: Tulum

Number of Coolers: 2

Date: 01/11/2021

Kit must also include:

- ☒ Field Sheets
- ☒ Temperature Control Bottle
- ☒ FedEx Bills, if applicable
- ☒ Plastic Bags/Zip Ties
- ☒ Acid Labels (sets of 24)

If Preservation Included:

ID <u>sulfuric acid</u>	Exp <u>10/19/21</u>	Lot # <u>0293040</u>
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____

PLEASE RETURN ALL COOLERS FOR RQ-2021-01-18-10