



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?
Yes / ☒ No

WIN Station Name: Wakulla River at Boat Tram

Date: 4/17/19
(mm/dd/yyyy)

WIN/ Field ID: 44059

WBID: 1006

Latitude: 30.23458
(Decimal Degrees)

County: Wakulla

ORG ID: 21FLWQA

Longitude: -84.29447
(Decimal Degrees)

Receiving Body of Water: St. Marks River

RQ- 2019-04-15-19

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
<u>Jason Stone</u> <u>Blake Spencer</u> <u>April Wood-McGath</u>				☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole	
									☐ Carboy	☒ Syringe		
									☐ Dipper	☐ Other		
									Depth Measured with <u>Sonar #1</u>			
Equipment ID								Collection Method				
								☐ Wading	☐ Canoe/Kayak			
								☐ From Shore	☐ Electric Motor			
								☐ Other	☒ Gasoline Motor			
Water Level: <u>Dry</u> / Pooled / Low / Normal / High / Flooded				Meter ID# <u>Rinco #2</u>				Matrix: <u>Fresh</u> / Marine / DI				
Photos: Yes / ☒ No				Flow: <u>No Flow</u> / Intertidal / <u>Flowing</u> / NA				Tide: <u>Rising</u> / Falling / Slack <u>NA</u>				
Tide Times: High <u>NA</u> Low <u>NA</u>												
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (µmhos/cm)	Temp. (C°)		
EST	10:46	1.1	0.5	VOB	4.25	47.6	7.66	0.15	323	20.99		
CEN			0.3									
Biological Samples Collected: <u>None</u> <u>HA</u> <u>SCI</u> <u>RPS</u> <u>Algae ID</u> <u>LVS</u> <u>LVI</u> Other:												
SBIO ID Numbers: SBIO-ID: <u>79328</u> HA-ID: <u>15722</u> RPS-ID: <u>9292</u> Macrophyte-ID: <u>11254</u> LIMS#: <u>2079061</u>												
Parameter Suite		Parameter Methods				Preservation		Lot#	Expiration	pH Check		
Preserved Nutrients		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☐ H2SO4		<u>SA8344070</u>	<u>12/10/19</u>	☒ <2	Contains: 1.1 HNO3 Lot No: NA8344050 Expires: 12/10/19 See Safety Data Sheet (SDS)	
Metals		☒ W-ICPMS ☐ W-ICP				☒ Ice ☒ HNO3		<u>NA8344050</u>	<u>12/10/19</u>	☒ <2		
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice						
Chlorophyll		☒ CHLSUITE-W				☒ Ice						
Physical/Aggregate (Fresh)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-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				☐ Ice						
		☐ 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				☐ Ice						
		☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA				☐ Ice						
Phytoplankton		☐ DTY-QN-C ☐ PKD-QN-C				☐ Ice						
Notes:												
Signature: <u>[Signature]</u>												
WIN ID / FILED ID: <u>44059</u>												
Location: <u>Wakulla River at boat tram</u>												
Date: <u>4/18/19</u>												

LIMS EVENT ID: WAS-SECT-2019-04-17-01

WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT: 4/19/19

QC Station ID, Field Parameters In LIMS DMT: 4/30/19

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data In WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

Entered by: 4/19/19

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

SAMPLE ID 79328 ORG ID 21FLWQA LATITUDE 30.23458
 COUNTY Wakulla STORET # 44059 LONGITUDE -84.29447
 DATE 4/12/19 TIME 1046 SAMPLING AGENCY FAEP
 SITE NAME Wakulla River at Boat Tram
 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): Forest/Natural <u>78</u> Silviculture <u>—</u> Field/Pasture <u>2</u> Agricultural <u>0.9</u> Residential <u>17</u> Commercial <u>0.7</u> Industry <u>0.9</u> Other (Specify) <u>water</u> <u>0.5</u>								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>85</u> m wide <u>0.5</u> m/s <u>1.1</u> m deep				
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18</u> Right Bank: <u>>18</u>				Hydrologic Modification Score (per FT 3101) <u>3-4</u>				
High Water Mark: <u>0.5</u> + <u>1.1</u> = <u>1.6</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		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>0.3</u></td> <td><u>20.99</u></td> <td><u>7.66</u></td> <td><u>4.25</u></td> <td><u>47.6</u></td> <td><u>323</u></td> <td><u>0.15</u></td> <td><u>—</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></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><u>1.1</u></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>0.3</u>	<u>20.99</u>	<u>7.66</u>	<u>4.25</u>	<u>47.6</u>	<u>323</u>	<u>0.15</u>	<u>—</u>	Mid:								☒ VOB	Bottom:								<u>1.1</u>				
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		Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>See Field</u> Exp: <u>Sheet</u>		Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐																																									
		Algae Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>Ice</u> Exp:		Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																									
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Iron/Sulfur Bacteria:	☒	☐	☐	☐																																									
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.																																													

SAMPLING TEAM

SIGNATURE :

DATE :

Blake Spencer, Avril Wood-McGrath, Jason Storrs[Signature]4/12/19

WIN ID: 44059 ✓ SPS: 79328 ✓ RB: 9292 ✓

# points ranked 4-6	60
total points assessed	86
% points ranked 4-6	69%

Secchi depth: VD3

Check accompanying data collected at same site/date.	
Algal mat sample	✓
Habitat Assessment	✓
Linear Veg. Survey	✓
SCIR/Biorecon (circle 1)	✓
Water sample	✓
RQ: <u>2019-04-15-19</u>	

Algal Thickness Rank	
N	rough, no algae; slimy, algae to 1 mm
3	>1mm - 6 mm
4	>6 - 20 mm
5	>20 mm - 10 cm
6	>10 cm

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6)	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6)	Canopy Cover
7	1	X		9	1	Y	
	2	N			2	Y	
	3	Y			3	Y	
	4	Y			4	Y	
	5	Y			5	Y	
0 ✓	6	Y	0 ✓	40 ✓	6	N	
	7	Y			7	N	
	8	Y			8	Y	
4	9	X		6	9	Y	
	1	X		9	1	N	
7	2	Y			2	Y	
	3	Y			3	Y	
	4	Y			4	Y	
10 ✓	5	N	0 ✓	50 ✓	5	N	
	6	Y			6	Y	
	7	Y			7	N	
3	8	Y		5	8	Y	
	9	X			9	Y	
8	1	X		7	1	X	
	2	Y			2	Y	
	3	Y			3	Y	
	4	Y			4	Y	
20	5	N	0 ✓	60 ✓	5	N	
	6	Y			6	Y	
	7	Y			7	Y	
7	8	Y		6	8	Y	
	9	Y			9	Y	
8	1	X		8	1	X	
	2	Y			2	Y	
	3	Y			3	Y	
	4	Y			4	Y	
30 ✓	5	N	0 ✓	70 ✓	5	N	
	6	Y			6	Y	
	7	Y			7	Y	
	8	Y			8	Y	
5	9	Y		7	9	X	

Record "N" for points deeper than the Secchi depth; algae are presumed absent.
Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. Note if thickness estimated for deep points which can be seen but not reached.

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 an 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%.

Entered by: ABR 4/19/19
(X bg: AWM 4/30/19
Authorized by: ABR 4/30/19

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

Waterbody: Wakulla River @ Boat Tram Date: 4/17/19 County: Wakulla Storet Number: 44059 ✓
 Analyst: Blake Spencer Signature: [Signature]
 Comments: SMP Sampling Wakulla BMAP

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.

HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
Alternanthera philoxeroides												Myriophyllum heterophyllum											
Bacopa caroliniana												Najas guadelupensis											
Bacopa monnieri												Nuphar luteum											
Bidens mitis												Orontium aquaticum											
Boehmeria cylindrica												Panicum hemitomon											
Centella asiatica												Panicum repens											
Ceratophyllum demersum												Panicum rigidulum											
Chara												Peltandra virginica											
✓ Cicuta maculata		X	X	X	X	X	X	X	X	X		Pistia stratioides											
✓ Cladium jamaicense				X								✓ Polygonum glabra		X	X	X	X	X	X	X	X	X	
Colocasia esculenta												Polygonum hydropiperoides											
Commelina diffusa												Polygonum punctatum											
Commelina virginica												✓ Pontedaria cordata		X	X	X	X	X	X	X	X	X	
Crinum americanum												Potamogeton illinoensis											
Diodia virginiana												✓ Rhynchospora inundata					X	X	X	X	X	X	
Eichhornia crassipes												Rosa palustris											
Eleocharis (wispy viviparous)												Ruellia simplex											
✓ Hydrilla verticillata				X	X		X	X				✓ Rumex verticillatus		X	X		X	X	X	X	X	X	
Hydrocotyle												Sacciolepis striata											
Hygrophila polysperma												✓ Sagittaria kurziana		X	X	X	X	X	X	X	X	X	
✓ Hymenocallis						X		X				✓ Sagittaria lancifolia		X	X	X	X	X	X	X	X	X	
Lachnanthes caroliniana												Sagittaria latifolia											
Landoltia punctata												Salvinia minima											
✓ Lemna		X	X	X	X	X	X	X	X	X		Samolus parviflora											
Limnophila sessiflora												Saururus cernuus											
Ludwigia leptocarpa												✓ Scirpus (schenoplectus) californicus		X	X	X		X	X	X			
Ludwigia palustris												Sparganium americanum											
Ludwigia peruviana												✓ Typha			X	X							
✓ Ludwigia repens		X	X	X	X	X	X	X	X	X		✓ Vallisneria americana		X									
Luziola fluitans												Zizania aquatica											
Micranthemum glomeratum												✓ Taxodium sp.				X							
Micranthemum umbrosum												✓ Juncus effusus						X	X				
✓ Mikania scandens		X	X	X	X	X	X	X	X	X		✓ Azolla filiculoides		X	X			X					
Myriophyllum aquaticum												✓ Riccia sp.		X	X	X	X	X	X	X	X	X	
												✓ Salix caroliniana		X	X	X	X	X	X	X	X	X	

If no Dominant or Co-Dominant were selected, indicate with "X"

Indicate % cover macrophytes per section									
0-5% Macrophyte Coverage									
>5 and ≤10% Macrophyte Coverage									
>10 and ≤25% Macrophyte Coverage									
>25 and ≤50% Macrophyte Coverage									
> 50% Macrophyte Coverage	X	X	X	X	X	X	X	X	X

Notes:

□ < 2m²

Entered by: *AWM* 4/19/19
 QC'd by: *AWM* 4/30/19

DEP-SOP-001/01: Form FD 9000-5
 STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
 STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SBIO: 79328 ✓

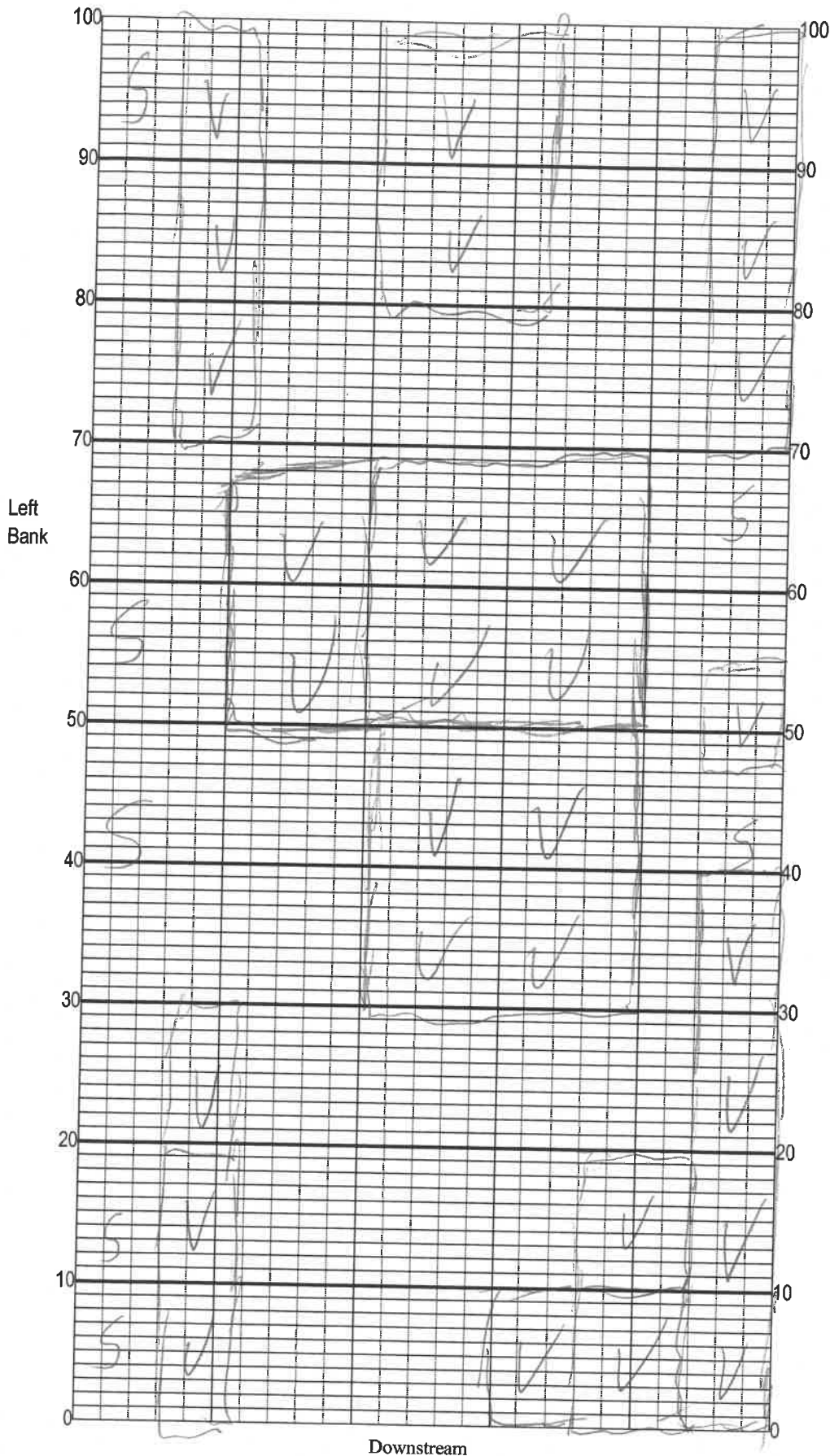
SUBMITTING AGENCY CODE:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
SUBMITTING AGENCY NAME:		44059 ✓	4/17/19 ✓	St. Marks River
REMARKS:	COUNTY:	LOCATION:	FIELD ID/NAME:	
HA: 15722 ✓	Wakulla	Wakulla River at Boat Tram	44059	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components <i>SNAG VEG</i>	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>10 ✓</i>	20 19 18 17 16	15 14 13 12 11	10 9 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>12 ✓</i> ----- Primary Score <i>12</i> <i>AWM</i>	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 <i>12</i> 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 <i>20 ✓</i>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. <i>20</i> 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 Left Bank <i>10 ✓</i> <i>10 ✓</i>	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. <i>10</i> 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 Left Bank <i>10 ✓</i> <i>10 ✓</i>	Width of vegetation greater than 18 m <i>10</i> 9	Width of vegetation > 12 to 18 m 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 Left Bank <i>10 ✓</i> <i>10 ✓</i> ----- Secondary Score <i>80 ✓</i>	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. <i>10</i> 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

142 ✓ TOTAL SCORE

Date: 4/17/19	Analyst: Blake Spencer	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: Wakulla River @ Boat Tram
Date: 4/17/19
Sampler: Blake Spencer

100 m: Latitude 30.234248
Longitude -84.294304
0 m: Latitude 30.234197
Longitude -84.292289

Substrates: Code key, draw proportionate habitat abundance. %

☒ S	Snags	10%
☐	Roots/undercut banks	___
☐	Leaf Packs (or mats)	___
☒ V	Aquatic Macrophytes	>30%
☐	___	___
☐	___	___
☐	Pools	total # observed = ___ # range expected = ___

Average width 85 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:

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Customer: WAS-SECT

Project ID: BMAP

Requester: Curtis Musson

Field Report Prepared By:

Collected By:

Blake Spencer, Jason Storts, April Whit McGuff

Sampling Agency:

FAEP

Location		WIN ID / FILED ID → 44059	☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>4/17/19</u> Time <u>10:46</u>	☒ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s) (See pg 2)
Field ID	Location <u>Wakulla River at boat tram</u>		Matrix (type, e.g., Salt, Fresh, etc) <u>fresh</u>	Diss. Oxygen <u>47.6</u>	☐ mg/L ☒ % sat	Total Res. Chlorine (mg/L)	<u>A</u>
WIN/STORET #	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Temp (C) <u>20.99</u>	pH <u>7.66</u>	Sample Depth <u>0.5</u>	Sp. Conductance (umho/cm) <u>323</u>	
			Salinity (ppt) <u>0.15</u>	Comments			
Location		WIN ID / FILED ID → 44059	☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>4/17/19</u> Time <u>10:27</u>	☒ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID	Location <u>Wakulla River at boat tram</u>		Matrix (type, e.g., Salt, Fresh, etc) <u>Biological</u>	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	<u>B</u>
WIN/STORET #	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)	
			Salinity (ppt)	Comments			
Location			☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____	☐ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)	
			Salinity (ppt)	Comments			
Location			☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____	☐ Eastern ☐ Central	Composite end Date _____ Time _____	Bottle Group(s)
Field ID			Matrix (type, e.g., Salt, Fresh, etc)	Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
WIN/STORET #	Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)	
			Salinity (ppt)	Comments			

Relinquished By: <u>[Signature]</u>	Date/Time <u>4/17/19 15:25</u>	Shipping Method <u>HA</u>	Number of Coolers Shipped: <u>1</u>	Received By: <u>Tyler R.</u>	Date/Time <u>04/17/19 @ 15:25</u>
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Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALKALINITY						
	TURBIDITY						
	W-CL-IC						
	W-COLOR						
	W-F						
	W-SO4-IC						
	W-TDS						
	W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	CHLSUITE-W						
Group: A	Bottle Type:	BG-500ML	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	W-E8321-DI						
	W-E8321-MS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	1
	W-ICP						
	W-ICPMS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	1
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 1	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	1
	W-PO4-F						
Group: A	Bottle Type:	BG-1L	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	W-PSNP-TQ						
Group: B	Bottle Type:	PT-50ML	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	ALGAL_ID						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 2	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	2

MFWQLDC

Cooler Packing Worksheet for Request: RQ-2019-04-15-19

Wakulla BMAP

Ship Cooler On: 4/11/2019

Customer/Project: WAS-SECT/BMAP

Assigned To: REAVES_S

Requester: Curtis Musson

Priority: 3

850-245-8453
2600 Blair Stone Rd

Tallahassee, FL 32399

Attn: Curtis Musson

Comments:

No preservatives needed.

Group A: Nutrients, Metals, Tracers (DI/MS), Q-PSNP-TQ

Group B: SCI, Algae_ID

Packing Notes:

No FedEx Labels

No Trash Bag

Requested Analyses:

Bottle Group: A

of Sites: 1

Container ID: P-1L

Qty: 1 Preservation: ICE

Lot # 00073854

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

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 # 1248230

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

Container ID: BG-500ML

Qty: 1 Preservation: ICE

Lot # 00072998

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 # 00073297

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

Analysis

W-ICP

W-ICPMS

Description

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 # 00073297

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 # 00072954

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 # 00073521

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 # 430897

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 # BIO WASH

Description: Plastic Jar 2 L

Analysis

MI-FW-QLDC

Description

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

Cooler Packed By: SR

Number of Coolers: 2

Date: 4-8-19

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	Exp	Lot #
ID	Exp	Lot #
ID	Exp	Lot #
ID	Exp	Lot #
ID	Exp	Lot #

PLEASE RETURN ALL COOLERS FOR RQ-2019-04-15-19