FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

October 2017

PAGE 1 OF ____

Data Qualified? Yes / No

Location/STORET Station Name: Wakulla At CR 365 Bridge **Date:** 10/19/2017 (mm/dd/yyyy)

STORET # 34879 **WBID:** 1006 **Latitude:** 30.21373 (Decimal Degrees)

County: Wakulla **RQ -** 2017-10-16-26 **ORG ID:** 21FLWQA **Longitude:** -84.26163 (Decimal Degrees)

Receiving Body of Water: St. Marks R, GOM **Field ID:** 34879_10192017

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
John Woods	X		X		
Ben Ralys		X		X	X

Sampling Equipment

- [X] Sample Container [ ] Van Dorn [ ] Pole
- [ ] Carboy [X] Syringe
- [ ] Dipper [ ] Other ____

Equipment ID ____

Collection Method

- [ ] Wading [ ] Canoe/Kayak
- [ ] From Shore [ ] Electric Motor
- [ ] Other ____ [X] Gasoline Motor

Water Level: Dry / Low / Normal / Above Normal / Flooded **Meter ID#** Exo 3 **Matrix:** Fresh / Marine / DI

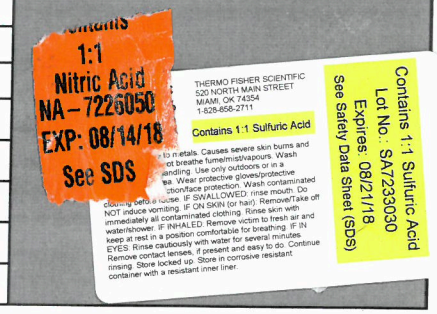
Photos: Yes / No **Flow:** No Flow / Intestital / Flowing / NA **Tide:** Rising/ Falling/ Slack/ NA **Tide Times:** High NA Low NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTh)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1110	0.3	2.4	4.47	49.9	7.69	0.15	2.4	305	20.65
CEN	1115	2.9		4.51	50.2	7.69	0.15	5	305	20.66

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

SBIO ID Numbers: SBIO-ID: 78061 HA-ID: 15092 RPS-ID: 8959 Macrophyte-ID: 10978 LIMS#: 1938707

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	[X] W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	[X] Ice [X] H_2SO_4	SA7233030	8/21/18	[X] <2
Metals	[X] W-ICPMS [X] W-ICP	[X] Ice [X] HNO_3	7226050	2/14/18	[X] <2
Filtered Nutrients	[X] W-PO4-F [X] Field Filtered 0.45 µm Filter	[X] Ice			
Chlorophyll	[X] CHLSUITE-W	[X] Ice			
Physical/Aggregate (Fresh)	[X] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	[X] Ice			
Physical/Aggregate (Marine)	[ ] Alkalinity / W-F / W-TSS / TURBIDITY	[ ] Ice			
Macroinvertebrates	[X] MI-FW-QLDC	[X] Formalin			
Periphyton	[X] ALGAE-ID	[X] Ice			
Microbiology	[ ] E Coli [ ] F Coli [ ] Enterococci	[ ] Ice			
Molecular	[ ] PCR-FILTER [ ] PCR-HF183 [ ] PCR-BacR [ ] PCR-GULL2 [ ] PCR-GFD	[ ] Ice			
Tracers	[X] W-SUC-AA-R [X] W-UHERB-AA [X] W-AHERB-AA	[ ] Ice			
Pesticides	[ ] W-PSNP-TQ [ ] W-UHERB-AA [ ] W-AHERB-AA [ ] W-PCL-SQ-R [ ] W-PYR-AA-R [ ] W-GLYPH [ ] W-SUC-AA-R	[ ] Ice [ ] Other			



Notes:

Field ID ➔
Wakulla River at CR 365
Oct 9, 2017

34879_10192017

STORET ➔
Wakulla River at CR365
34879

Signature: Date: 10/19/17

Field Parameters Entered into LIMS: CM 10/20/17 (Initials/Date) Field Parameters QC in LIMS: 4/11/18

Date Migrated to STORET: ____ (Initials/Date) Field Sheets Scanned/Saved: 4.16.18 CM (Initials/Date)

SBIO: 78061 APS: 8959

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Wakulla @ CR 365 Bridge | County: Wakulla | Date: 10/19/17 | Investigators: Ben Rabys John Woods

STORET Station Number: 34879

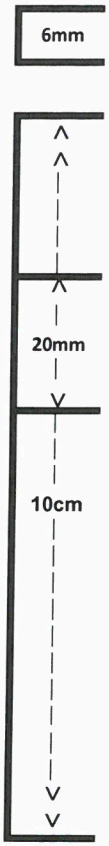
Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	2		
	2	2		
	3	2		
	4	2		
	5	2		0
	6	3		
	7	6		
	8	6		
	9	2		
10	1	6		
	2	6		
	3	6		
	4	6		
	5	6		0
	6	6		
	7	6		
	8	6		
	9	6		
20	1	N		
	2	N		
	3	6		
	4	N		
	5	6		0
	6	6		
	7	6		
	8	6		
	9	6		
30	1	6		
	2	6		
	3	N		
	4	N		
	5	6		0
	6	6		
	7	6		
	8	6		
	9	6		
40	1	6		
	2	6		
	3	N		
	4	N		
	5	6		0
	6	6		
	7	6		
	8	6		
	9	6		
50	1	N		
	2	6		
	3	6		
	4	N		
	5	6		
	6	6		
	7	6		
	8	6		
	9	6		
60	1	N		
	2	6		
	3	6		
	4	N		
	5	6		0
	6	6		
	7	6		
	8	6		
	9	6		
70	1	6		
	2	6		
	3	6		
	4	N		
	5	5		0
	6	5		
	7	6		
	8	6		
	9	6		
80	1	N		
	2	6		
	3	6		
	4	5		
	5	N		0
	6	5		
	7	6		
	8	6		
	9	6		
90	1	N		
	2	6		
	3	N		
	4	6		
	5	N		0
	6	6		
	7	6		
	8	6		
	9	6		
100	1	N		
	2	6		
	3	6		
	4	N		
	5	5		0
	6	6		
	7	6		
	8	6		
	9	6		

Secchi depth	1.0B
Estimated?	
# points ranked 4-6	
total points assessed	
% points ranked 4-6	

Check accompanying data collected at same site/date.	
Algal mat sample	✓
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	✓
Water sample	✓

RQ- 2017-10-16-26

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%.

Entered by: [illegible] 4/11/18

QC, CM 4-16-18

SBID: 78061 Macrophyte: 10878

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

Waterbody: Wakulla at CR 365 Bridge	Date: 10/19/17	County: Wakulla	Storet Number: 34879
Analyst: Ben Rabys, John Woods		Signature: Ben Rabys	

Comments: SMP Sampling

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	X	X			X						
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata	X	X			X			X	X		
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum						X	X				
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata	X	X	X	X	X	X	X	X	X	X	
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
Micranthemum glomeratum											
Micranthemum umbrosum											
Mikania scandens	X	X	X	X	X	X	X	X	X	X	
Myriophyllum aquaticum											
If no Dominant or Co-Dominant were selected, indicate with "X"											

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)
Myriophyllum heterophyllum											
Najas guadelupensis									X	X	
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Peltandra virginica											
Pistia stratioides											
Polygonum glabra	X		X								
Polygonum hydropiperoides	X	X	X			X		X			
Polygonum punctatum	X	X			X		X	X	X	X	
Pontedaria cordata	X	X	X	X	X	X	X	X	X	X	
Potamogeton illinoensis											
Rhynchospora inundata			X	X	X	X					
Rosa palustris											
Ruellia simplex											
Rumex verticillatus											
Sacciolepis striata											
Sagittaria kurziana			X								
Sagittaria lancifolia	X	X	X	X				X			
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Scirpus (schenoplectus) californicus									X	X	
Sparganium americanum											
Typha	X	X	X			X		X	X		
Vallisneria americana	D	D	D	D	D	D	D	D	D	D	
Zizania aquatica							X				

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

Notes:

☐ < 2m2

Entered by: [illegible] 4/11/18

QC, CM 4.16.18

Macrophyte QC Report

STORET: 34879
Visit ID: 78061
Macrophyte ID: 10878
LIMS ID: 1938707

Sample Date: 10/19/2017
Collector Name: Ralys, Benjamin
Identifier Name: Musson, Curtis

Macrophyte Sample Comments:

QC CM 4.16.18

Taxa Name:	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
Boehmeria cylindrica	P	P			P						CM
Cicuta maculata	P	P			P			P	P		CM
Crinum americanum						P	P				CM
Hydrilla verticillata	P	P	P	P	P	P	P	P	P	P	CM
Mikania scandens	P	P	P	P	P	P	P	P	P	P	CM
Najas guadalupensis									P	P	CM
Polygonum glabrum	P		P								CM
Polygonum hydropiperoides	P	P	P			P		P			CM
Polygonum punctatum	P	P			P		P	P	P	P	CM
Pontederia cordata	P	P	P	P	P	P	P	P	P	P	CM
Rhynchospora inundata			P	P	P	P					CM
Sagittaria kurziana			P								CM
Sagittaria lancifolia	P	P	P	P				P			CM
Schoenoplectus californicus									P	P	CM
Typha	P	P	P			P		P	P		CM
Vallisneria americana	D	D	D	D	D	D	D	D	D	D	CM
Zizania aquatica								P			CM

This data has not been fully approved at this time.

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

SBIO: 78061 HA: 15092

SAMPLING AGENCY: Florida Department of Environmental Protection		STORET STATION NUMBER: 34879	DATE (MM/DD/YY): 10/19/17	RECEIVING BODY OF WATER: St. Marks / Conn
REMARKS: Wakulla BMAP	COUNTY: Wakulla	LOCATION: Wakulla at CR 365 Bridge		FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components (Snag, Leaf, Roots, Rock, Aquatic Vegtation) **Substrate Diversity** 8	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 20 ____%	Major productive habitat present at site (>30% 27.2% 25.8% 24.4% 26.6%) (20) 19 18 17 16	Major productive habitat, by aerial extent (21.6% 20.2% 18.8% 17.4% 16%) 15 14 13 12 11	6% to 15% major productive habitat (15% 13% 11% 9% 6%) 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity 20 0.6 m/s	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 12 ---------- Primary Score 60	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 10 Left Bank 10 If Banks are PipeClay, BedRock or Concrete at Bank full: Optimal	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 4	Width of vegetation greater than 18 m (10) 9	Width of vegetation >12 to 18m 8 7 6 (18m 15m 12m)	Width of vegetation 6 to 12 m. human activities close to system 5 (4) (9m)	Less than 6 m of buffer zone due to intensive human activities 3 2 1 (6-5m) (4-3m) (<2m)
Riparian Zone Vegetation Quality Right Bank 10 Left Bank 9 ---------- Secondary Score 73	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

~~139~~ 133 **TOTAL SCORE**

Date: 10/19/17	Analyst: Bu Ralys, John Woods	Signature:

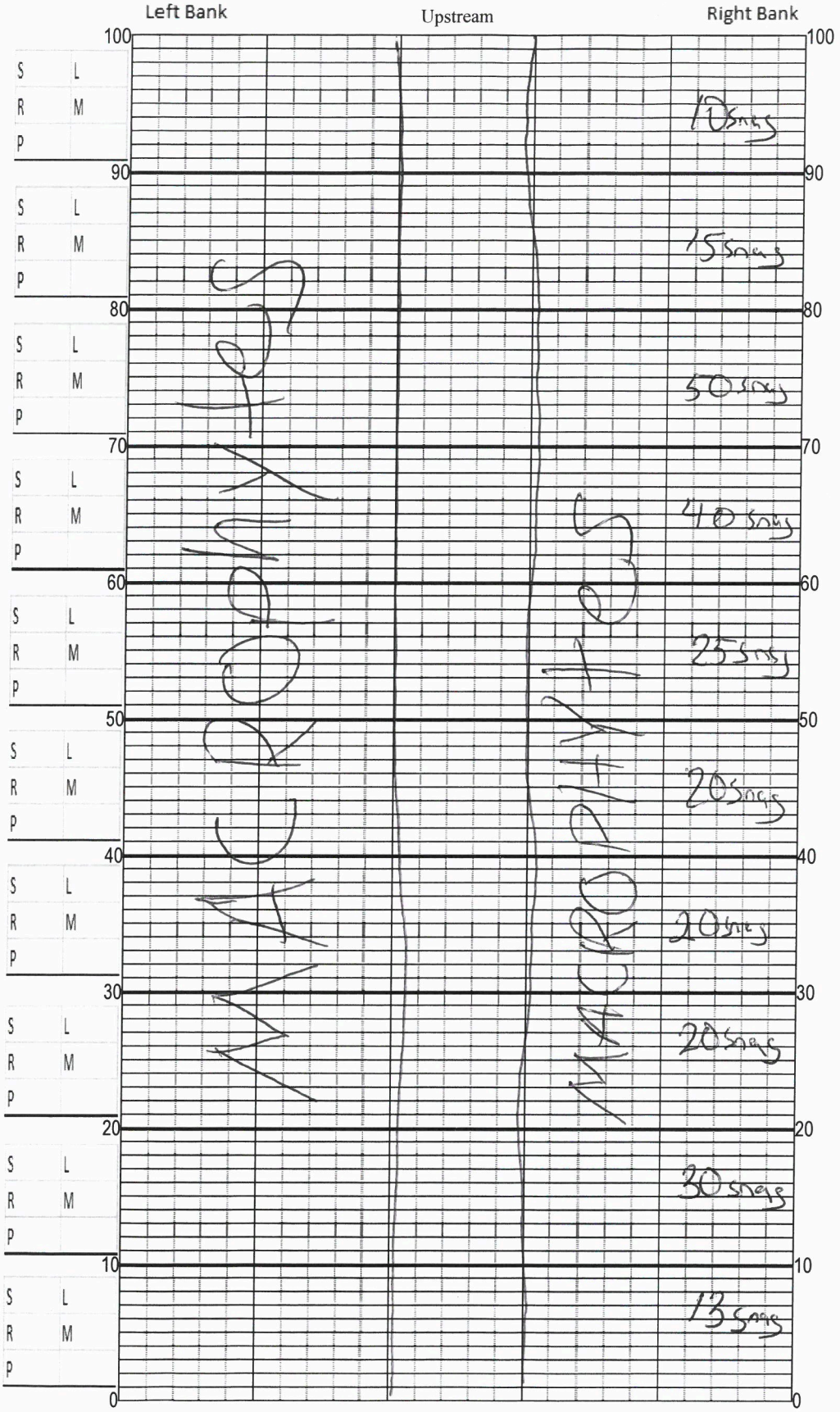
~~BIO 4/11/18~~ ~~BIO 77385~~

Entered by: BW 4/11/18

QC, CM 4-16-18

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

Add Crinum



Location: Wakulla

Date: 10/19/17

Sampler: Ben Rabs

100 m: Latitude	
Longitude	
0 m: Latitude	
Longitude	

Substrates: Code key, draw proportionate habitat abundance. %

S	Snags	
R	Roots/undercut banks	
L	Leaf Packs (or mats)	
M	Aquatic Macrophytes	
Rc	Rock	
P	Pools — total # observed = ____ ; # range expected = ____	

Average width _____ m

Average depth _____ m

Velocity measured at _____ meter mark.

Velocity _____ m/s

WQ & chemistry taken at _____ 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.

Notes/Plants Observed:
$2m^2$ = 16 Sweeps

Meter Mark	Depth (m)	Width (m)	Velocity Measurement (Sec)
Avg.			

Length of grid represents 100 m of stream (not linear meters). (Horizontal scale is double vertical scale, draw proportionately).

Expected Number of Pools

$$\left(\frac{100}{12 * \_\_\_\_W}\right) * 1 =$$

$$\left(\frac{100}{12 * \_\_\_\_W}\right) * 2 =$$

# of Sweeps	Conversion	m^2	%
Snag	÷ 8	m^2	
Root	÷ 8	m^2	
Leaf	÷ 8	m^2	
Macrophyte	÷ 8	m^2	
Rock	÷ 8	m^2	
Total Available Habitat		m^2	
Total Area		m^2	
Total Unavailable Habitat		m^2	

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

SAMPLE ID ~~77385~~ 78061 ORG ID 21FLA WQA LATITUDE 30.21373
COUNTY Wakulla STORET # 34879 LONGITUDE -84.26163
DATE 10/19/17 TIME 11:16 SAMPLING AGENCY FDEP
SITE NAME Wakulla at CR 365 Bridge
FIELD ID/NAME 34879-10192017 RECEIVING BODY OF WATER St. Marks / Gom

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) :

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
78		2		17	0.7	0.9	0.5

Landscape Development Intensity Index (LDI): 1.17

Local Watershed Erosion (select one) : ☐ None ☑ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution : ☐ No evidence ☐ Slight ☑ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side Left Bank : 6m Right Bank : >18

Hydrologic Modification Score (per FT 3101) : 3-4

High Water Mark: 0.1 (m) + 1.1 (above present water level) = 1.2 (present depth) (above bed)

Artificially Impounded ☐ Yes ☒ No

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

— m/s	0.6 m/s	— m/s
— m deep	2.4 m deep	— m deep

85 m wide

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)	<1	7	
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation	>30	7	
Rock or Shell Rubble.		6	
Sand.....			
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.3	20.65	7.69	4.47	49.9	305	0.15	
Mid:	~~EXO~~							☒ VOB
Bottom	2.9	20.66	7.69	4.51	50.2	305	0.15	TOTAL DEPTH (M) ~~2.3~~ 2.4

Meter ID: EXO 3

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: Field Shot Exp:

Color Tannic ☐ Green (Algae) ☐ Clear ☑ Other (Specify) ☐

Algae Sample Taken? ☑ Yes ☐ No
Sample Preserved? ☑ Yes ☐ No
Lot Number: ICE Exp: H2O

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 Ben Ralys, John Woods SIGNATURE : DATE : 10/19/17

Entered by: 4/11/18
QC CM 4.16.18

62-160.800, F.A.C.

Revision Date: March 1, 2014

Boldly "X" this box if there is qualified data on this page.

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

Meter ID: EXO3 **Project:** GI SMP 1710

Notes: (1) Numbers ≤4, are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
(2) Always wait for meter to stabilize before recording any readings.
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site _____

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 10/17

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	Jon Woods	10/9/17	406	21.3	8.9	8.9	100		1.06	P	L
ICV	"	"	821	23.7	8.5	8.4	99			P	L
CCV	"	"	1416	22.3	8.7	8.7	100			P	L
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.
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; 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.	Jon Woods	10/9/17	806	170630E	7/18	1000	1000	P	L
ICV	"	"	814	2707D83	7/19	100	100	P	L
CCV	"	"	1426	"	"	"	98	P	L
CCV	"	"	1722	170606B	6/18	1000	967	P	L

Report specific conductance as a whole number with no decimal figure. Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	Jon Woods	10/9/17	811	170622C	3/19	7.0	7.0	-5.2	P	L
Calibr.	"	"	813	170926A	10/18	4.0	4.0	169	P	L
Calibr.	"	"	816	170622D	3/19	10.0	10.0	-174	P	L
ICV	"	"	819	"	"	"	10.0	-177	P	L
CCV	"	"	1424	170926A	10/18	4.0	4.0	166	P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ±0.2 SU; mV pH7 Range 0±50; mV pH 4 Range +180±50;
mV pH 10 Range -180±50; Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly) Date of Last Depth Verification _____

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air				0.000			

ICV acceptance criteria ±5 % or ±0.05m, whichever is greater

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Lab Sample Submittal Form

Request Number: RQ-2017-10-16-26
Wakulla BMAP
Customer: WAS-SECT
Project ID: BMAP

Requester: Curtis Musson
Collected By: Ben Rabs John Woods

Field Report Prepared By: Ben Rabs
Sampling Agency: FDEP

Location: Wakulla River at CR365

STORET 34879

Field ID → Wakulla River at CR 365 Oct 9, 2017

34879_10192017

☐ Comp ☒ Grab	Collection (comp begin or grab) Date 10/19/17 Time 1116	(Eastern) Central	Collection (comp begin or grab) Date — Time —	Bottle Group(s)
Matrix (Salt, (Fresh)) Fresh	Diss. Oxygen (mg/L) 4.47			
Temp (C) 20.65	pH 7.69	Sample Depts (m) 0.3	Sp. Conductance (umho/cm) 305	A, B
Salinity (ppt) 0.15	Comments			
Latitude (Decimal Degrees) 30.21373		Longitude (Decimal Degrees) -84.26163		

Location Field ID STORET #	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Collection (comp begin or grab) Date Time	Bottle Group(s)
	Matrix (Salt, Fresh)	Diss. Oxygen (mg/L)			
	Temp (C)	pH	Sample Depts (m)	Sp. Conductance (umho/cm)	
	Salinity (ppt)	Comments			
	Latitude (Decimal Degrees)		Longitude (Decimal Degrees)		

Location Field ID STORET #	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Collection (comp begin or grab) Date Time	Bottle Group(s)
	Matrix (Salt, Fresh)	Diss. Oxygen (mg/L)			
	Temp (C)	pH	Sample Depts (m)	Sp. Conductance (umho/cm)	
	Salinity (ppt)	Comments			
	Latitude (Decimal Degrees)		Longitude (Decimal Degrees)		

Relinquished By:	Date/Time	Number of Coolers	Received By:	Date/Time
Ben Rabs	10/19/2017	1		

Group: A	Bottle Type:	P-1L	# of Bottles: 2	Preservative:	ICE	**Enter Number of Bottles Sent to Lab**	2
	ALKALINITY TURBIDITY W-CL-IC W-COLOR W-F W-SO4-IC W-TDS W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: 2	Preservative:	ICE	**Enter Number of Bottles Sent to Lab**	2
	CHLSUITE-W						
Group: A	Bottle Type:	BG-1L	# of Bottles: 2	Preservative:	ICE	**Enter Number of Bottles Sent to Lab**	2
	W-AHERB-AA W-SUC-AA-R W-UHERB-AA						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	HNO3	**Enter Number of Bottles Sent to Lab**	2
	W-ICP W-ICPMS						
Group: A	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	**Enter Number of Bottles Sent to Lab**	2
	W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 2	Preservative:	FILTER-ICE	**Enter Number of Bottles Sent to Lab**	2
	W-PO4-F						
Group: B	Bottle Type:	PT-50ML	# of Bottles: 2	Preservative:	ICE	**Enter Number of Bottles Sent to Lab**	2
	ALGAL_ID						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 4	Preservative:	Formalin	**Enter Number of Bottles Sent to Lab**	4
	MI-FW-QLDC						