FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified? Yes / No

WIN Station Name: Wakulla at CR 365 Bridge **Date:** 07/17/2018 (mm/dd/yyyy)

WIN/ Field ID: 34879 **WBID:** 1006 **Latitude:** 30.21373 (Decimal Degrees)

County: Wakulla **ORG ID:** 21FLWQA **Longitude:** -84.26163 (Decimal Degrees)

Receiving Body of Water: St. Marks River **RQ-2018-** 07-16-16

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
J. Burkett		✓		✓	✓
C. Green	✓		✓		

Sampling Equipment
- ☑ Sample Container ☐ Van Dorn ☐ Pole
- ☐ Carboy ☑ Syringe
- ☐ Dipper ☐ Other
- Depth Measured with
- Equipment ID

Collection Method
- ☐ Wading ☐ Canoe/Kayak
- ☐ From Shore ☐ Electric Motor
- ☐ Other ☑ Gasoline Motor

Water Level: Dry/ Pooled/ Low / (Normal) / High / 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 Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTh)	Sp COND (µmhos/cm)	Temp. (C°)
(EST)	10:35	2.4	0.3	2.45	48.3	4.28 ~~48.3~~	7.70	0.02	318	21.5
CEN	10:40		1.9		49.0	4.34	7.69	0.02	318	21.5

Biological Samples Collected: None (HA) (SCI) (RPS) (Algae ID) (LVS) LVI Other: 711041

SBIO ID Numbers: SBIO-ID: 74619 HA-ID: 15289 RPS-ID: 9061 Macrophyte-ID: ~~10997~~ LIMS#: 2008226

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☑ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☑ Ice ☐ H_2SO_4	SA8085170	3/26/19	☐ <2
Metals	☑ W-ICPMS ☑ W-ICP	☐ Ice ☑ HNO_3	NA7226050	8/4/18	☐ <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-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-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers	☑ W-E8321-DI ☑ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☐ Ice ☐ Other			

Place Preservative Sticker(s) Here (If Available)

Notes:

Kit-C
FW BACT, TRACERS
SCI, RPS, LVS, HA

WIN ID/Field ID 34879 ↓ Location ↓ Wakulla River at CR 365

Signature: [signature] **Date:** 07/17/18

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ (Initials/Date) QC Station ID, Field Parameters In LIMS DMT: CG 7-24-18 (Initials/Date)

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

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

SBIO: 79619 HA: 15289

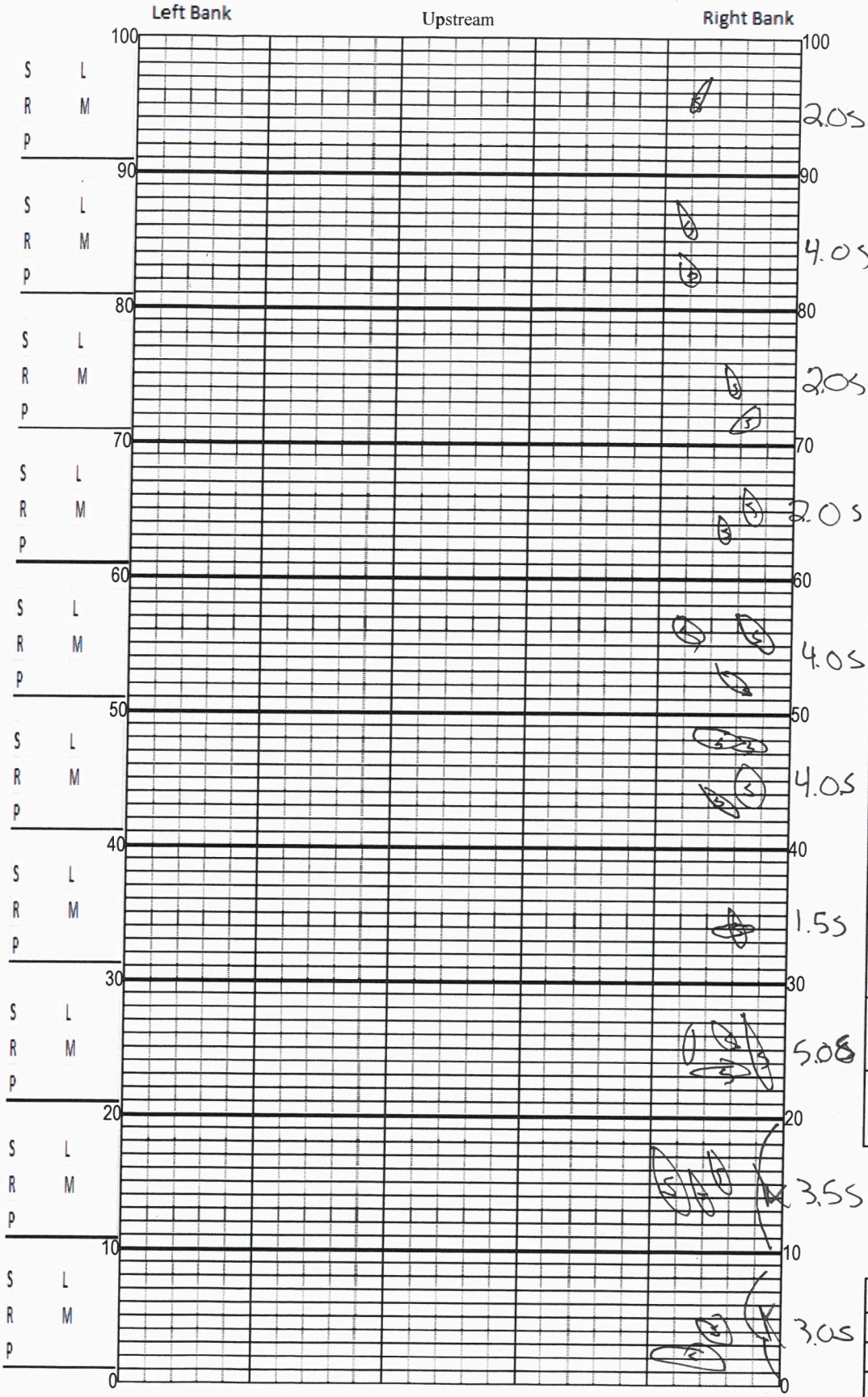
SAMPLING AGENCY: Florida Department of Environmental Protection		STORET STATION NUMBER: 34879	DATE (MM/DD/YY): 7/17/18	RECEIVING BODY OF WATER: St. Marks River
REMARKS:	COUNTY: Wakulla	LOCATION: Wakulla @ CR 365 Bridge		FIELD ID/NAME: 34879

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components: Snag, Roots, Leaf, Rock, Aquatic Vegtation **Substrate Diversity** 10	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 0.5 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 14 Primary Score 68	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** 16	Expected sinuosity given the stream width. No evidence of dredging or artificial straight-ening. No spoil banks. 20 19 (18) 17 16	Good sinuosity within old chan-nelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. May have spoil banks. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. May have spoil banks. 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 95 Left Bank 5	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 ~~10~~ 8 Secondary Score 72	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~~ 138 **TOTAL SCORE**

Date: 7/17/18	Analyst: J. Burtch	Signature: Jude

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



Location: Wakulla @ CR 365 Bridge

Date: 7/12/18

Sampler:

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

S	Snags	4.13
R	Roots/undercut banks	
L	Leaf Packs (or mats)	
M	Aquatic Macrophytes	80
Rc	Rock	
	sand	15.87
P	Pools	total # observed = 2
		# range expected = 1

Average width 75 m
Average depth 2.4 m

Velocity measured at 50 meter mark.
Velocity 0.5 m/s

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.

Notes/**Plants Observed**:
2m² = **13.2** Sweeps

31 = 5

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	m²	%
Snag	÷ 8	m²	
Root	÷ 8	m²	
Leaf	÷ 8	m²	
Macrophyte	÷ 8	m²	
Rock	÷ 8	m²	
Total Available Habitat		m²	
Total Area		m²	
Total Unavailable Habitat		m²	

SBIO: 79619 RPS: 9061

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Wakulla @ CR 365 Bridge | County: Wakulla | Date: 7/17/18 | Investigators: J. Burkett, J. Woods

STORET Station Number:

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

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

Secchi depth	0.8
Estimated?	N
# points ranked 4-6	
total points assessed	99
% points ranked 4-6	

(Exclude X's)

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

RQ-

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

(> 3 considered smothered)

(N to 1 mm)

(3) 6mm

(4) 20mm

(5) 10cm

(6)

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%.

SBIO: 28619 Macrophyte: 11041 LIMS: 2008226

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

Waterbody: **Wakulla River @ CR 365 Bridge**	**Date: 7/17/2018**	County: **Wakulla**	Storet Number: **34879**
Analyst: J. Burtchett		Signature:	
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	✓	✓	✓			✓	✓	✓			
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											
Micranthemum glomeratum											
Micranthemum umbrosum											
Mikania scandens											
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											
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Peltandra virginica											
Pistia stratioides											
Polygonum glabra					✓	✓	✓	✓			
Polygonum hydropiperoides						·	✓	✓			
Polygonum punctatum											
Pontederia cordata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Potamogeton illinoensis											
Rhynchospora inundata											
Rosa palustris											
Ruellia simplex											
Rumex verticillatus											
Sacciolepis striata											
Sagittaria kurziana	✓	✓		✓	✓						
Sagittaria lancifolia	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Scirpus (schenoplectus) californicus				✓	✓	✓		✓	✓	✓	
Sparganium americanum											
Typha	✓	✓									
Vallisneria americana	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Zizania aquatica											
schoenoplectus				✓	✓			✓	✓	✓	
[illegible]											

Indicate % cover macrophytes per section	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
0-5% Macrophyte Coverage										
>5 and ≤10% Macrophyte Coverage										
>10 and ≤25% Macrophyte Coverage										
>25 and ≤50% Macrophyte Coverage										
> 50% Macrophyte Coverage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes:

2 plant vine (30-40) red.

☐ < 2m2

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

SAMPLE ID 78619 | ORG ID 21FLWQA | LATITUDE 30.21373
COUNTY Wakulla | STORET # 34879 | LONGITUDE -84.26163
DATE 7/17/18 | TIME 1035 | SAMPLING AGENCY FDEP
SITE NAME Wakulla @ CR 365 Bridge
FIELD ID/NAME Wakulla @ CR 365 Bridge | RECEIVING BODY OF WATER St. Marks River

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)
25		35		40			

Landscape Development Intensity Index (LDI):

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 : 6-12 Right Bank : >18

Hydrologic Modification Score (per FT 3101):

High Water Mark: 0 (m) + 2.4 (present depth) = ~~0~~ 2.4 (above bed) (above present water level)

Artificially Impounded ☐ Yes ☑ No

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
75 m wide
0.3 m/s | 0.5 m/s | 0.4 m/s
1.8 m deep | 2.4 m deep | 1.7 m deep

Artificially Channelized : ☑ NO ☑ Mostly recovered, more sinuous ☐ 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

	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)	4.13	5	
Undercut Banks / Roots			
Leaf Packs or Mat			
Aquatic Vegetation	80	10	
Rock or Shell Rubble..			
Sand.....	15.87	5	
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	21.5	7.70	4.28	44.3	318	0.02	2.4
Mid:								☑ VOB
Bottom	1.9	21.5	7.69	4.34	49.0	314	0.02	TOTAL DEPTH

Meter ID: Exo3 — TOTAL DEPTH: 2.4

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:

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

SAMPLING TEAM
J. Burkett, C. Green

SIGNATURE : [signature]

DATE : 7/17/18

62-160.800, F.A.C.

Revision Date: March 1, 2014

Request Number: RQ-2018-07-16-16
Wakulla BMAP

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: WAS-SECT
Project ID: BMAP

Requester: Curtis Musson
Collected By: J.Burtchett
Field Report Prepared By: J.Burtchett C.Green
Sampling Agency: 8034

Location / Field ID / WIN/STORET #	Collection	Composite end	Parameters	Bottle Group(s)
Location ↓ WIN ID/Field ID 34879 Wakulla River at CR 365	☐ Comp ☑ Grab; Collection (comp begin or grab) Date 7/17/18 Time 1035 (Eastern)	Date – Time –	Matrix: Fresh; Diss. Oxygen 4.28 ☑ mg/L ☐ % sat; Total Res. Chlorine (mg/L) –; Temp (C) 21.5; pH 7.70; Sample Depth 0.3 ☐ ft ☑ m; Sp. Conductance (umho/cm) 3K; Salinity (ppt) 0.02; Comments	A, ~~B~~ (See pg 2)
Latitude ☐ dd ☐ dms; Longitude ☐ dd ☐ dms				
Location: Wakulla River @CR365; Field ID: 34879; WIN/STORET #	☑ Comp ☐ Grab; Date 7/17/18 Time 1035 Eastern Central	Date – Time –	Matrix (type, e.g., Salt, Fresh, etc); Diss. Oxygen ☐ mg/L ☐ % sat; Total Res. Chlorine (mg/L) –; Temp (C); pH; Sample Depth ☐ ft ☐ m; Sp. Conductance (umho/cm); Salinity (ppt); Comments: SCI DONE	B
Latitude ☐ dd ☐ dms; Longitude ☐ dd ☐ dms				
Location; Field ID; WIN/STORET #	☐ Comp ☐ Grab; Collection (comp begin or grab) Date Time Eastern Central	Date Time	Matrix (type, e.g., Salt, Fresh, etc); Diss. Oxygen ☐ mg/L ☐ % sat; Total Res. Chlorine (mg/L); Temp (C); pH; Sample Depth ☐ ft ☐ m; Sp. Conductance (umho/cm); Salinity (ppt); Comments	
Latitude ☐ dd ☐ dms; Longitude ☐ dd ☐ dms				
Location; Field ID; WIN/STORET #	☐ Comp ☐ Grab; Collection (comp begin or grab) Date Time Eastern Central	Date Time	Matrix (type, e.g., Salt, Fresh, etc); Diss. Oxygen ☐ mg/L ☐ % sat; Total Res. Chlorine (mg/L); Temp (C); pH; Sample Depth ☐ ft ☐ m; Sp. Conductance (umho/cm); Salinity (ppt); Comments	
Latitude ☐ dd ☐ dms; Longitude ☐ dd ☐ dms				

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By:	Date/Time
JB, CG	7/18/18: 818	HD	1	[illegible]	7-18-18 | 08:18

*Correction by sampler 7/20/18

Group: A	Bottle Type: P-1L	# of Bottles: 2	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: 2	Preservative: ICE		Enter Number of Bottles Sent to Lab	1
	CHLSUITE-W					
Group: A	Bottle Type: P-250ML-WO-THI	# of Bottles: 2	Preservative: ICE		Enter Number of Bottles Sent to Lab	1
	ECOLI-18QT					
Group: A	Bottle Type: BG-500ML	# of Bottles: 2	Preservative: ICE		Enter Number of Bottles Sent to Lab	1
	W-E8321-DI W-E8321-MS					
Group: A	Bottle Type: P-500ML	# of Bottles: 2	Preservative: HNO3		Enter Number of Bottles Sent to Lab	1
	W-ICP W-ICPMS					
Group: A	Bottle Type: P-500ML	# of Bottles: 2	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: 2	Preservative: FILTER-ICE		Enter Number of Bottles Sent to Lab	1
	W-PO4-F					
Group: B	Bottle Type: PT-50ML	# of Bottles: 2	Preservative: ICE		Enter Number of Bottles Sent to Lab	1
	ALGAL_ID					
Group: B	Bottle Type: PJ-2L	# of Bottles: 4	Preservative: Formalin		Enter Number of Bottles Sent to Lab	2
	MI-FW-QLDC					