



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

PAGE 1 OF 1

Data Qualified?
Yes / No

STORET Station Name: Wakulla River at Boat Tram

Date: 02/16/2016

(mm/dd/yyyy)

STORET Station ID: 44059

Latitude: 30.234581

(Decimal Degrees)

WBID: 1006

RQ - 2016-02-15-27

ORG ID: 21FLWQA

Longitude: -84.294477

(Decimal Degrees)

Receiving Body of Water: St. Marks River

Field ID: 44059

County: Wakulla

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Curtis Musson					X	X				NA
Ben Ralys							X	X		NA
Robert Wiwi				X		X	X	X		NA

Sampling Equipment			
☒ Sample Container	☐ Van Dorn	☐ Pole	
☐ Carboy	☒ Syringe		
☐ Dipper	☐ Other		
Equipment ID			

Collection Method			
☐ Wading	☐ Via Boat		
☐ From Shore	☐ Canoe/Kayak		
☐ Other (note below)	☐ Electric Motor		
	☒ Gasoline Motor		

Water Level: Dry / Low / Normal / High / Flooded

Meter ID# Biology7

Photos: Yes / No

Matrix: Fresh / Marine / DI

Tide Falling: Yes / No / NA

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
EST	11:00 AM	0.3	1.5	8.67	97.4	7.24	0.00	VOB	6	21.15
CEN	11:05	0.3	1.2	4.02	44.1	7.47	0.15		305	20.33

Biological Samples Collected: None HA SCI LVS RPS LVI Other

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ TKN / TP / Nox / NH3 / TOC ☐ Other	☒ Ice ☒ H2SO4	SA 5259020	09/16/16	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO2	NA 5113210	04/23/16	☒ <2
Filtered Nutrients	☒ oP ☒ Field Filtered 0.45 µm Filter	☒ Ice	Contains 1:1 Nitric Acid NA-5113210 EXP: 04/23/16 Warning! See MSDS		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
BOD	☒ BOD-INHB ☒ BOD-UNIN	☒ Ice			
Physical/Aggregate	☒ TSS / Turbidity / Alkalinity / Color ☐ Other	☒ Ice			
Macroinvertebrates	☒ MI-FW-QLDC	☒ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococcus ☐ QPCR	☐ Ice			
Periphyton	☒ ALGAE-ID	☒ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Notes:

1.75 s

Sagging 102c

Do did Not Pass CCV

SBIO-75582

RPS-7746

VPDB-9504

Place Label Here
(If Available)

Signature: Curtis Musson

Date: 2/16/2016

Field Parameters Entered into LIMS: CM 2-17-16
(Initials/Date)

Field Parameters QC in LIMS: BR 2/19/16
(Initials/Date)

Date Migrated to STORET: _____
(Initials/Date)

Field Sheets Scanned/Saved: MB 2/16/16/4:25
(Initials/Date)

CM 5-31-16

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Wakulla at Boat ramp

County: Wakulla

Date: 02/16/2016
20/16/2016

Investigators: Robert Wivi

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
60	1	3	Y		60	1	5	Y	
	2	5				2	5		
	3	6				3	6		
	4	N		0		4	N		0
	5	6		0		5	N		0
	6	6		0		6	N		0
	7	6				7	6		
	8	6	Y			8	N	Y	
	9	N	Y			9	6	Y	
10	1	6	Y		70	1	6	Y	
	2	N				2	6		
	3	6				3	6		
	4	N		0		4	6		0
	5	N		0		5	N		0
	6	N		0		6	N		0
	7	N				7	N		
	8	6	Y			8	N	Y	
	9	4	Y			9	N	Y	
20	1	5	Y		80	1	N	Y	
	2	5				2	5		
	3	6				3	6		
	4	6		0		4	6		0
	5	6		0		5	N		0
	6	6		0		6	6		0
	7	6				7	6		
	8	N	Y			8	6	Y	
	9	N	Y			9	6	Y	
30	1	N	Y		90	1	N	Y	
	2	N				2	N		
	3	N				3	N		
	4	6		0		4	N		0
	5	N		0		5	6		0
	6	6		0		6	N		0
	7	6				7	6		
	8	N	Y			8	N	Y	
	9	N	Y			9	6	Y	
40	1	N	Y		100	1	5	Y	
	2	6				2	N		
	3	5				3	N		
	4	N		0		4	N		0
	5	N		0		5	6		0
	6	N		0		6	6		0
	7	5				7	6		
	8	N	Y			8	6	Y	
	9	N	Y			9	6	Y	
50	1	N	Y		50	1	N	Y	
	2	N				2	N		
	3	N				3	N		
	4	6		0		4	N		0
	5	6		0		5	6		0
	6	6		0		6	6		0
	7	6				7	6		
	8	6	Y			8	6	Y	
	9	N	Y			9	6	Y	

STORET Station Number: 44059

Secchi depth 10
Estimated? 10

points ranked 4-6 51
total points assessed 99
% points ranked 4-6 52

Check accompanying data collected at same site/date.

Algal mat sample -
Linear Veg Survey -
Habitat Assessment -
SCI/Biorecon -
Water sample -

RQ 2016-02-15-27

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

SBto: 75582

RPS: 7746

BR 2/19/16

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 densimeter quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

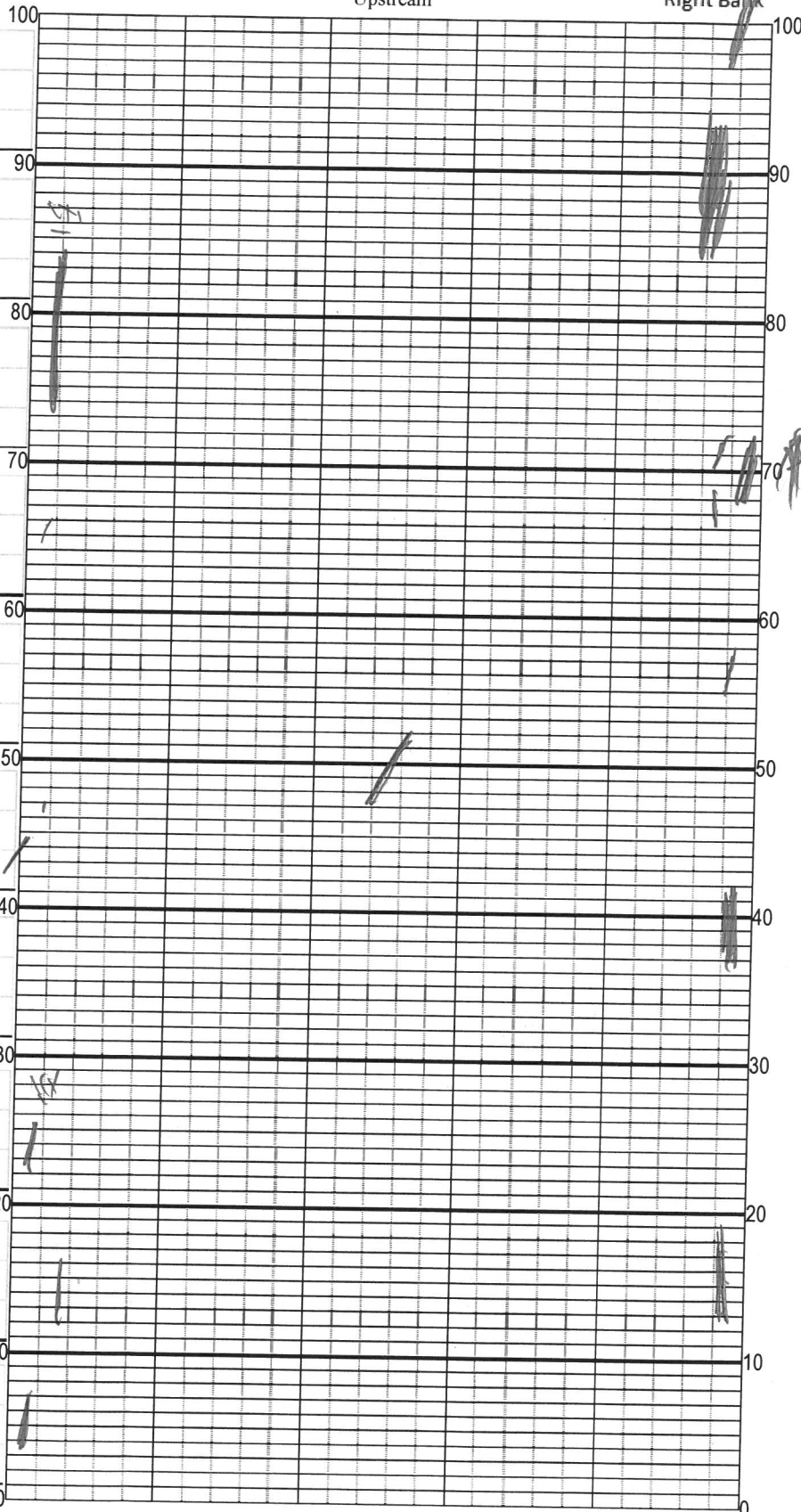
Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

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

Left Bank

Upstream

Right Bank



↓ Smothering Notes

Location: Wakulla At Boat Tram

Date: 02/16/2016

Sampler: Ben Ralys

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ S Snags <1

☐ R Roots/undercut banks 0

☐ L Leaf Packs (or mats) 0

☐ M Aquatic Macrophytes 25

☐ R Rock 0

☐ _____

☐ P Pools total # observed = _____
range expected = _____

Average width _____ m

Average depth _____ m

Velocity measured at _____ meter mark.

Velocity 0.57 m/s

WQ & chemistry taken at 70 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 = 16 Sweeps

# 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	

Meter Mark	Depth (m)	Width (m)	Velocity Measurement (Sec)
<u>70</u>	<u>1.2</u>		<u>1.75 Sec</u>
Avg.			

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

Expected Number of Pools

$$\frac{100}{12 \cdot \frac{100}{450}} \cdot 1 = .2$$

$$\frac{100}{12 \cdot \frac{100}{450}} \cdot 2 = .4$$

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

SAMPLING AGENCY: Florida Department of Environmental Protection		STORET STATION NUMBER: <u>44059</u>	DATE (MM/DD/YY): 02/16/2016	RECEIVING BODY OF WATER: St. Marks river
REMARKS:	COUNTY: Wakulla	LOCATION: Wakulla River at Boat Tram		FIELD ID/NAME: 44059

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components <u>Snag Leaf Root Rock Aquatic Vegetation</u> Substrate Diversity <u>9</u>	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 <u>9</u> 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 <u>14</u> <u>25</u> %	Greater than 30% major productive habitat present at site (100% 83% 66% 48% 30.5%) 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent (30.4% 27% 23% 20% 16%) 15 14 <u>13</u> 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 <u>20</u> <u>0.57</u> m/s	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec <u>0.33</u> 0.31 0.29 0.27 >0.25 <u>20</u> 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 <u>12</u> ----- Primary Score <u>55</u>	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 <u>12</u> 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 <u>20</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. <u>20</u> 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 <u>10</u> Left Bank <u>10</u> If Banks are Pipe Clay, Bed Rock or Concrete at Bank full: Optimal	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. (+,+,+) <u>10</u> 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 <u>10</u> Left Bank <u>9</u>	Width of vegetation greater than 18 m <u>10</u> <u>9</u>	Width of vegetation >12 to 18 m 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 <u>10</u> Left Bank <u>9</u> ----- Secondary Score <u>78</u>	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. <u>10</u> <u>9</u>	>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

133

TOTAL SCORE

Date: <u>2/16/16</u>	Analyst: Ben raly	Signature: <u>B. Raly</u>
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RQ-2016-02-15-27

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

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

Meter ID:

Biology 7

Project:

Wakulla

- 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

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.	Curtis Musson	2/15/16	1520	22.2	8.71	8.71	100.0	20.6	—	P	L
ICV	Curtis Musson	2/15/16	1524	22.3	8.69	8.68	99.9	20.6	—	P	L
CCV	Ben Roberts	2/16/16	7:34	20.8	8.95	8.95	100.0	69.6	—	P	L
CCV	Curtis Musson	2-16-16	16:42	21.60	8.64	7.84	88.9	62.5	—	P	L

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 μ hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	Curtis Musson	2/15/2016	1525	CC14162	10/15/2016	996	996	P	L
ICV	Curtis Musson	2/15/2016	1529	CC14162	10/15/2016	996	996	P	L
CCV	Ben Roberts	2/16/16	7:40	CC14162	10/15/2016	996	990	P	L
CCV	Curtis Musson	2/16/16	16:44	CC13882	7-15-2016	101.1	102	P	L

Report specific conductance as a whole number with no decimal figure.

Conductivity Acceptance criteria $\pm 5\%$

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.	Curtis Musson	2/15/2016	1532	156244	10/2017	7.0	7.00	-20.5	P	L
Calibr.	Curtis Musson	2/15/2016	1534	154634	07/2017	4.0	4.00	152.6	P	L
Calibr.	Curtis Musson	2/15/2016	1537	146934	10/2016	10.0	10.00	-193.4	P	L
ICV	Curtis Musson	2/15/2016	1539	154634	07/2017	4.0	3.97	154.7	P	L
CCV	Ben Roberts	2/16/16	7:41	156244	10/2017	7.0	6.99	-19.7	P	L
CCV	Curtis Musson	2/16/16	16:47	154634	07/2017	4.00	4.05	150.4	P	L

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU; mV pH7 Range 0 $\pm$ 50;mV pH 4 Range +180 $\pm$ 50;mV pH 10 Range -180 $\pm$ 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 $\pm 5\%$ or ± 0.05 m, whichever is greater

Wakulla Springs and Sally Ward Springs

Central Laboratory Submittal Form

last revised Nov 10, 2015

Customer: WQAP

Requester: Benjamin Ralys

Field Report Prepared By:

Project ID: SMP

Collected By:

Benjamin Ralys

Sampling Agency:

Location Wakulla River at CR 365 Bridge		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 2-16-16 Time 3:27	☒ Eastern ☐ Central	Composite end Date Time	Bottle Group(s) (See pg 2)
Field ID 34879	Matrix (type, e.g., Salt, Fresh, etc) Fresh	Diss. Oxygen		☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	1B
STORET # 34879	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)	CID
Latitude 30.213731	☒ dd ☐ dms	Longitude -84.261636	☒ dd ☐ dms	Comments See Field Sheet for Field Measurements 2 depths		
Location Wakulla River at Boat TRAM		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 2-16-16 Time 11:05	☒ Eastern ☐ Central	Composite end Date Time	Bottle Group(s)
Field ID 44059	Matrix (type, e.g., Salt, Fresh, etc) Fresh	Diss. Oxygen 4.02		☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	1B
STORET # 44059	Temp (C) 20.33	pH 7.47	Sample Depth 0.3	☐ ft ☒ m	Sp. Conductance (umho/cm) 305	CID
Latitude 30.234581	☒ dd ☐ dms	Longitude -84.294477	☐ dd ☐ dms	Comments		
Location Sally Ward Spring at Wakulla Park Dr.		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 2-16-16 Time 1:15	☒ Eastern ☐ Central	Composite end Date Time	Bottle Group(s)
Field ID G1WA0021	Matrix (type, e.g., Salt, Fresh, etc) Fresh	Diss. Oxygen 4.02		☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	A
STORET # G1WA0021	Temp (C) 20.62	pH 7.45	Sample Depth 0.3	☐ ft ☒ m	Sp. Conductance (umho/cm) 334	
Latitude 30.2414	☒ dd ☐ dms	Longitude -84.3109	☒ dd ☐ dms	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)	
STORET #	Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)	
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Comments		

Relinquished By:	Date/Time	Shipping Method	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
							NJB	2/16/16/4:25

Cooler Packing Worksheet for Request: RQ-2016-02-15-27

Wakulla Springs and Sally Ward Springs

Ship Cooler On: 2/1/2016

Customer/Project: WQAP/SMP

Requester: Benjamin Ralys

Priority: 3

850-245-8443
2600 Blair Stone Rd
MS #3560
Tallahassee, FL 32399-2400
Attn: Benjamin Ralys

Comments:

No preservatives needed.

Requested Analyses:

Bottle Group: A

of Sites: 1

Container ID: P-1L

Qty: 1 Preservation: ICE

Lot # 00053616

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

W-CL-IC

W-COLOR

W-F

W-NO2

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)

Nitrite in aqueous matrices as mg N/L

Total Dissolved Solids in aqueous matrices

Total Suspended Solids in aqueous matrices

Container ID: P-1L

Qty: 1 Preservation: ICE

Lot # 00053616

Description: Plastic Bottle 1L

Analysis

BOD-UNIN

Description

BOD, NOT nitrogen-inhibited

Container ID: BP-1L

Qty: 1 Preservation: ICE

Lot # 1158198

Description: Brown Plastic Bottle 1L

Analysis

Description

Container ID: P-500ML

Qty: 1 Preservation: ICE And H2SO4

Lot # 00063547

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: ICE-FLTR

Lot # 00063891

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

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

Bottle Group: B# of Sites: 2

Container ID: P-1L

Qty: 2 Preservation: ICE

Lot # 00053616

Description: Plastic Bottle 1L

Analysis

ALKALINITY

TURBIDITY

W-CL-IC

W-COLOR

W-F

W-NO2

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)

Nitrite in aqueous matrices as mg N/L

Total Dissolved Solids in aqueous matrices

Total Suspended Solids in aqueous matrices

Container ID: P-1L

Qty: 2 Preservation: ICE

Lot # 00053616

Description: Plastic Bottle 1L

Analysis

BOD-UNIN

Description

BOD, NOT nitrogen-inhibited

Container ID: BP-1L

Qty: 2 Preservation: ICE

Lot # 1158198

Description: Brown Plastic Bottle 1L

Analysis

CHL-CORR-W

Description

Phytoplankton chlorophyll-a (corrected for phaeophytin) and phaeophytin by spectrophotometry

Container ID: P-500ML

Qty: 2 Preservation: HNO3

Lot # 00063547

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: 2 Preservation: ICE And H2SO4

Lot # 00063547

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: 2 Preservation: ICE-FLTR

Lot # 00063891

Description: Plastic Bottle 125 mL

Analysis

W-PO4-F

Description

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

Bottle Group: C

of Sites: 2

Container ID: PT-50ML

Qty: 2 Preservation: ICE

Lot # 430897

Description: Plastic Tube 50 mL

Analysis

ALGAL_ID

Description

Qualitative assessment of algal taxa present without counts

Bottle Group: D

of Sites: 2

Container ID: PJ-2L

Qty: 4 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: NB Date: 2-8-14

DEP Cooler ID #(s): 2 coolers

Kit must also include:

- ☒ Field Sheets
- ☒ Temperature Control Bottle (1 per cooler)
- ☒ FedEx Bills, if applicable (1 per cooler)
- ☒ Plastic Bags
- ☒ Zip Ties

If Preservation Included:

ID _____	Lot # _____
ID _____	Lot # _____
ID _____	Lot # _____
ID _____	Lot # _____
ID _____	Lot # _____

PLEASE RETURN ALL COOLERS FOR RQ-2016-02-15-27

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

Waterbody: Wakulla at Boat TRAM Date: 02/16/2016 County: Wakulla Storet Number: 44059
Analyst: Curtis Musson Signature: Curtis Musson
Comments: BMAP Sampling RA-2016-02-15-27

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												Pistia stratioides											
Cicuta maculata	X	X	X	X	X	X	X	X	X	X		Polygonum glabra											
Cladium jamaicense				X								Polygonum hydropiperoides											
Colocasia esculenta												Polygonum punctatum											
Commelina diffusa												Pontedaria cordata	X	X	X	X	X	X	X	X	X	X	
Commelina virginica												Potamogeton illinoensis											
Crinum americanum												Rhynchospora inundata											
Diodia virginiana												Rosa palustris											
Eichhornia crassipes												Ruellia simplex											
Eleocharis (wispy viviparous)												Rumex verticillatus	X	X					X	X	X		
Hydrilla verticillata					X	X	X			X		Sacciolepis striata											
Hydrocotyle												Sagittaria kurziana											
Hygrophila polysperma												Sagittaria lancifolia											
Hymenocallis												Sagittaria latifolia	X	X	X	X			X		X	BR	
Lachnanthes caroliniana												Salvinia minima											
Landoltia punctata												Samolus parviflora											
Lemna	X	X	X	X	X	X	X	X	X	X		Saururus cernuus											
Limnophila sessiflora												Scirpus (schenoplectus) californicus	X	X	X	X	X	X	X	X	X		
Ludwigia leptocarpa												Sparganium americanum											
Ludwigia palustris												Typha	X	X	X	X							
Ludwigia peruviana												Vallisneria americana	X	X	X	X	X	X	X	X	X	D	
Ludwigia repens	X			X	X	X	X					Zizania aquatica											
Luziola fluitans												Cyperus SP	X	X	X	X	X	X	X	X	X		
Micranthemum glomeratum												Polygonum glabra	X	X	X	X	X	X	X	X	X		
Micranthemum umbrosum												Sagittaria latifolia	X	X	X	X			X		X		
Mikania scandens	X	X	X	X	X	X	X	X	X	X		Hymenocallis											
Myriophyllum aquaticum												Azela caroliniana											
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	X	X	X	X	X	X	X	X	X	X													
>25 and ≤50% Macrophyte Coverage																							
> 50% Macrophyte Coverage																							

SBto: 75582
VPDB: 9504

BR 2/19/16

Macrophyte Field Data

☐ New Data
 ☒ Existing Data

Arch Method
 Macrophyte ID
 Visit ID (SBIO Sample ID)
 STORET Station Number

Search:

9504

STORET Station:

Visit ID (SBIO Sample ID):

Macrophyte ID:

9504

tion Visit Information

Station: 44059

ample Date: 2/16/2016

ad Sampler: Ralys, Benjamin

rophyte ID: 9504

entifier: Musson, Curtis

SCINAME	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
☒ Azolla caroliniana										P
☒ Cicuta maculata	P	P	P	P	P	P	P	P	P	P
☒ Cladium jamaicense				P						
☒ Hydrilla verticillata					P	P	P			P
☒ Hymenocallis					P					P
☒ Lemna	P	P	P	P		P	P	P	P	P
☒ Ludwigia repens	P			P	P	P	P			
☒ Mikania scandens	P	P	P	P	P	P	P	P	P	
☒ Polygonum glabrum	P	P	P	P	P		P	P	P	
☒ Pontederia cordata	P	P	P	P	P	P	P	P	P	P
☒ Rumex verticillatus	P	P					P	P	P	
☒ Sagittaria latifolia	P	P	P	P				P		P
☒ Scirpus californicus	P	P	P	P		P	P	P		
☒ Typha	P	P	P	P						
☒ Vallisneria americana	D	D	D	D	D	D	D	D	D	D

CM 2-17-16

BR 2/19/16