



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

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Data Qualified?
Yes / No

Location/STORET Station Name: Wakulla River Below US 98

Date: 04/18/2017
(mm/dd/yyyy)

STORET # G1WA0028

WBID: 1006VA

Latitude: 30.17607

County: Wakulla

RQ - 2017-04-03-28

ORG ID: 21FLWQA

Longitude: -84.2429

(Decimal Degrees)

Receiving Body of Water: St. Marks River, GOM

Field ID: G1WA0028_04182017

(Decimal Degrees)

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Curtis Musson			X			
Stuart, Raymond		X		X	X	X

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Equipment ID: Meter 2		
Collection Method		
☐ Wading	Via Boat	
☐ From Shore	☐ Canoe/Kayak	
☐ Other (note below)	☐ Electric Motor	
	☒ Gasoline Motor	

Water Level: Dry / Pooled / Low / Normal / High / Flooded		Matrix: Fresh / Marine / DI								
Meter ID# Biology 2		Photos: Yes / No								
		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 (umhos/cm)	Temp. (C°)
EST	9:13	0.3	4.1	7.93	89.8	7.84	0.20	3.3	417	21.14
CEN	9:13	3.6		7.25	81.5	7.76	0.21		434	20.94

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

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	SA 6302030	10/28/17	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3	NA 6253070	09/09/17	☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um 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 ☐ qPCR	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Contains 1:1 Sulfuric Acid SA - 6302030 EXP: 10/28/17 Warning! See SDS

Notes:

STORET ↓

Field ID →

Kit A

Wakulla River
Below Highway
98 Bridge



G1WA0028

Wakulla River
Below Highway
98 Bridge

April 18, 2017



G1WA0028_04182017

Signature:

Date:

Field Parameters Entered into LIMS: CM 4-19-17

Field Parameters QC in LIMS:

Date Migrated to STORET:

Field Sheets Scanned/Saved:

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

Boldly "X" this box if there is qualified data on this name

Meter Bio #2

RQ- 2017-04-03-28

Project SMD

- 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 03/06/2017

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 Mussen	4-18-17	7:13	23.30	8.530	8.53	100.0	41	-	P	L
ICV	Curtis Mussen	4-18-17	7:14	23.30	8.530	8.60	100.9	41	-	P	L
CCV	Curtis Mussen	4-18-17	15:01	25.37	8.203						
CCV	Robert Lim	4/19/17	7:01	22.31	8.677	11.81	136.1	42	-	F	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 Mussen	4/18/17	7:16	16111D	11/2017	1000	1000	P	LAB
ICV	Curtis Mussen	4-18-17	7:17	16111D	11/2017	1000	997	P	LAB
CCV	Curtis Mussen	4-18-17	15:04	170310E	03/2018	100	103	P	LAB
CCV									

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 Mussen	4/18/17	7:19	16111B	2/2018	7.0	7.00	-13	P	LAB
Calibr.	Curtis Mussen	4-18-17	7:21	16111A	11/2017	4.01	4.00	158	P	LAB
Calibr.	Curtis Mussen	4-18-17	7:23	16111C	5/2018	10.01	9.49	-181	P	LAB
ICV	Curtis Mussen	4-18-17	7:25	16111C	5/2018	10.01	9.89	-175	P	LAB
CCV	Curtis Mussen	4-18-17	15:06	16111A	11/2017	4.01	3.88	166	P	LAB
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU;

mV pH7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

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 $\pm 5\%$ or ± 0.05 m, whichever is greater

Request Number: RQ-2017-04-03-28

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Lab Sample Submittal Form

Event: Wakulla, Moriah, Wards, Caney

Customer: WQ-ASSESS

Project ID: SMP

Requester: Curtis Musson

Collected By: Curtis Musson Raymond Stuart

Field Report Prepared By: Raymond Stuart
Sampling Agency: FDEP

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Location

Field ID: →

Moriah Creek < 100
meters upstr sam
Ft Newport F.d.

April 18, 2017

G1WA0057_04182017

Moriah Creek 100
meter: upstream
of Newport Rd.

STORET ↓

G1WA0057

Field ID: →

Wakulla River
Below Highway
98 Bridge

April 18, 2017

G1WA0028_04182017

Wakulla River
Below Highway
98 Bridge

STORET ↓

G1WA0028

Field ID: →

Caney Creek
Upstream of
US 90

April 18, 2017

G1WA0014_04182017

Caney Creek
Upstream of
US 90

STORET ↓

G1WA0014

☐ Comp
☒ GrabCollection (comp begin or grab)
Date 4/18/17 Time 8:25amEastern
CentralCollection (comp begin or grab)
Date

Time

Bottle
Group(s)

Matrix (Salt, Fresh)

Diss. Oxygen
(mg/L) 7.57

Temp

(C) 18.54

pH 7.29

Sample Depts
(m) 0.05Sp. Conductance
(umho/cm) 380

A

Salinity
(ppt) 0.18

Comments

Latitude (Decimal Degrees)
30.1857Longitude (Decimal Degrees)
-84.1929☐ Comp
☒ GrabCollection (comp begin or grab)
Date 4/18/17 Time 9:13amEastern
CentralCollection (comp begin or grab)
Date

Time

Bottle
Group(s)

Matrix (Salt, Fresh)

Diss. Oxygen
(mg/L) 7.93

Temp

(C) 21.14

pH 7.84

Sample Depts
(m) 0.3Sp. Conductance
(umho/cm) 417

A

Salinity
(ppt) 0.20

Comments

Latitude (Decimal Degrees)
30.17607Longitude (Decimal Degrees)
-84.2429☐ Comp
☒ GrabCollection (comp begin or grab)
Date 4/18/17 Time 10:55amEastern
CentralCollection (comp begin or grab)
Date

Time

Bottle
Group(s)

Matrix (Salt, Fresh)

Diss. Oxygen
(mg/L) 12.21

Temp

(C) 19.27

pH 7.08

Sample Depts
(m) 0.05Sp. Conductance
(umho/cm) 106Salinity
(ppt) 0.05

Comments

Latitude (Decimal Degrees)
30.5325Longitude (Decimal Degrees)
-83.9501B
C
D
E

Relinquished By:

Date/Time

4/18/17 1:18pm

Number of Coolers

3

Received By:

Date/Time

Request Number: RQ-2017-04-03-28

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Lab Sample Submittal Form

Event: Wakulla, Moriah, Wards, Caney

Requester: Curtis Musson

Field Report Prepared By: _____

Customer: WQ-ASSESS

Project ID: SMP

Sampling Agency: FDEP

Collected By: _____

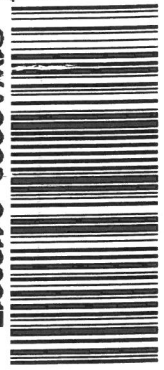
Location

Field ID: →

Wards Creek
upstream of
bridge at CR 259

April 18, 2017

STW00002_04182017



Wards Creek
upstream of
bridge at CR 259



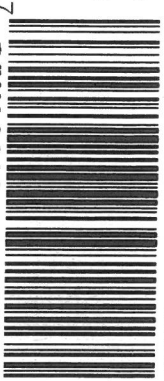
Location

Field ID: →

Caney Creek
Downstream
of 158A

April 18, 2017

STW00000_04182017



Caney Creek
Downstream
of 158A



Location

Field ID

STORET #

☐ Comp
☒ Grab

Date 4/18/17 Time 11:25am

Matrix (Salt, Fresh) (mg/L) 0.78

Temp (C) 20.40

pH 5.50

Salinity (ppt) 0.03

Comments No waste water tracers

Latitude (Decimal Degrees) 30.605000

Longitude (Decimal Degrees) -83.893257

☐ Comp
☒ Grab

Date 4/18/17 Time 12:05pm

Matrix (Salt, Fresh) (mg/L) 11.22

Temp (C) 20.33

pH 6.60

Salinity (ppt) 0.06

Comments

Latitude (Decimal Degrees) 30.52

Longitude (Decimal Degrees) -83.94

☐ Comp
☐ Grab

Date

Matrix (Salt, Fresh) (mg/L)

Temp (C)

pH

Salinity (ppt)

Comments

Latitude (Decimal Degrees)

Longitude (Decimal Degrees)

Eastern
Central

Date

Time

Sample Depts (m)

Sp. Conductance (umho/cm)

60

0.15

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

Bottle Group(s)

C

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

E

Relinquished By: _____

Date/Time

Number of Coolers

Received By: _____

Date/Time

Group: A	Bottle Type:	P-1L	# of Bottles: 4	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: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	CHLSUITE-W						
Group: A	Bottle Type:	P-500ML	# of Bottles: 4	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: 4	Preservative:	ICE-FLTR	Enter Number of Bottles Sent to Lab	2
	W-PO4-F						
Group: B	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: B	Bottle Type:	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	CHLSUITE-W						
Group: B	Bottle Type:	P-500ML	# of Bottles: 2	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	2
	W-ICP						
	W-ICPMS						

Group: B	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles: 2	Preservative: ICE And H2SO4	Enter Number of Bottles Sent to Lab	2
Group: B	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 2	Preservative: ICE-FLTR	Enter Number of Bottles Sent to Lab	2
Group: C	Bottle Type: ECOL-18QT	P-250ML-WO-THI	# of Bottles: 3	Preservative: ICE	Enter Number of Bottles Sent to Lab	3
Group: D	Bottle Type: W-AHERB-AA W-SUC-AA-R W-UHERB-AA	BG-1L	# of Bottles: 3	Preservative: ICE	Enter Number of Bottles Sent to Lab	2
Group: E	Bottle Type: PCR-HF183	QPCR-P-250ML	# of Bottles: 6	Preservative: ICE	Enter Number of Bottles Sent to Lab	6

Cooler Packing Worksheet for Request: RQ-2017-04-03-28

Wakulla, Moriah, Wards, Caney

Ship Cooler On: 3/30/2017

Customer/Project: WQ-ASSESS/SMP

Assigned To: REYNOLDS_T

Requester: Curtis Musson

Priority: 3

850-248-8453
Division Of Water Facilities, FL DEP
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
Attn: curtis musson

Comments:

Group A: Freshwater Kit
Group B: Freshwater Kit With Metals
Group C: E. coli
Group D: Organics (Tracers)
Group E: PCR-HF183

1 - Case of sulfuric acid

No FedEx shipping labels needed, samples will be dropped off.

Requested Analyses:

Bottle Group: A

of Sites: 4

Container ID: P-1L

Qty: 4 Preservation: ICE

Lot # 00067304

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

Container ID: BP-1L

Qty: 4 Preservation: ICE

Lot # 1191091

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

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

Container ID: P-500ML

Qty: 4 Preservation: ICE And H2SO4

Lot # 00067368

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: 4 Preservation: ICE-FLTR

Lot # 00065449

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 # 00067304

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

Container ID: BP-1L

Qty: 2 Preservation: ICE

Lot # 1191091

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

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

Container ID: P-500ML

Qty: 2 Preservation: HNO3

Lot # 00067368

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 # 00067368

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 # 0065449

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: 3

Container ID: P-250ML-WO-THI

Qty: 3 Preservation: ICE

Lot # 417013

Description:

Analysis

ECOLI-18QT

Description

Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems

Bottle Group: D

of Sites: 3

Container ID: BG-1L

Qty: 3 Preservation: ICE

Lot # 00666798

Description: Brown Glass Bottle 1L

Affix BLUE dot to container.

Analysis

Description

W-AHERB-AA
W-SUC-AA-R
W-UHERB-AA

Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS
Analysis of sucralose in water matrices by HPLC/MS/MS
Urea herbicides and other chemicals in water matrices by HPLC/MS/MS

Bottle Group: E

of Sites: 3

Container ID: QPCR-P-250ML

Qty: 6 Preservation: ICE

Lot # L170130

Description:

Analysis

PCR-HF183

Description

Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction

Cooler Packed By: Tyler Reynolds Date: 04/02/17

DEP Cooler ID #(s): 3 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 Sulfuric Acid Lot # 6302030
ID _____ Lot # _____
ID _____ Lot # _____
ID _____ Lot # _____
ID _____ Lot # _____

PLEASE RETURN ALL COOLERS FOR RQ-2017-04-03-28