



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

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Data Qualified?

Yes / No

Location/STORET Station Name: Lake Arrowhead at Boat Dock at Turtle Ln Date: 10/10/2017

STORET # G1WA0004 WBID: S64A Latitude: _____ (mm/dd/yyyy)

County: Leon RQ - 2017-10-09-23 ORG ID: 21FLWQA Longitude: _____ (Decimal Degrees)

Receiving Body of Water: Pine Hill Lake Field ID: G1WA0004_10102017 (Decimal Degrees)

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Curtis Musson			X	X	X	X
Ben Ralys		X		X		

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 / Pooled / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# Bio #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 (µmhos/cm)	Temp. (C°)
<u>EST</u>	<u>8:27</u>	<u>0.3</u>	<u>1.3</u>	<u>8.18</u>	<u>103.4</u>	<u>7.86</u>	<u>0.03</u>	<u>0.5</u>	<u>70</u>	<u>27.36</u>
CEN										

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

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#: 1935394

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 7233030	8/21/18	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <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 ☐ 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	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Other			

Contains 1.1 Sulfuric Acid
Lot No.: SA7233030
Expires: 08/21/18
See Safety Data Sheet (SDS)

Contains 1.1 Sulfuric Acid
DANGER
SULFURIC ACID <51%
7732-18-5
May be corrosive to metals. Causes severe skin burns and eye damage. May cause respiratory irritation. Harmful to aquatic life. Do not release into the environment. Wear protective gloves/eye protection. Do not breathe dust/fume/gas/mist/vapors/spray. Do not get inside clothing. If swallowed, do not induce vomiting. If on skin, wash with plenty of water. If on face, rinse mouth. If in eyes, rinse thoroughly with water for several minutes. If inhaled, move to fresh air. If irritation persists, seek medical attention. Store in corrosion resistant container.

Notes: Field ID: →
Lake Arrowhead at boat dock at Turtle Crk Ln near outlet
Oct 10, 2017

G1WA0004_10102017

Lake Arrowhead at Boat Dock At Turtle Crk Ln Near Outlet

STORET ↓

G1WA0004

Signature: [Signature] Date: 10/10/17

Field Parameters Entered into LIMS: cm 10/10/17 Field Parameters QC in LIMS: cm 4/11/18

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 ID: Bio #2

RQ: 2017-10-09-16

Project: SMP

- Notes:** (1) Always wait for meter to stabilize before recording any readings.
 (2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
 (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 Mussen	10/9/17	1541	22.87	8.598	8.60	100.0	52	—	P/F	L/F
ICV	Curtis Mussen	10/9/17	1543	22.89	8.525	8.60	100.0	52	—	P/F	L/F
CCV	Curtis Mussen	10/10/17	1541	24.37	8.356	8.59	104.7	53	—	P/F	L/F
CCV										P/F	L/F

DO Acceptance criteria from Table ± 0.3 mg/L.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	Curtis Mussen	10/9/17	1545	170614 E	6/2018	1000	1000	P/F	L/F
ICV	Curtis Mussen	10/9/17	1546	170614 E	6/2018	1000	1000	P/F	L/F
CCV	Curtis Mussen	10/10/17	1543	170614 D	6/2018	100	105	P/F	L/F
CCV								P/F	L/F

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	10/9/17	1547	170310 B	9/18	7.0	7.00	44	P/F	L/F
Calibr.	Curtis Mussen	10/9/17	1551	170614 A	6/18	4.01	4.01	215	P/F	L/F
Calibr.	Curtis Mussen	10/9/17	1552	170310 C	9/18	10.01	9.94	-107	P/F	L/F
ICV	Curtis Mussen	10/9/17	1554	170614 A	6/18	4.01	3.82	222	P/F	L/F
CCV	Curtis Mussen	10/10/17	1544	170310 C	9/18	10.01	10.06	-109	P/F	L/F
CCV									P/F	L/F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50 ;

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

mV pH 10 Range -180 ± 50 ;

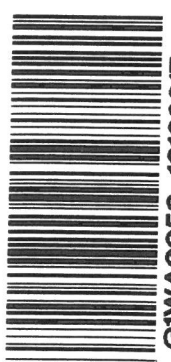
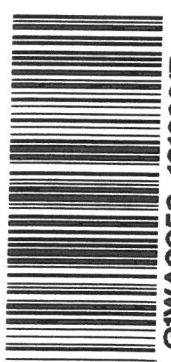
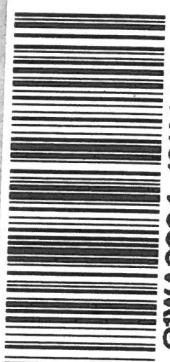
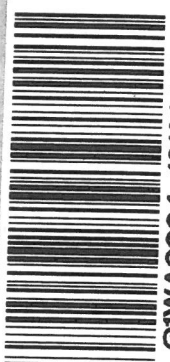
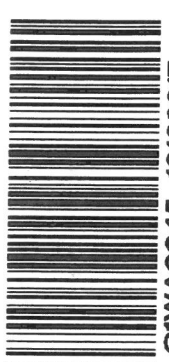
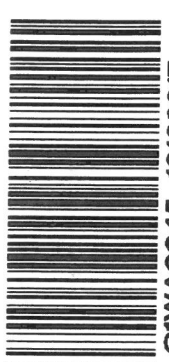
If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth verification

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value meters	Pass / Fail	Lab / Field
Pressure mode in air						P/F	L/F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater.

COMMENTS:

Loc	Field	STOI	Locs	Field	ST	Loc	Field	S
Aj Henry Park Pond Middle	Field ID → Aj Henry Park Pond Middle Oct 10, 2017	STOI Oct 10, 2017	Lake Arrowhead Boat Dock At Turtle Crk Ln Near Outlet	Field ID → Lake Arrowhead at boat dock at Turtle Crk Ln near outlet Oct 10, 2017	ST Oct 10, 2017	Tallavanna Lake Middle	Field ID → Tallavanna Lake Middle Oct 10, 2017	S Oct 10, 2017
STORET ↓  GIWA0058 Field ID →  GIWA0058_10102017	Field ID →  GIWA0058_10102017	STOI Oct 10, 2017	STORET ↓  GIWA0004 Field ID →  GIWA0004_10102017	Field ID →  GIWA0004_10102017	ST Oct 10, 2017	STORET ↓  GIWA0045 Field ID →  GIWA0045_10102017	Field ID →  GIWA0045_10102017	
Loc Field STOI	Field ID → Aj Henry Park Pond Middle Oct 10, 2017	STOI Oct 10, 2017	Locs Field ST	Field ID → Lake Arrowhead Boat Dock At Turtle Crk Ln Near Outlet Oct 10, 2017	ST Oct 10, 2017	Loc Field S	Field ID → Tallavanna Lake Middle Oct 10, 2017	S Oct 10, 2017

2017-10-09-23

Swamp, Salem, Talavanna, Arrowhead, AJ, Harbinwoo Requester:
Customer: WAS-SECT
Project ID: SMP

Collected By: Curtis Mussen, Ben Calys

Curtis Musson

Field Report Prepared By:
Sampling Agency:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Lab Sample Submittal Form

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Locati-

Swamp Creek upstream of Railroad

STRETCH



G1WA0052

Field 11 () ➤

Swamp Creek
upstream of
Railroad

Oct 10, 2017

**Salem Branch
downstream of
SR 159**

STREET →



G1WA0053

Field ID: Salem Branch
downstream of
SR 159

Oct 10, 2017

**Harbinwood
Estates Drain**

STORE ➔



G1WA0034

Field/City

Harbinwood Estates Drain

Oct 10, 2017

Relinquished By:

Date/Time

Date/Time 1-16/17 1355

Number of Coolers

5

Received By: 

Date/Time

date/time 10/20/10 7:00

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
Central Lab Sample Submittal Form

Request Number: 19-2017-10-09-23
Swamp, Salem, Talavanna, Arrowhead, AJ, Harbinwoo Requester: Curtis Musson
Customer: WAS-SECT
Project ID: SMP

Collected By: Curtis Musson, Ben Ralys
Field Report Prepared By: Curtis Musson
Sampling Agency: FDEP

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Loc	File	STC	Matrix	Temp (C)	pH	Diss. Oxygen (mg/L)	Sample Depts (m)	Sp. Conductance (umho/cm)	Bottle Group(s)
STORET G1WA0033 Megginnis Arm Run Downstream of Sharer Oct 10, 2017	STC Godby Drainage Ditch at Progress Dr. Oct 10, 2017	STC Central Drainage Ditch downstream of Orange Ave. Oct 10, 2017	☐ Comp ☒ Grab Fresh	25.89	4.27	6.81	0.2	209	A, C, D G
STC Godby Drainage Ditch at Progress Dr. Oct 10, 2017	STC Central Drainage Ditch downstream of Orange Ave. Oct 10, 2017	STC Central Drainage Ditch downstream of Orange Ave. Oct 10, 2017	☐ Comp ☒ Grab Fresh	26.67	3.84	7.02	0.3	198	A, C D, E
STC Central Drainage Ditch downstream of Orange Ave. Oct 10, 2017	STC Central Drainage Ditch downstream of Orange Ave. Oct 10, 2017	STC Central Drainage Ditch downstream of Orange Ave. Oct 10, 2017	☐ Comp ☒ Grab Fresh	28.16	8.04	7.71	0.3	224	A, B, C G, H

Relinquished By: <u>Curtis Musson</u>	Date/Time: <u>10/10/17 1355</u>	Number of Coolers: <u>5</u>	Received By: <u>G.D.</u>	Date/Time: <u>10/10/17 2:08</u>
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Group: A	Bottle Type: ALKALINITY TURBIDITY W-CL-IC W-COLOR W-F W-SO4-IC W-TDS W-TSS	P-1L	# of Bottles: 8	Preservative: ICE	Enter Number of Bottles Sent to Lab	8
Group: A	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 8	Preservative: ICE	Enter Number of Bottles Sent to Lab	8
Group: A	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles: 8	Preservative: ICE And H2SO4	Enter Number of Bottles Sent to Lab	8
Group: A	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 8	Preservative: ICE-FLTR	Enter Number of Bottles Sent to Lab	8
Group: B	Bottle Type: W-ICP W-ICPMS	P-500ML	# of Bottles: 1 2 Added	Preservative: HNO3	Enter Number of Bottles Sent to Lab	3
Group: C	Bottle Type: ECOLI-18QT	P-250ML-WO-THI	# of Bottles: 7	Preservative: ICE	Enter Number of Bottles Sent to Lab	7
Group: D	Bottle Type: W-AHERB-AA W-SUC-AA-R W-UHERB-AA	BG-1L	# of Bottles: 5	Preservative: ICE	Enter Number of Bottles Sent to Lab	5
Group: E	Bottle Type: PCR-FILTER PCR-HF183	QPCR-P-250ML	# of Bottles: 4	Preservative: ICE	Enter Number of Bottles Sent to Lab	4
Group: F	Bottle Type: PCR-FILTER	QPCR-P-250ML	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab	2

Group: F	Bottle Type: PCR-GFD	QPCR-P-250ML	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
Group: G	Bottle Type: PCR-FILTER	QPCR-P-250ML	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	6
Group: H	Bottle Type: W-AHERB-AA W-GLYPH W-PYR-AA-R W-SUC-AA-R W-UHERB-AA	BG-1L	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	4
Group: H	Bottle Type: W-CT-CI-R W-PCL-SQ-R	BG-500ML	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	6
Group: H	Bottle Type: W-PSNP-TQ	BG-1L	# of Bottles: 6	Preservative:	ICE	Enter Number of Bottles Sent to Lab	6

Cooler Packing Worksheet for Request: RQ-2017-10-09-23
SWamp, Salem, Talavanna, Arrowhead, AJ, Harbinwood, Meginnis, Godby, Central

Ship Cooler On: 10/3/2017
Customer/Project: WAS-SECT/SMP

Assigned To: SEARSON_C
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, CHLA, Physical Aggregates
Group B: Metals
Group C: Microbiology (Bacteria)
Group D: Organics (Wastewater Tracers) AHERB Short List
Group E: PCR (HF183, FILTER)
Group F: PCR (GFD, FILTER)
Group G: PCR (FILTER)
Group H: Pesticides AHERB Long List

Requested Analyses:

Bottle Group: A

of Sites: 8

Container ID: P-1L

Qty: 8 Preservation: ICE

Lot # 00068657

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: 8 Preservation: ICE

Lot # 1208913

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

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

Container ID: BG-1L

Qty: 5 Preservation: ICE

Lot # 00068050

Description: Brown Glass Bottle 1L

Affix BLUE dot to container.

Analysis

W-AHERB-AA

W-SUC-AA-R

W-UHERB-AA

Description

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: 2

Container ID: QPCR-P-250ML

Qty: 4 Preservation: ICE

Lot # 00067801

Description:

Analysis

PCR-FILTER

PCR-HF183

Description

Preparation of Samples by Filtration and held for qPCR Analysis

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

Bottle Group: F

of Sites: 1

Container ID: QPCR-P-250ML

Qty: 2 Preservation: ICE

Lot # 00067801

Description:

Analysis

PCR-FILTER

PCR-GFD

Description

Preparation of Samples by Filtration and held for qPCR Analysis

Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction

Bottle Group: G

of Sites: 3

Container ID: QPCR-P-250ML

Qty: 6 Preservation: ICE

Lot # 00067801

Description:

Analysis

PCR-FILTER

Description

Preparation of Samples by Filtration and held for qPCR Analysis

Bottle Group: H

of Sites: 2