



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 1

February 2016

Data Qualified?
Yes / No

STORET Station Name: Lake Arrowhead at boat dock at Turtle Crk Ln near outlet

Date: 04/20/2016

(mm/dd/yyyy)

STORET Station ID: G1WA0004

Latitude: 30.568517

(Decimal Degrees)

WBID: 564A

RQ - 2016-04-18-18

ORG ID: 21FLWQA

Longitude: -84.218058

(Decimal Degrees)

Receiving Body of Water: Lake Iamonia

Field ID: G1WA0004

County: Leon

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Curtis Musson					X	X	X	X	X
Robert Wiwi									

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

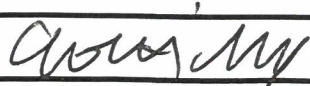
Collection Method		
☐ Wading	Via Boat	
☒ From Shore	☐ Canoe/Kayak	
☐ Other (note below)	☐ Electric Motor	
	☐ Gasoline Motor	

Water Level: Dry / Low / <u>Normal</u> / High / Flooded					Matrix: <u>Fresh</u> Marine / DI					
Meter ID# Biology 2			Photos: Yes / <u>No</u>			Tide Falling: Yes / No / <u>NA</u>				
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	14:10	0.3	1.4	10.7	127.3	7.07	0.04	0.7	83	23.56
CEN										

Biological Samples Collected: <u>None</u> HA SCI LVS RPS LVI Other									
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	529020	9-16-16	☒ <2	
Metals	☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO2			☐ <2	
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter				☒ Ice				
Chlorophyll	☒ CHLSUITE-W				☒ Ice				
BOD	☐ BOD-UNIN				☐ Ice				
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS				☒ Ice				
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY				☐ 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				☐ Ice				
	☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH				☐ Other				

Contains
1:1
Sulfuric Acid
SA-5259020
EXP: 09/16/16
Warning!

Adhesive Sticker(s) Here
(If Available)

Notes:		 G1WA0004 20 April 2016 Lake Arrowhead at boat dock at Turtle Crk Ln near outl	
Signature: 		Date: 4-20-16	

Field Parameters Entered into LIMS: Cm 4-21-16
(Initials/Date)

Field Parameters QC in LIMS: Cm 4-21-16
(Initials/Date)

Date Migrated to STORET: Cm 4-21-16
(Initials/Date)

Field Sheets Scanned/Saved: Cm 4-21-16
(Initials/Date)

Request Number: RQ-2016-04-18-18

Killearn Chain of Lakes Outlet, Alford Arm Tributary,
Lake Arrowhead and Ochlockonee River

Customer: WQAP

Project ID: SMP

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Requester: Benjamin Ralys

Collected By: C. Musson, R. Wiwi

Field Report Prepared By:

R. Wiwi

last revised Apr 7, 2016

Sampling Agency:

Location Alford Arm Tributary at Buck Lake Rd		☐ Comp ☒ Grab		Collection (comp begin or grab) Date 4/20/16 Time 10:20		Eastern Central		Composite end Date Time		Bottle Group(s) (See pg 2)	
Field ID G1WA0017		Matrix (type, e.g., Salt, Fresh, etc) Fresh		Diss. Oxygen 2.95		☒ mg/L ☐ % sat		Total Res. Chlorine (mg/L)		B	
STORET # G1WA0017		Temp (C) 19.33		pH 5.57		Sample Depth 0.3		Sp. Conductance (umho/cm) 32			
Latitude 30.46363		Longitude -84.17115		Salinity (ppt) 0.01		Comments					
Location Killearn Chain of Lakes Outlet at Velda Dairy Rd. across from Mint Hill Church		☐ Comp ☒ Grab		Collection (comp begin or grab) Date 4/20/16 Time 13:10		Eastern Central		Composite end Date Time		Bottle Group(s)	
Field ID G1WA0015		Matrix (type, e.g., Salt, Fresh, etc) Fresh		Diss. Oxygen 7.18		☒ mg/L ☐ % sat		Total Res. Chlorine (mg/L)		B, C	
STORET #		Temp (C) 20.89		pH 6.24		Sample Depth 0.2		Sp. Conductance (umho/cm) 41			
Latitude 30.53735		Longitude -84.22847		Salinity (ppt) 0.02		Comments					
Location Lake Kantuck Outlet at Centerville Rd.		☐ Comp ☒ Grab		Collection (comp begin or grab) Date 4/20/16 Time		Eastern Central		Composite end Date Time		Bottle Group(s)	
Field ID Kantuck Bloom 4.20.2016		Matrix (type, e.g., Salt, Fresh, etc) Fresh		Diss. Oxygen		☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)		Additional Bottles	
STORET # NA		Temp (C)		pH		Sample Depth 0.3		Sp. Conductance (umho/cm)			
Latitude		Longitude		Salinity (ppt)		Comments					
Location Lake Arrowhead at boat dock at Turtle Crk Ln near outlet		☐ Comp ☒ Grab		Collection (comp begin or grab) Date 4/20/16 Time 14:10		Eastern Central		Composite end Date Time		Bottle Group(s)	
Field ID G1WA0004		Matrix (type, e.g., Salt, Fresh, etc) Fresh		Diss. Oxygen 10.77		☒ mg/L ☐ % sat		Total Res. Chlorine (mg/L)		B	
STORET # G1WA0004		Temp (C) 23.56		pH 7.07		Sample Depth 0.3		Sp. Conductance (umho/cm) 83			
Latitude 30.568517		Longitude -84.218058		Salinity (ppt) 0.04		Comments					

Relinquished By: [Signature]	Date/Time 4/20/16 4:40	Shipping Method	Number of Coolers Shipped:	Received By: [Signature]	Date/Time 4/20/16 1640
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Request Number: RQ-2016-04-18-18

Killearn Chain of Lakes Outlet, Alford Arm Tributary,
Lake Arrowhead and Ochlockonee River

Customer: WQAP

Project ID: SMP

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Requester: Benjamin Ralys

Collected By: C. Musson, R. Wiwi

Field Report Prepared By:

R. Wiwi

Sampling Agency:

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last revised Apr 7, 2016

Location Ochlockonee River upstream of SR 12		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 4/20/16 Time 15:05	Eastern Central	Composite end Date Time	Bottle Group(s) (See pg 2) A	
Field ID G1WA0038		Matrix (type, e.g., Salt, Fresh, etc) Fresh		Diss. Oxygen 7.29	☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)
STORET # G1WA0038		Temp (C) 19.6	pH 6.53	Sample Depth 0.3	☐ ft ☒ m		Sp. Conductance (umho/cm)
Latitude 30.67062	☒ dd ☐ dms	Longitude -84.30511	☒ dd ☐ dms	Salinity (ppt) 0.04			Comments
Location Ochlockonee River 350m upstream of SR 12		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 4/20/16 Time 15:30	Eastern Central	Composite end Date Time	Bottle Group(s) A	
Field ID G1WA0042		Matrix (type, e.g., Salt, Fresh, etc) Fresh		Diss. Oxygen 7.32	☐ mg/L ☐ % sat		Total Res. Chlorine (mg/L)
STORET # G1WA0042		Temp (C) 19.08	pH 6.55	Sample Depth 0.3	☐ ft ☒ m		Sp. Conductance (umho/cm) 78
Latitude 30.6720	☒ dd ☐ dms	Longitude -84.30410	☒ dd ☐ dms	Salinity (ppt) 0.04			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	Salinity (ppt)			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	Salinity (ppt)			Comments

Relinquished By:	Date/Time	Shipping Method	Number of Coolers Shipped:	Received By: R. Wiwi	Date/Time 4/20/16 / 1640
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Group: B	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 3	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>3</u>
Group: B	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles: 3	Preservative: ICE And H2SO4	Enter Number of Bottles Sent to Lab <u>3</u>
Group: B	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 3	Preservative: ICE-FLTR	Enter Number of Bottles Sent to Lab <u>3</u>
Group: C	Bottle Type: MI-FW-QLDC	PJ-2L	# of Bottles: 4	Preservative: Formalin	Enter Number of Bottles Sent to Lab <u>2</u>
Group: D	Bottle Type: ALGAL_ID	PT-50ML	# of Bottles: 2	Preservative: ICE	Enter Number of Bottles Sent to Lab <u>0</u>

Additional Bottles:

Bottle Type:

Bloom-ID

of Bottles:

3

Preservative:

ICE

sent to Lab:

3

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 Biology 2 RQ- 2016-04-18-18 Project SMP

- 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 03/04/2016

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	4/20/16	0706	21.7	8.8	8.8	100.0	44.1	✓	P	LAD
ICV	Curtis Musson	4-20-16	0708	21.7	8.8	8.8	100.2	44.1	✓	P	LAD
CCV	Curtis Musson	4/20/16	1659	24.9	8.3	8.56	103.3	43.1	✓	P	LAD
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 μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	Curtis Musson	4/20/16	0711	CC14162	10-15-16	996	996	P	L
ICV	Curtis Musson	4/20/16	0714	CC13882	7-15-16	101.1	102.9	P	L
CCV	Curtis Musson	4/20/16	17:01	CC13882	7-15-16	101.0	97	P	L
CCV	Curtis Musson	4/20/16	17:03	CC14162	10-15-16	996	998	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	4/20/16	0717	153035	7/17	7.0	7.00	-10.9	P	LAD
Calibr.	Curtis Musson	4/20/16	0719	154634	7/17	4.0	4.00	165.0	P	LAD
Calibr.	Curtis Musson	4/20/16	0722	146934	10/16	10.0	10.01	-188.2	P	LAD
ICV	Curtis Musson	4/20/16	0723	154634	7/17	4.00	3.98	166.8	P	LAD
CCV	Curtis Musson	4/20/16	17:06	146934	10-16	10.00	10.03	-189.7	P	LAD
CCV										

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

Cooler Packing Worksheet for Request: RQ-2016-04-18-18
Killearn Chain of Lakes Outlet, Alford Arm Tributary, Lake Arrowhead and Ochlockonee

Ship Cooler On: 4/4/2016
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:

- 1 - case of Nitric Acid
- 1 - case of Sulfuric Acid.

Group A = Fresh Metals
Group B = Fresh water Non metal

Requested Analyses:

Bottle Group: A

of Sites: 1

Container ID: P-1L

Qty: 1 Preservation: ICE

Description: Plastic Bottle 1L

Lot # 00064521
500mL Bottles

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

Description: Plastic Bottle 1L

Lot # 00064521
500mL Bottles

Analysis

BOD-UNIN

Description

BOD, NOT nitrogen-inhibited

Container ID: BP-1L

Qty: 1 Preservation: ICE

Description: Brown Plastic Bottle 1L

Lot # 1168614

Analysis

Description

Container ID: P-500ML

Qty: 1 Preservation: HNO3

Lot # 00064521

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: 1 Preservation: ICE And H2SO4

Lot # 00064521

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 # 00064520

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: 3

Container ID: P-1L

Qty: 3 Preservation: ICE

Lot # 00064521

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: 3 Preservation: ICE

Lot # 00064521

Description: Plastic Bottle 1L

Analysis

BOD-UNIN

Description

BOD, NOT nitrogen-inhibited

Container ID: BP-1L

Qty: 3 Preservation: ICE

Lot # 1168614

Description: Brown Plastic Bottle 1L

Analysis

CHLSUITE-W

Description

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

Container ID: P-500ML

Qty: 3 Preservation: ICE And H2SO4

Lot # 00064521

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: 3 Preservation: ICE-FLTR

Lot # 00064520

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: PJ-2L

Qty: 4 Preservation: Formalin

Lot # 1801
BIO WASH

Description: Plastic Jar 2 L

Analysis

MI-FW-QLDC

Description

No. Taxa of FW macroinverts, qual samp, 20 dipnets.

Bottle Group: D

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

Cooler Packed By: SK

Date: 4-13-16

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 <u>Sulfuric Acid</u>	Lot # <u>SA5259020</u>
ID _____	Lot # _____
ID <u>Nitric Acid</u>	Lot # <u>NA5259030</u>
ID _____	Lot # _____
ID _____	Lot # _____

PLEASE RETURN ALL COOLERS FOR RQ-2016-04-18-18