

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

Boldly "X" this box if there are qualified data on this page.

Meter ID: PRO DSS Desi RQ: 2019-07-08-53 Project: Algae Bloom

- 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.

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification

7/2019

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	C. Ruben	7-22-19	0740	24.4	762	8.4	8.37	101.9%	—	—	(P) F	(L) F
ICV	↓	↓	0742	24.5	762	8.4	8.36	100.3	—	—	(P) F	(L) F
CCV	A. Kalmbacher	7-22-19	1245	25.1	762	8.3	8.27	99.8	—	—	(P) F	(L) F
CCV											P / F	L / F

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 (Pro DSS 0.75 to 1.50); 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 µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	C. Ruben	7-22-19	0745	190430A	5/2020	1000	1003	(P) F	(L) F
ICV	↓	↓	0747	190319B	3/2020	100	100.1	(P) F	(L) F
CCV	A. Kalmbacher	7-22-19	1255	190430A	5/2020	1,000	1004	(P) F	(L) F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	C. Ruben	7-22-19	0755	2904054	3/2021	7.	25.1	7.03	-16.1	(P) F	(L) F
Calibr.	↓	↓	0800	2904100	3/2021	4.	25.1	3.94	166.4	(P) F	(L) F
Calibr.	↓	↓	0803	2904103	4/2020	10.	25.2	9.95	-187.9	(P) F	(L) F
ICV	↓	↓	0806	2904054	3/2021	7.0	25.2	7.03	-13.9	(P) F	(L) F
CCV	A. Kalmbacher	7-22-19	1300	2901851	7/2020	10.	24.7	9.99	-188.9	(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 ± 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)

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: _____; Date of last 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	C. Ruben	7-22-19	0809	0.00	0.00	(P) F	(L) F

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

COMMENTS:

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-6-06 V2)

WATERBODY <i>North of Doctors Lake South Bank</i>		DATE (M/D/YY): <i>7/22/14</i>	TIME: (AM) <i>1015</i>	Case ID#
COUNTY: <i>Clay</i>	LOCATION: <i>North of Doctors Lake South Bank</i>		NEAREST TOWN/CITY: <i>Jacksonville</i>	
Visit Type: Initial ☐ Recon ☐ Sampling ☒ Follow-up ☐	Samples collected: ☒ yes ☐ no	Samples submitted to:		Photos Taken: ☒ yes ☐ no
Sample collection method: Single Grab: ☒ Grab Composite: ☐ Depth integrated composite: ☐				
Sample & Analysis types: Aqueous: ☐ Surface Scum: ☐ Benthic mat: ☐ Tissue: ☐				
Algal ID & enumeration: ☒ Nutrients: ☒ Chl-a: ☒ AGP: ☐ Turbidity: ☐ Toxin: ☐				
Estimated size of bloom:		Impounded: ☐ yes ☐ no	Stream/River/Canal ☐ m wide	
Lake/Estuary Typical depth ☐ m deep	Inflows: ☐ yes ☐ no	Typical Transect ☐ m deep	☐ m deep	☐ m deep
Outflows: ☐ yes ☐ no	Water velocity ☐ m/s	☐ m/s	☐ m/s	
		Left bank	Middle	Right bank

Canopy Cover: Open: ☒ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily Shaded: ☐
Description of Bloom/ Latitude <i>30</i> <i>872</i> <i>877</i> Longitude <i>81</i> <i>42</i> <i>333</i>
Present Weather conditions <i>Sunny, partly cloudy, 85°F</i>
Print a map from GIS tool or internet mapping service (e.g., Mapquest, Google Map) Last rain event
Sketch bloom area on the attached map. Indicate wind direction. Rainfall amount

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	D ₂₀ (%)	Sal (ppt)	Secch (m)
Top	<i>0.3</i>	<i>30.6</i>	<i>8.11</i>	<i>1.24</i>	<i>2087</i>	<i>96.9</i>	<i>1.06</i>	<i>0.65</i>
Mid-depth								
Bottom	<i>1.5</i>							
System Type: Stream: ☐ (1st - 2nd order 3rd - 4th order 5th - 6th order 7th order or greater) Lake: ☒ Wetland: ☐ Estuary: ☐ Other: ☐								
Water Odors (check box): Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐								
Water Surface (check box): Clear: ☒ Scum: ☐ Globbs: ☐ Slick: ☐								
Water Clarity (check box): Clear: ☐ Slightly turbid: ☒ Turbid: ☐ Opaque: ☐								
Bloom Color (check box): Green: ☐ Red: ☐ Brown: ☐ Other: ☐								
Notes					Abundance: Periphyton ☒ Absent ☐ Rare ☐ Common ☐ Abundant ☐ Fish ☐ Aquatic Macrophytes ☒ Iron/sulfur Bacteria ☒			

ISIT TEAM:

AGENCY:

*C Ruben
K Appleby
A Kalmbacher*

FDEP DEAR NE ROK

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-6-06 V2)

WATERBODY NAME: <i>Deaton's Lake</i>		DATE (MD/YY): <i>7/22/2019</i>	TIME: (AM) (PM) <i>1035</i>	Case ID#
COUNTY: <i>Clay</i>	LOCATION: <i>Deaton's Lake, Bay Scout Camp</i>		NEAREST TOWN/CITY: <i>Sacksonville</i>	
Visit Type: Initial ☐ Recon ☐ Sampling ☒ Follow-up ☐	Samples collected: ☒ yes ☐ no	Samples submitted to:		Photos Taken: ☒ yes ☐ no
Sample collection method: Single Grab: ☒ Grab Composite: ☐ Depth integrated composite: ☐				
Sample & Analysis types: Aqueous: ☐ Surface Scum: ☐ Benthic mat: ☐ Tissue: ☐				
Algal ID & enumeration: ☒ Nutrients: ☒ Chl-a: ☒ AGP: ☐ Turbidity: ☐ Toxin: ☐				
Estimated size of bloom: Impounded: ☐ yes ☐ no				
Lake/Estuary Typical depth: m deep		Stream/River/Canal: m wide		
Inflows: ☐ yes ☐ no		Typical Transport: m deep		
Outflows: ☐ yes ☐ no		Water velocity: m/s		

Canopy Cover: Open: ☒ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily Shaded: ☐

Description of Bloom/ Latitude *30* *09* *054* Longitude *81* *43* *466* *446*
Degrees Minutes Seconds Degrees Minutes Seconds

Present Weather conditions
Sunny, partly cloudy, 85°F

Last rain event

Print a map from GIS tool or Internet mapping service (e.g., Mapquest, Google Map)

Rainfall amount

Sketch bloom area on the attached map. Indicate wind direction.

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	DO (%)	Sal (ppt)	Secchi (m)
Top	<i>0.3</i>	<i>30.3</i>	<i>7.55</i>	<i>5.49</i>	<i>2087</i>	<i>78</i>	<i>1.02</i>	<i>0.6</i>
Mid-depth				<i>6.15</i>		<i>82.2</i>		
Bottom	<i>0.9</i>							
System Type: Stream: ☐ (1st - 2nd order 3rd - 4th order) Lake: ☒ Wetland: ☐ Estuary: ☐ Other: ☐								
Water Odors (check box): Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐								
Water Surface (check box): Clear: ☒ Scum: ☐ Globbs: ☐ Slick: ☐								
Water Clarity (check box): Clear: ☐ Slightly: ☒ Turbid: ☐ Opaque: ☐								
Bloom Color (check box): Green: ☐ Red: ☐ Brown: ☐ Other: ☐								
Notes: Contains: 1:1 H2SO4 Lot No.: SA8344070 Expires: 12/10/19 See Safety Data Sheet (SDS)					Abundance: Periphyton ☒ Absent ☐ Rare ☐ Common ☐ Abundant ☐ Fish ☐ Aquatic Macrophytes ☒ Iron/sulfur Bacteria ☒			

VISIT TEAM

AGENCY

THE HAZARDOUS WASTE SCIENTIFIC CENTER
1435556 2711
Contains 1:1 H2SO4
May be corrosive to metals. Causes severe eye burns and eye damage. Do not breathe fumes. Harmful to aquatic life. May irritate skin. Wear protective gloves. Wash thoroughly after use. Do not eat, drink, or smoke. Do not get in eyes. If in eyes, flush with water for 15 minutes. If on skin, wash with soap and water. If swallowed, drink water. Do not induce vomiting. If you feel unwell, call a doctor. If you are pregnant, consult your doctor. Do not mix. Store in original container. Do not use if container is damaged or leaking. Do not use if label is missing. Store in original container. Do not use if label is missing.

*CLP**A Kullumbacher
K Appleby**FDEP DEAR WEROC*

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-6-06 V2)

WATERBODY NAME: Doctor's Lake		DATE (MM/DD/YY): 7/22/19	TIME: (AM) (PM) 1100	Case ID#
COUNTY: Clay	LOCATION: Doctor's Lake West Side		NEAREST TOWN/CITY: Jacksonville	
Visit Type: Initial ☐ Recon ☐ Sampling ☒ Follow-up ☐	Samples collected: ☒ yes ☐ no	Samples submitted to:		Photos Taken: ☒ yes ☐ no
Sample collection method: Single Grab: ☒ Grab Composite: ☐ Depth integrated composite: ☐				
Sample & Analysis types: Aqueous: ☐ Surface Scum: ☐ Benthic mat: ☐ Tissue: ☐				
Algal ID & enumeration: ☒ Nutrients: ☒ Chl-a: ☒ AGP: ☐ Turbidity: ☐ Toxin: ☐				
Estimated size of bloom: Impounded: ☐ yes ☐ no		Stream/River/Canal m wide		
Lake/Estuary Typical depth Inflows: ☐ yes ☐ no		Typical Temperature m deep		
Outflows: ☐ yes ☐ no		Water velocity m/s		
Canopy Cover: Open: ☒ Lightly Shaded (11-45%): ☐ Moderately Shaded (46-80%): ☐ Heavily Shaded: ☐				
Description of Bloom		Latitude 30 07 643 Degrees Minutes Seconds	Longitude 81 45 435 Degrees Minutes Seconds	
Present Weather conditions Sunny, partly cloudy, 85° F				
Print a map from GIS tool or Internet mapping service (e.g., Mapquest, Google Map)				
Sketch bloom area on the attached map. indicate wind direction.				

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	DO (%)	Sal (ppt)	Secchi (m)
Top	0.3	31.0	8.51	7.84	3690	101.4	1.42	0.4
Mid-depth				8.05				
Bottom	1.5							
System Type: Stream: ☐ (1st - 2nd order 3rd - 4th order) 5th - 6th order 7th order or greater) Lake: ☒ Wetland: ☐ Estuary: ☐ Other: ☐								
Water Odors (check box): Normal: ☒ Sewage: ☐ Petroleum: ☐ Chemical: ☐ Other: ☐								
Water Surface (check box): Clear: ☒ Scum: ☐ Globbs: ☐ Slick: ☐								
Water Clarity (check box): Clear: ☐ Slightly: ☐ Turbid: ☒ Opaque: ☐								
Bloom Color (check box): Green: ☐ Red: ☐ Brown: ☐ Other: ☐								
Notes High DO%. Difficult to filter sample. water was not really green. However, no visible surface characteristics.					Abundance: Periphyton ☒ Fish ☒ Aquatic Macrophytes ☐ Iron/sulfur Bacteria ☒			

SULFURIC ACID <51%
DANGER
7584-92-4
7782-85-4

Contains: 1:1 H2SO4

May be corrosive to metal. Causes severe skin burns and eye damage. Do not breathe fumes/mist/spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. Wash contaminated clothing before reuse. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/soak off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. When loaded up: Store in corrosive resistant container with a locked inner liner.

Contains: 1:1 H2SO4
Lot No.: SAG344070
Expires: 12/10/19
See Safety Data Sheet (SDS)

AGENCY: **K Appleby**
A Kalmbacher
C Riben

FDEP DEAR NE ROC

Algae Bloom Response-as needed

Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: WQAP

Requester: Jeremy M. ParrishField Report Prepared By: C. Ruben

Project ID: BLOOM-RESP

Collected By: A KalmbacherSampling Agency: FDEP DEARNEROC

Location <u>Doctors Lake</u>		☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>7/22/19</u> Time <u>1015</u>		☒ Eastern ☐ Central	Composite end Date <u> </u> Time <u> </u>		Bottle Group(s) (See pg 2)	
Field ID <u>Mouth of Doctors Lake South Bank</u>		Matrix (type, e.g., Salt, Fresh, etc) <u>Fresh</u>		Diss. Oxygen <u>7.24</u>	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L) <u> </u>		<u>A, B</u> <u>C, D</u>	
WIN/STORET #		Temp (C) <u>30.6</u>	pH <u>8.11</u>	Sample Depth <u>0.3</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>2087</u>			
Latitude <u>30° 08' 822"</u>	☐ dd ☒ dms	Longitude <u>81° 42' 822"</u>	☐ dd ☒ dms	Salinity (ppt) <u>1.06</u>	Comments				
Location <u>Doctors Lake</u>		☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>7/22/19</u> Time <u>1035</u>		☒ Eastern ☐ Central	Composite end Date <u> </u> Time <u> </u>		Bottle Group(s)	
Field ID <u>Doctors Lake Boy Scout Camp</u>		Matrix (type, e.g., Salt, Fresh, etc) <u>Fresh</u>		Diss. Oxygen <u>6.15</u>	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L) <u> </u>		<u>A, B</u> <u>C, D</u>	
WIN/STORET #		Temp (C) <u>30.3</u>	pH <u>7.55</u>	Sample Depth <u>0.3</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>2087</u>			
Latitude <u>30° 09' 054"</u>	☐ dd ☒ dms	Longitude <u>81° 43' 446"</u>	☐ dd ☒ dms	Salinity (ppt) <u>1.02</u>	Comments				
Location <u>Doctors Lake</u>		☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>7/22/19</u> Time <u>1100</u>		☒ Eastern ☐ Central	Composite end Date <u> </u> Time <u> </u>		Bottle Group(s)	
Field ID <u>Doctors Lake West side</u>		Matrix (type, e.g., Salt, Fresh, etc) <u>Fresh</u>		Diss. Oxygen <u>8.05</u>	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L) <u> </u>		<u>A, B</u> <u>C, D</u>	
WIN/STORET #		Temp (C) <u>31.0</u>	pH <u>8.51</u>	Sample Depth <u>0.3</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>3690</u>			
Latitude <u>30° 07' 643"</u>	☐ dd ☒ dms	Longitude <u>81° 45' 435"</u>	☐ dd ☒ dms	Salinity (ppt) <u>1.92</u>	Comments				
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date <u> </u> Time <u> </u>		☐ Eastern ☐ Central	Composite end Date <u> </u> Time <u> </u>		Bottle Group(s)	
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)			
WIN/STORET #		Temp (C)	pH	Sample Depth	☐ ft ☐ m	Sp. Conductance (umho/cm)			
Latitude	☐ dd ☐ dms	Longitude	☐ dd ☐ dms	Salinity (ppt)	Comments				

Relinquished By: <u>Chyan</u>	Date/Time <u>7/22/19 1300</u>	Shipping Method <u>Fedex</u>	Number of Coolers Shipped: <u>1</u>	Received By:	Date/Time
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Group: A	Bottle Type:	PT-50ML	# of Bottles: 9	Preservative:	ICE	Enter Number of Bottles Sent to Lab	3
	BLOOM-ID						
Group: B	Bottle Type:	BG-250ML-WDMT H	# of Bottles: 9	Preservative:	ICE	Enter Number of Bottles Sent to Lab	3
	W-MCYST-AA						
Group: C	Bottle Type:	BP-1L	# of Bottles: 9	Preservative:	ICE	Enter Number of Bottles Sent to Lab	3
	CHLSUITE-W						
Group: C	Bottle Type:	P-500ML	# of Bottles: 9	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	3
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
Group: C	Bottle Type:	P-125ML	# of Bottles: 9	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	3
	W-PO4-F						
Group: D	Bottle Type:	BP-1L	# of Bottles: 9	Preservative:	Lugols	Enter Number of Bottles Sent to Lab	3
	DTY-QN-C						
	PKD-QN-BV						