

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: Desi RQ: 2019-05-06-31 Project: Algae Response

- 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 _____

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	6-24-19	0735	24.6	761	8.3	8.34	99.9	-	-	☒ P / ☒ F	☒ L / ☒ F
ICV	↓	↓	0737	24.6	761	8.3	8.34	100	-	-	☒ P / ☒ F	☒ L / ☒ F
CCV	Brian Davis	6/24/19	1555	24.4	760	8.4	8.43	101.2	-	-	☒ 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 μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	C. Ruben	6-24-19	0748	180919	9/2019	50,000	48,052	☒ P / ☒ F	☒ L / ☒ F
ICV	↓	↓	0753	190430A	5/2020	1000	971	☒ P / ☒ F	☒ L / ☒ F
CCV	Brian Davis	6/24/19	1557	0424820	6/20	24820	24555	☒ 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	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	C. Ruben	6-24-19	0756	2904C54	3/2021	7.	25.1	7.15	-6.7	☒ P / ☒ F	☒ L / ☒ F
Calibr.	↓	↓	0759	2904B00	3/2021	4.	25.1	4.06	170.8	☒ P / ☒ F	☒ L / ☒ F
Calibr.	↓	↓	0802	2901B51	7/2020	10.	25.2	10.2	-182.0	☒ P / ☒ F	☒ L / ☒ F
ICV	↓	↓	0804	2904C54	3/2021	7.0	25.8	7.18	-8.8	☒ P / ☒ F	☒ L / ☒ F
CCV	Brian Davis	6/24/19	1400	2901B51	7/20	10.0	25.0	10.00	-181.7	☒ 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)

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	6-24-19	0805	0.00	0.00	☒ 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:

Effective Date: 08/04/2014

Revision Date: 08/04/2014

Author: E. Miller

AB-17-1.7

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-8-06 V2)

WATERBODY <i>Dis Inlet</i>		DATE (M/D/YY): <i>6/24/19</i>	TIME: (AM) <i>1330</i>	Case ID#
COUNTY: <i>Clay</i>	LOCATION: <i>Dis Inlet @ BSA</i>		NEAREST TOWN/CITY: <i>Fleming Island</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 <i>1.3 m deep</i>		Inflows: ☐ yes ☐ no		
Outflows: ☐ yes ☐ no		Stream/River/Canal Typical Transect Water velocity		
		Specify m wide m deep 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>30.149845</i> Longitude <i>-81.742892</i>				
Present Weather conditions <i>Clear, Windy</i>				
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.				
Last rain event				
Rainfall amount				

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	Secch (m)
Top	<i>0.3</i>	<i>31.4</i>	<i>8.58</i>	<i>9.24</i>	<i>3840</i>	<i>0.6</i>
Mid-depth						
Bottom	<i>1.3</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: ☐ Globs: ☐ Slick: ☐						
Water Clarity (check box): Clear: ☐ Slightly turbid: ☒ Turbid: ☐ Opaque: ☐						
Bloom Color (check box): Green: ☐ Red: ☐ Brown: ☒ Other: ☐						

SULFURIC ACID <51%
DANGER
75649-9
7732-18-0
Contains: 1.1 H2SO4

May be corrosive to metals. Causes severe skin burns and eye damage. Do not breathe fumes/mist/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/protective eyewear/protective equipment. Wash contaminated clothing before reuse. If SWALLOWED: Do not induce vomiting. If ON SKIN (or hair): Remove/soak off contaminated area. If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Store in corrosion resistant container with a resistant inner liner.

Contains: 1.1 H2SO4
Lot No.: SA9010030
Expires: 04/10/20
See Safety Data Sheet (SDS)

Abundance:	Absent	Rare	Common	Abundant
Periphyton	☒	☐	☐	☒
Fish	☒	☐	☐	☒
Aquatic Macrophytes	☒	☐	☐	☒
Iron/sulfur Bacteria	☒	☐	☐	☒

BEAR AVE

AGENCY:

B-7

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-6-08 V2)

WATERBODY <i>D's Inlet</i>		DATE (M/D/YY): <i>6/24/19</i>	TIME: (AM) <i>1400</i>	Case ID#
COUNTY: <i>Clay</i>	LOCATION: <i>D's Inlet - E of Lake Shore Dr</i>		NEAREST TOWN/CITY: <i>Fleming Island</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 <i>1.5 m deep</i>	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 Degrees Minutes Seconds Longitude Degrees Minutes Seconds

Present Weather conditions *Clear* *30.123054* *-81.718744*

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. *241°* Rainfall amount

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	Secch(m)
Top	<i>0.3</i>	<i>33.7</i>	<i>9.60</i>	<i>16.9</i>	<i>4396</i>	<i>0.5</i>
Mid-depth						
Bottom						

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: ☐

SULFURIC ACID <51%
DANGER
7044-09-9
7730-18-0

May be corrosive to metals. Causes severe skin burns and eye damage. Do not breathe fumes/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/face mask. If SWALLOWED, rinse mouth. Do NOT induce vomiting. If ON SKIN (or hair): Remove 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. Store locked up. Store in corrosion resistant container with a resistant inner liner.

Contains: 1.1 H2SO4
Lot No.: SA9010030
Expires: 04/10/20
See Safety Data Sheet (SDS)

Abundance:	Absent	Rare	Common	Abundant
Periphyton	☒	☐	☐	☐
Fish	☐	☐	☐	☒
Aquatic Macrophytes	☒	☐	☐	☐
Iron/sulfur Bacteria	☒	☐	☐	☐

DEAR NEV AGENCY: *B. T.*

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-6-06 V2)

WATERBODY Drs Inlet		DATE (M/D/YY): 6-24-19	TIME: (AM) 1300	Case ID#
COUNTY: Clay	LOCATION: Drs Inlet - mouth	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: ☐ m deep				
Inflows: ☒ yes ☐ no				
Outflows: ☒ yes ☐ no				
Typical Transect ☐ m deep ☐ m deep ☐ m deep				
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 Degrees Minutes Seconds Longitude Degrees Minutes Seconds

Present Weather conditions
Clear **30.148064°N, -81.70516°W**

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):	Secch (m)
Top	0.3	32.3	8.68	9.89	4124	0.5
Mid-depth						
Bottom	2.6	29.5	7.46	6.32	3936	

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: ☐

SULFURIC ACID <51%
DANGER
1584-83-8
7782-18-0
Contains: 1.1 H2SO4
Lot No.: SAG010030
Expires: 04/10/20
See Safety Data Sheet (SDS)

Abundance:	Absent	Rare	Common	Abundant
Periphyton	☒	☐	☐	☐
Fish	☐	☐	☐	☒
Aquatic Macrophytes	☐	☐	☐	☐
Iron/sulfur Bacteria	☐	☐	☐	☐

PEARLED AGENCY: **U-D**

Customer: WQAP

Project ID: BLOOM-RESP

Requester: Jeremy M. Parrish

Collected By: B. Davis / C. Ruben

Field Report Prepared By: A. Kalmbacher

Sampling Agency: FDEP / NEROC

Location <u>Doctors Inlet - Mouth</u>		☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>6-24-2019</u> Time <u>1300</u>		☒ Eastern ☐ Central	Composite end Date _____ Time _____		Bottle Group(s) (See pg 2)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen <u>9.89</u>	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		A, B, C, D
WIN/STORET #		Temp (C) <u>32.3</u>	pH <u>8.68</u>	Sample Depth <u>0.3</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>4124</u>		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments					
Location <u>Doctors Inlet - Boy Scout Camp</u>		☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>6-24-2019</u> Time <u>1330</u>		☒ Eastern ☐ Central	Composite end Date _____ Time _____		Bottle Group(s)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen <u>9.24</u>	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		A, B, C, D
WIN/STORET #		Temp (C) <u>31.4</u>	pH <u>8.38</u>	Sample Depth <u>0.5</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>3840</u>		
Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments					
Location <u>Doctors Inlet - E. of Lakeshore Dr</u>		☐ Comp ☒ Grab	Collection (comp begin or grab) Date <u>6-24-2019</u> Time <u>1400</u>		☒ Eastern ☐ Central	Composite end Date _____ Time _____		Bottle Group(s)
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen <u>9.24</u>	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		A, B, C, D
WIN/STORET #		Temp (C) <u>33.7</u>	pH <u>8.38</u>	Sample Depth <u>0.3</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>4396</u> <u>3840</u>		
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)		
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>[Signature]</u>	Date/Time <u>6-24-2019</u>	Shipping Method <u>FedEx</u>	Number of Coolers Shipped: <u>1</u>	Received By:	Date/Time
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1530

Group: A	Bottle Type:	PT-50ML	# of Bottles: 8	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>3</u>
	BLOOM-ID						
Group: B	Bottle Type:	BG-250ML-WDMT H	# of Bottles: 8	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>3</u>
	W-MCYST-AA						
Group: C	Bottle Type:	BP-1L	# of Bottles: 8	Preservative:	ICE	Enter Number of Bottles Sent to Lab	<u>3</u>
	CHLSUITE-W						
Group: C	Bottle Type:	P-500ML	# of Bottles: 8	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	<u>3</u>
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
Group: C	Bottle Type:	P-125ML	# of Bottles: 8	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab	<u>3</u>
	W-PO4-F						
Group: D	Bottle Type:	BP-1L	# of Bottles: 8	Preservative:	Lugols	Enter Number of Bottles Sent to Lab	<u>3</u>
	DTY-QN-C						
	PKD-QN-BV						