

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: Bruce

RQ: 2022-08-01-666

Project: Algae Doctors

Lake

- 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 8/1/22

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.	<u>K. Villinger</u>	<u>8/2/22</u>	<u>822</u>	<u>22.7</u>	<u>763.7</u>	<u>8.7</u>	<u>—</u>	<u>100.5</u>	<u>—</u>	<u>1.022</u>	<u>P</u> F	<u>L</u> F
ICV		<u>↓</u>	<u>826</u>	<u>22.8</u>	<u>763.7</u>	<u>8.7</u>	<u>8.64</u>	<u>100.3</u>	<u>—</u>	<u>1.022</u>	<u>P</u> F	<u>L</u> F
CCV		<u>↓</u>	<u>1635</u>	<u>23.8</u>	<u>761.0</u>	<u>8.4</u>	<u>8.39</u>	<u>99.6</u>	<u>—</u>	<u>1.022</u>	<u>P</u> F	<u>L</u> 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 hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	<u>K. Villinger</u>	<u>8/2/22</u>	<u>830</u>	<u>2202258</u>	<u>3/23</u>	<u>1000</u>	<u>1000</u>	<u>P</u> F	<u>L</u> F
ICV		<u>↓</u>	<u>836</u>	<u>210917A</u>	<u>9/22</u>	<u>100</u>	<u>100.5</u>	<u>P</u> F	<u>L</u> F
CCV		<u>↓</u>	<u>1638</u>	<u>211122A</u>	<u>12/22</u>	<u>15000</u>	<u>15039</u>	<u>P</u> F	<u>L</u> 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.	<u>K. Villinger</u>	<u>8/2/22</u>	<u>842</u>	<u>4203B87</u>	<u>2/24</u>	<u>7.00</u>	<u>23.7</u>	<u>7.00</u>	<u>-14.6</u>	<u>P</u> F	<u>L</u> F
Calibr.		<u>↓</u>	<u>847</u>	<u>2205F96</u>	<u>5/24</u>	<u>4.00</u>	<u>23.7</u>	<u>4.00</u>	<u>165.3</u>	<u>P</u> F	<u>L</u> F
Calibr.		<u>↓</u>	<u>851</u>	<u>2202A63</u>	<u>7/23</u>	<u>10.01</u>	<u>23.8</u>	<u>10.01</u>	<u>-185.3</u>	<u>P</u> F	<u>L</u> F
ICV		<u>↓</u>	<u>856</u>	<u>2205F96</u>	<u>5/24</u>	<u>4.00</u>	<u>23.8</u>	<u>4.00</u>	<u>164.1</u>	<u>P</u> F	<u>L</u> F
CCV		<u>↓</u>	<u>1641</u>	<u>2202A63</u>	<u>7/23</u>	<u>10.01</u>	<u>24.4</u>	<u>9.99</u>	<u>-186.2</u>	<u>P</u> F	<u>L</u> 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 10 170.7, slope from 4 to 7 179.9 (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: 8/1/22

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	<u>K. Villinger</u>	<u>8/2/22</u>	<u>857</u>	<u>0.000</u>	<u>0.000</u>	<u>P</u> F	<u>L</u> F

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

COMMENTS:



Cyanobacteria Bloom Response Field Data Sheet (2022-06-10 v1)

Email scanned submittal forms to lab.receiving@FloridaDEP.gov

RQ - 2022-08-01-66				Collected By:		Brian Davis, Katrin Villinger							
Customer:		WQAP		Field Report Prepared By:		Brian Davis							
Project ID:		BLOOM_RESP		Sampling Agency:		NEROC							
Location: Doctor's Lake @ Mill Cove				Comments:									
Field ID: NEHAB0057				Coordinates:		30.12510, -81.72682							
WIN Secondary Resource Type: Lake				Collection Equip:		WaterBottle							
WIN ID: NEHAB0057				High Tide Time:		15:45		Low Tide Time:		10:35			
Matrix:		Marine		Grab		Tide:		☐ Rising ☐ Falling ☒ Slack ☐ N/A					
Water Quality													
Date	Time ■ EST □ CEN	D.O. (%)	D.O. (mg/L)	Temp (°C)	pH (SU)	Sample Depth (m)	Total Depth (m)	Secchi Disk (m)	Sp. Cond. (µmho/cm)	Salinity (PPTH)			
08/02/2022	12:20	115.3	8.41	31.1	9.03	0.3	2.3	0.7	5127	2.73			
	12:21	78.6	5.8	30.5	8.81	1.8					5156	2.75	
Bloom Observations													
Algal Bloom Observed? ☒ Yes ☐ No													
Water Clarity		☐ Clear		☒ Slightly Turbid		☐ Turbid		☐ Opaque					
Bloom Color		☒ Green		☐ Red		☐ Brown		☐ Other:					
Algae Type		☒ Planktonic		☐ Filamentous		☐ Other:							
Algae Accumulation		☐ Mat		☒ Specks		☐ Scum		☐ Glob					
Algae Distribution		☐ Surface-Entire		☐ Surf-Localized		☐ Surf-Windblown		☒ Suspended		☐ Benthic ☐ Epiphytic			
Parameter Suite		Parameter Methods				Preservation		pH Check	#Bottles Sent to Lab	Bottle Group			
Algal ID (PT-50mL)		☐ ALGAL-ID				☐ Ice							
Bloom ID (PT-50mL)		☒ BLOOM-ID				☒ Ice			1	C			
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	D			
Toxins (BG-WD250)		☒ W-MCYST-AA ☒ W-SAXTN-MS ☐ OV-TOXN				☒ Ice			1	D			
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP Acid Lot: SA2145160 Exp: 6/2/23				☒ Ice ☒ H2SO4		☒ <2	1	D			
Filtered Nutrients (P125mL)		☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice			1	D			
				Filter Lot # R1EB01329									
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C				☐ Ice ☐ Lugols							
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time					
Brian Davis		08/02/2022 16:30		2									



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RQ - 2022-08-01-66				Collected By:		Brian Davis, Katrin Villinger					
Customer:		WQAP		Field Report Prepared By:		Brian Davis					
Project ID:		BLOOM_RESP		Sampling Agency:		NEROC					
Location: Dr's Lake End of Lawrence Rd				Comments:							
Field ID: NEHAB0073				Coordinates:		30.12914, -81.75169					
WIN Secondary Resource Type: Lake				Collection Equip:		WaterBottle					
WIN ID: NEHAB0073				High Tide Time:		15:45		Low Tide Time:		10:35	
Matrix:		Marine		Grab		Tide:		☐ Rising ☐ Falling ☒ Slack ☐ N/A			
Water Quality											
Date	Time ☒ EST ☐ CEN	D.O. (%)	D.O. (mg/L)	Temp (°C)	pH (SU)	Sample Depth (m)	Total Depth (m)	Secchi Disk (m)	Sp. Cond. (µmho/cm)	Salinity (PPTH)	
08/02/2022	11:20	68.7	4.98	31.9	8.74	0.3	1.1	0.7	5504	2.94	
Bloom Observations											
Algal Bloom Observed? ☒ Yes ☐ No											
Water Clarity		☐ Clear		☒ Slightly Turbid		☐ Turbid		☐ Opaque			
Bloom Color		☒ Green		☐ Red		☐ Brown		☐ Other:			
Algae Type		☒ Planktonic		☐ Filamentous		☐ Other:					
Algae Accumulation		☐ Mat		☒ Specks		☐ Scum		☐ Glob			
Algae Distribution		☐ Surface-Entire		☐ Surf-Localized		☐ Surf-Windblown		☒ Suspended		☐ Benthic ☐ Epiphytic	
Parameter Suite		Parameter Methods				Preservation		pH Check	#Bottles Sent to Lab	Bottle Group	
Algal ID (PT-50mL)		☐ ALGAL-ID				☐ Ice					
Bloom ID (PT-50mL)		☒ BLOOM-ID				☒ Ice			1	C	
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	D	
Toxins (BG-WD250)		☒ W-MCYST-AA ☒ W-SAXTN-MS ☐ OV-TOXN				☒ Ice			1	D	
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP				☒ Ice ☒ H2SO4		☒ <2	1	D	
		Acid Lot:		SA2145160		Exp:		6/2/22			
Filtered Nutrients (P125mL)		☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice			1	D	
		Filter Lot #		R1EB01329							
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C				☐ Ice ☐ Lugols					
Relinquished By:		Date/Time		Number of Coolers Shipped				Received By:		Date/Time	
Brian Davis		08/02/2022 16:30		2							



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RQ - 2022-08-01-66				Collected By:		Brian Davis, Katrin Villinger					
Customer:		WQAP		Field Report Prepared By:		Brian Davis					
Project ID:		BLOOM_RESP		Sampling Agency:		NEROC					
Location: Swimming Pen Cr @ Whitey's Fish Camp				Comments:							
Field ID: NEHAB0074				Coordinates:		30.10155, -81.74754					
WIN Secondary Resource Type: River/Stream				Collection Equip:		WaterBottle					
WIN ID: NEHAB0074				High Tide Time:		04:15		Low Tide Time:		10:55	
Matrix:		Marine		Grab		Tide:		☐ Rising ☐ Falling ☒ Slack ☐ N/A			
Water Quality											
Date	Time ☒ EST ☐ CEN	D.O. (%)	D.O. (mg/L)	Temp (°C)	pH (SU)	Sample Depth (m)	Total Depth (m)	Secchi Disk (m)	Sp. Cond. (µmho/cm)	Salinity (PPTH)	
08/02/2022	10:50	80.4	5.85	31.3	8.29	0.3	1.9	0.5	6247	5.91	
	10:57	60.8	4.45	31	7.9	1.4				6246	
Bloom Observations											
Algal Bloom Observed? ☒ Yes ☐ No											
Water Clarity		☐ Clear		☒ Slightly Turbid		☐ Turbid		☐ Opaque			
Bloom Color		☒ Green		☐ Red		☐ Brown		☐ Other:			
Algae Type		☒ Planktonic		☐ Filamentous		☐ Other:					
Algae Accumulation		☐ Mat		☒ Specks		☐ Scum		☐ Glob			
Algae Distribution		☐ Surface-Entire		☐ Surf-Localized		☐ Surf-Windblown		☒ Suspended		☐ Benthic ☐ Epiphytic	
Parameter Suite		Parameter Methods				Preservation		pH Check	#Bottles Sent to Lab	Bottle Group	
Algal ID (PT-50mL)		☐ ALGAL-ID				☐ Ice					
Bloom ID (PT-50mL)		☒ BLOOM-ID				☒ Ice			1	C	
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	D	
Toxins (BG-WD250)		☒ W-MCYST-AA ☒ W-SAXTN-MS ☐ OV-TOXN				☒ Ice			1	D	
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP				☒ Ice ☒ H2SO4		☒ <2	1	D	
		Acid Lot:		SA2145160		Exp:		6/2/23			
Filtered Nutrients (P125mL)		☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice			1	D	
				Filter Lot # R1EB01329							
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C				☐ Ice ☐ Lugols					
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time			
Brian Davis		08/02/2022 16:30		2							



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RQ - 2022-08-01-66				Collected By:		Brian Davis, Katrin Villinger					
Customer:		WQAP		Field Report Prepared By:		Brian Davis					
Project ID:		BLOOM_RESP		Sampling Agency:		NEROC					
Location: LSJR @ 2930 SR 13				Comments:							
Field ID: NEHAB0077				Coordinates:		30.05121, -81.66793					
WIN Secondary Resource Type: River/Stream				Collection Equip:		WaterBottle					
WIN ID: NEHAB0077				High Tide Time:		17:00		Low Tide Time:		11:25	
Matrix:		Fresh		Grab		Tide:		☒ Rising ☐ Falling ☐ Slack ☐ N/A			
Water Quality											
Date	Time ☒ EST ☐ CEN	D.O. (%)	D.O. (mg/L)	Temp (°C)	pH (SU)	Sample Depth (m)	Total Depth (m)	Secchi Disk (m)	Sp. Cond. (µmho/cm)	Salinity (PPTH)	
08/02/2022	15:00	106.4	7.8	31.7	8.06	0.3	1.7	1.5	1000	0.49	
	15:05	94.6	7.02	30.9	7.85	1.2			1003	0.49	
Bloom Observations											
Algal Bloom Observed? ☒ Yes ☐ No											
Water Clarity		☐ Clear		☒ Slightly Turbid		☐ Turbid		☐ Opaque			
Bloom Color		☒ Green		☐ Red		☐ Brown		☐ Other:			
Algae Type		☒ Planktonic		☐ Filamentous		☐ Other:					
Algae Accumulation		☐ Mat		☒ Specks		☐ Scum		☐ Glob			
Algae Distribution		☐ Surface-Entire		☐ Surf-Localized		☐ Surf-Windblown		☒ Suspended		☐ Benthic ☐ Epiphytic	
Parameter Suite		Parameter Methods				Preservation		pH Check	#Bottles Sent to Lab	Bottle Group	
Algal ID (PT-50mL)		☐ ALGAL-ID				☐ Ice					
Bloom ID (PT-50mL)		☒ BLOOM-ID				☒ Ice			1	C	
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	D	
Toxins (BG-WD250)		☒ W-MCYST-AA ☒ W-SAXTN-MS ☐ OV-TOXN				☒ Ice			1	D	
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP				☒ Ice ☒ H2SO4		☒ <2	1	D	
		Acid Lot:		SA2145160		Exp:		6/2/23			
Filtered Nutrients (P125mL)		☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice			1	D	
		Filter Lot #		R1EB01329							
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C				☐ Ice ☐ Lugols					
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time			
Brian Davis		08/02/2022 16:30		2							



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RQ - 2022-08-01-66				Collected By:		Brian Davis, Katrin Villinger					
Customer:		WQAP		Field Report Prepared By:		Brian Davis					
Project ID:		BLOOM_RESP		Sampling Agency:		NEROC					
Location: Dr's Lake at Camp Echokotee				Comments:							
Field ID: NEHAB0085				Coordinates:		30.15024, -81.72502					
WIN Secondary Resource Type: Lake				Collection Equip:		WaterBottle					
WIN ID: NEHAB0085				High Tide Time:		15:45		Low Tide Time:		10:35	
Matrix:		Marine		Grab		Tide:		☐ Rising ☐ Falling ☒ Slack ☐ N/A			
Water Quality											
Date	Time ☒ EST ☐ CEN	D.O. (%)	D.O. (mg/L)	Temp (°C)	pH (SU)	Sample Depth (m)	Total Depth (m)	Secchi Disk (m)	Sp. Cond. (µmho/cm)	Salinity (PPTH)	
08/02/2022	12:00	101.6	7.36	32	8.6	0.3	0.6	0.5	3496	1.81	
Bloom Observations											
Algal Bloom Observed? ☒ Yes ☐ No											
Water Clarity		☐ Clear		☒ Slightly Turbid		☐ Turbid		☐ Opaque			
Bloom Color		☒ Green		☐ Red		☐ Brown		☐ Other:			
Algae Type		☒ Planktonic		☐ Filamentous		☐ Other:					
Algae Accumulation		☐ Mat		☒ Specks		☐ Scum		☐ Glob			
Algae Distribution		☐ Surface-Entire		☐ Surf-Localized		☐ Surf-Windblown		☒ Suspended		☐ Benthic ☐ Epiphytic	
Parameter Suite		Parameter Methods				Preservation		pH Check	#Bottles Sent to Lab	Bottle Group	
Algal ID (PT-50mL)		☐ ALGAL-ID				☐ Ice					
Bloom ID (PT-50mL)		☒ BLOOM-ID				☒ Ice			1	A	
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	B	
Toxins (BG-WD250)		☒ W-MCYST-AA ☒ W-SAXTN-MS ☐ OV-TOXN				☒ Ice			1	B	
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP Acid Lot: SA2145160 Exp: 6/2/23				☒ Ice ☒ H2SO4		☒ <2	1	B	
Filtered Nutrients (P125mL)		☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice			1	B	
				Filter Lot # R1EB01329							
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C				☐ Ice ☐ Lugols					
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time			
Brian Davis		08/02/2022 16:30		2							



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RQ - 2022-08-01-66				Collected By:		Brian Davis, Katrin Villinger					
Customer:		WQAP		Field Report Prepared By:		Brian Davis					
Project ID:		BLOOM_RESP		Sampling Agency:		NEROC					
Location: Dr's Lake Near Lucy Branch				Comments:							
Field ID: NEHAB0086				Coordinates:		30.13998, -81.74409					
WIN Secondary Resource Type: River/Stream				Collection Equip:		WaterBottle					
WIN ID: NEHAB0086				High Tide Time:		15:45		Low Tide Time:		10:35	
Matrix:		Marine		Grab		Tide:		☐ Rising ☐ Falling ☒ Slack ☐ N/A			
Water Quality											
Date	Time ☒ EST ☐ CEN	D.O. (%)	D.O. (mg/L)	Temp (°C)	pH (SU)	Sample Depth (m)	Total Depth (m)	Secchi Disk (m)	Sp. Cond. (µmho/cm)	Salinity (PPTH)	
08/02/2022	11:40	93.5	6.77	31.7	8.82	0.3	1.4	0.6	4819	2.55	
Bloom Observations											
Algal Bloom Observed? ☒ Yes ☐ No											
Water Clarity		☐ Clear		☒ Slightly Turbid		☐ Turbid		☐ Opaque			
Bloom Color		☒ Green		☐ Red		☐ Brown		☐ Other:			
Algae Type		☒ Planktonic		☐ Filamentous		☐ Other:					
Algae Accumulation		☐ Mat		☒ Specks		☐ Scum		☐ Glob			
Algae Distribution		☐ Surface-Entire		☐ Surf-Localized		☐ Surf-Windblown		☒ Suspended		☐ Benthic ☐ Epiphytic	
Parameter Suite		Parameter Methods				Preservation		pH Check	#Bottles Sent to Lab	Bottle Group	
Algal ID (PT-50mL)		☐ ALGAL-ID				☐ Ice					
Bloom ID (PT-50mL)		☒ BLOOM-ID				☒ Ice			1	A	
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	B	
Toxins (BG-WD250)		☒ W-MCYST-AA ☒ W-SAXTN-MS ☐ OV-TOXN				☒ Ice			1	B	
Preserved Nutrients (500mL HDPE)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-S-A-TP Acid Lot: SA2145160 Exp: 6/2/22				☒ Ice ☒ H2SO4		☒ <2	1	B	
Filtered Nutrients (P125mL)		☒ W-PO4-F		☒ Field Filtered 0.45um Filter		☒ Ice			1	B	
				Filter Lot # R1EB01329							
Quantitative Algae		☐ DTY-QN-C / PKD-QN-C				☐ Ice ☐ Lugols					
Relinquished By:		Date/Time		Number of Coolers Shipped		Received By:		Date/Time			
Brian Davis		08/02/2022 16:30		2							