

Effective Date: 08/04/2014
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Author: E. Miller
AB-17-1.7

~~HAB-0001~~ Import File ID: 21916 ~~HAB-0001~~ CC
~~HAB-072820~~ Manatee Springs River CC
HAB-072820-0001 29,4889 Station ✓
~~Manatee Springs River~~ 82,9806 DMT ✓
WIN ✓

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-6-06 V2)

WATERBODY <u>Manatee Spring</u>		DATE (M/D/YY): <u>07/26/20</u>	TIME: (AM) <u>1140</u>	Case ID#:
COUNTY: <u>Levy</u>	LOCATION: <u>Manatee Spring @ Sunnyside River</u>		NEAREST TOWN/CITY: <u>Chiefland</u>	
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 <u>30</u> m wide	
Lake/Estuary Typical depth <u> </u> m deep	Inflows: ☐ yes ☐ no	Typical Transect Left bank <u> </u> m deep Middle <u> </u> m deep Right bank <u> </u> m deep		
Outflows: ☐ yes ☐ no	Water velocity Left bank <u> </u> m/s Middle <u> </u> m/s Right bank <u> </u> m/s			

Canopy Cover: Open: ☐ Lightly Shaded (11-45%): ☒ Moderately Shaded (46-80%): ☐ Heavily Shaded: ☐
Description of Bloom/ Latitude <u> </u> Degrees <u> </u> Minutes <u> </u> Seconds Longitude <u> </u> Degrees <u> </u> Minutes <u> </u> Seconds
Present Weather conditions
Print a map from GIS tool or Internet mapping service (e.g., Mapquest, Google Map) Last rain event <u>7/26/20</u>
Sketch bloom area on the attached map. Indicate wind direction. Rainfall amount <u> </u>

WATER QUALITY	Depth (m):	Temp. (°C):	pH (SU):	D.O. (mg/l):	Cond. (µmho/cm) or Salinity (ppt):	D.O. %	total depth	Secch (m)
Top	<u>0.3</u>	<u>25.1</u>	<u>7.1</u>	<u>4.51</u>	<u>398.0</u>	<u>53.0</u>	<u>0.8 m</u>	<u>0.85</u>
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: ☒ <u>no Bloom</u>								
Notes					Abundance: Periphyton ☐ Absent ☐ Rare ☐ Common ☒ Abundant ☒ Fish ☐ Aquatic Macrophytes ☐ Iron/sulfur Bacteria ☒			

VISIT TEAM:

Woods/Eckles

AGENCY:

FL214CHR

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: 153484

RQ-

2020-01-20-32

Project:

Algal 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 7/20

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.	San Woods	7/28/20	728	20.5	758.4	9.0	8.96	99.4	—	1.05	P/F	L/F
ICV	"	"	740	20.9	758.4	8.9	8.86	98.3	—	—	P/F	L/F
CCV	"	"	1447	17.1	758.7	9.6	9.73	101.0	—	—	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.	San Woods	7/28/20	731	191120D	12/2020	2908	1000	P/F	L/F
ICV	"	"	737	2908	8/2021	100	103.1	P/F	L/F
CCV	"	"	1448	191120D	12/2020	1000	1015	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.	San Woods	7/28/20	732	200407B	10/2021	7.02	20.6	7.02	-34.0	P/F	L/F
Calibr.	"	"	733	191120A	6/2021	4.00	20.8	4.00	137.4	P/F	L/F
Calibr.	"	"	734	191120C	6/2021	10.04	20.9	10.05	-20.8	P/F	L/F
ICV	"	"	736	"	"	10.05	20.1	10.05	-20.1	P/F	L/F
CCV	"	"	1450	191120A	6/2021	4.00	19.7	4.01	135.7	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 10 167.8, slope from 4 to 7 171.4 (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: 7/20

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	San Woods	7/28/20	735	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:

Field Report Prepared By:

Sampling Agency:

Relinquished By: SW	Date/Time 7/24/20 1435	Shipping Method HD	Number of Coolers Shipped: 2	Received By: 	Date/Time 7/25/20 1440
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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: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
Group: A	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
Group: A	Bottle Type: ECOLI-18QT	P-250ML-WO-THI	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
Group: A	Bottle Type: W-E8321-DI W-E8321-MS	BG-500ML	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
Group: A	Bottle Type: W-HARD W-ICP W-ICPMS	P-500ML	# of Bottles: 4	Preservative:	HNO3	Enter Number of Bottles Sent to Lab	/
Group: A	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles: 4	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	/
Group: A	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 4	Preservative:	FILTER+ICE	Enter Number of Bottles Sent to Lab	/
Group: A	Bottle Type: W-PSNP-TQ	BG-1L	# of Bottles: 10	Preservative:	ICE	Enter Number of Bottles Sent to Lab	/
Group: B	Bottle Type: MI-FW-QLDC	PJ-2L	# of Bottles: 14	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	/

Florida Department of Environmental Protection
Central Laboratory Submittal Form

Customer: WQAP

Requester: Michael Eckles

Field Report Prepared By: Jon Woods

Project ID: BLOOM-RESP

Collected By: Woods/Eckles

Sampling Agency: FLA/TLHR

Location		Manatee Springs		Collection (comp begin or grab)		Time 1140		Composite end		Bottle Group(s)	
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Date 7/25/20		Time 1140		Date		(See pg 2)	
WIN/STORET #		Temp (C) 25.1		pH 7.11		Sample Depth 0.3		Total Res. Chlorine (mg/L)		B/C	
Latitude		Salinity (ppt)		Comments				ft		m	
Location		dd dms		Collection (comp begin or grab)		Time		Date		Bottle Group(s)	
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Date		Time		Date			
WIN/STORET #		Temp (C)		pH		Sample Depth		Total Res. Chlorine (mg/L)			
Latitude		Salinity (ppt)		Comments				ft		m	
Location		dd dms		Collection (comp begin or grab)		Time		Date		Bottle Group(s)	
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Date		Time		Date			
WIN/STORET #		Temp (C)		pH		Sample Depth		Total Res. Chlorine (mg/L)			
Latitude		Salinity (ppt)		Comments				ft		m	
Location		dd dms		Collection (comp begin or grab)		Time		Date		Bottle Group(s)	
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Date		Time		Date			
WIN/STORET #		Temp (C)		pH		Sample Depth		Total Res. Chlorine (mg/L)			
Latitude		Salinity (ppt)		Comments				ft		m	
Location		dd dms		Collection (comp begin or grab)		Time		Date		Bottle Group(s)	
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Date		Time		Date			
WIN/STORET #		Temp (C)		pH		Sample Depth		Total Res. Chlorine (mg/L)			
Latitude		Salinity (ppt)		Comments				ft		m	
Location		dd dms		Collection (comp begin or grab)		Time		Date		Bottle Group(s)	
Field ID		Matrix (type, e.g., Salt, Fresh, etc)		Date		Time		Date			
WIN/STORET #		Temp (C)		pH		Sample Depth		Total Res. Chlorine (mg/L)			
Latitude		Salinity (ppt)		Comments				ft		m	

Relinquished By: SW	Date/Time: 7/28/20 1435	Shipping Method: HD	Number of Coolers Shipped: 2	Received By: [Signature]	Date/Time: 7/28/20 1440
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Group: A	Bottle Type: BLOOM-ID	PT-50ML	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab
Group: B	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab
Group: B	Bottle Type: W-MCYST-AA	BG-250ML-WDMT H	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab
Group: B	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN	P-500ML	# of Bottles: 4	Preservative: ICE And H2SO4		Enter Number of Bottles Sent to Lab
Group: B	Bottle Type: W-PO4-F	P-125ML	# of Bottles: 4	Preservative: FILTER-ICE		Enter Number of Bottles Sent to Lab
Group: C	Bottle Type: DTY-QN-C PKD-QN-C	BP-1L	# of Bottles: 4	Preservative:	Lugols	Enter Number of Bottles Sent to Lab

B - BNA
B - FLPRO

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