FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

Data Qualified? Yes / (No)

Location/STORET Station Name: Canal Between Kanturk and Killarney **Date:** 7/10/2017 (mm/dd/yyyy)

STORET # _____ **WBID:** 647F **Latitude:** 30.53213

County: Leon **RQ -** 2017-06-05-~~53~~ 44 **ORG ID:** 21FLWQA **Longitude:** -84.19814 (Decimal Degrees)

Receiving Body of Water: _____ **Field ID:** Algal Sample between Lakes (Decimal Degrees)

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Ben Ralys	✓	✓			
Robert Wiwi			✓	✓	✓

Sampling Equipment

- [x] Sample Container
- [ ] Van Dorn
- [ ] Pole
- [ ] Carboy
- [x] Syringe
- [ ] Dipper
- [ ] Other _____

Equipment ID _____

Collection Method

- [ ] Wading
- [x] From Shore
- [ ] Other (note below)

Via Boat
- [ ] Canoe/Kayak
- [ ] Electric Motor
- [ ] Gasoline Motor

Water Level: Dry / Pooled / Low / (Normal) / High / Flooded

Matrix: (Fresh) / Marine / DI

Meter ID# Biology #2 **Photos:** (Yes) / No

Tide Falling: Yes / No / (NA)

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
(EST)	14:30 R ~~13:30~~	0.3	0.5	7.40	98.8	9.14	0.02	VOB	38	30.57
CEN										

Biological Samples Collected: None HA SCI RPS (Algae ID) LVS LVI Other _____

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	[x] W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	[x] Ice [x] H_2SO_4	7093010	4/3/18	[x] <2
Metals	[ ] W-ICPMS [ ] W-ICP	[ ] Ice [ ] HNO_3			[ ] <2
Filtered Nutrients	[x] W-PO4-F [x] Field Filtered 0.45 µm Filter	[x] Ice			
Chlorophyll	[x] CHLSUITE-W	[x] Ice			
Physical/Aggregate (Fresh)	[x] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	[x] Ice			
Physical/Aggregate (Marine)	[ ] Alkalinity / W-F / W-TSS / TURBIDITY	[ ] Ice			
Macroinvertebrates	[ ] MI-FW-QLDC	[ ] Formalin			
Periphyton	[x] ALGAE-ID	[x] Ice			
Microbiology	[ ] E Coli [ ] F Coli [ ] Enterococci [ ] qPCR	[ ] Ice			
Tracers	[ ] W-SUC-AA-R [ ] W-UHERB-AA [ ] W-AHERB-AA	[ ] Ice			
Pesticides	[ ] W-PSNP-TQ [ ] W-AHERB-AA [ ] W-PYR-AA-R [ ] W-PCL-SQ-R [ ] W-UHERB-AA [ ] W-GLYPH [ ] W-SUC-AA-R	[ ] Ice [ ] Other			

Place Preservative Sticker(s) Here (If Available)

Notes:

algal bloom response; sampled during rain

Place Label Here (If Available)

Signature: _____ **Date:** 7/10/17

Field Parameters Entered into LIMS: DT 7/11/17 (Initials/Date) Field Parameters QC in LIMS: CW 7/11/17 (Initials/Date)

Date Migrated to STORET: _____ (Initials/Date) Field Sheets Scanned/Saved: DT 7/11/17 (Initials/Date)

CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET

(7-6-06 V2)

WATERBODY NAME:	DATE (M/D/YY):	TIME: (AM) (PM)	Case ID#:
Kanturk Lake	7/10/17	14:30 ~~13:30~~	

COUNTY:	LOCATION:	NEAREST TOWN/CITY:
Leon	Canal Between Kanturk and Killarney	Tallahassee

Visit Type: Initial ☒, Recon ☒, Sampling ☒, Follow-up ☐

Samples collected: ☒ yes ☐ no

Samples submitted to: FDEP Lab Tallahassee

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: ☐ Specify

Estimated size of bloom: entire lake

Impounded: ☒ yes ☐ no

Lake/Estuary Typical depth: 1.5 m deep

Inflows: ☒ yes ☐ no

Outflows: ☒ yes ☐ no

Stream/River/Canal Typical Transect: m wide

	Left bank	Middle	Right bank
m deep			
Water velocity m/s			

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

Description of Bloom/ Present Weather conditions: Light rain

Latitude: Degrees / Minutes / Seconds: 30.53213 (DD)

Longitude: Degrees / Minutes / Seconds: -84.19814 (DD)

Last rain event: During sampling

Rainfall amount: 0.05 in

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):	Salinity (PPT)	DOSAT	Secchi (m)
Top	0.3	30.57	9.14	7.40	38	0.02	98.8	VOB
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: ☐ Globs: ☐ Slick: ☐

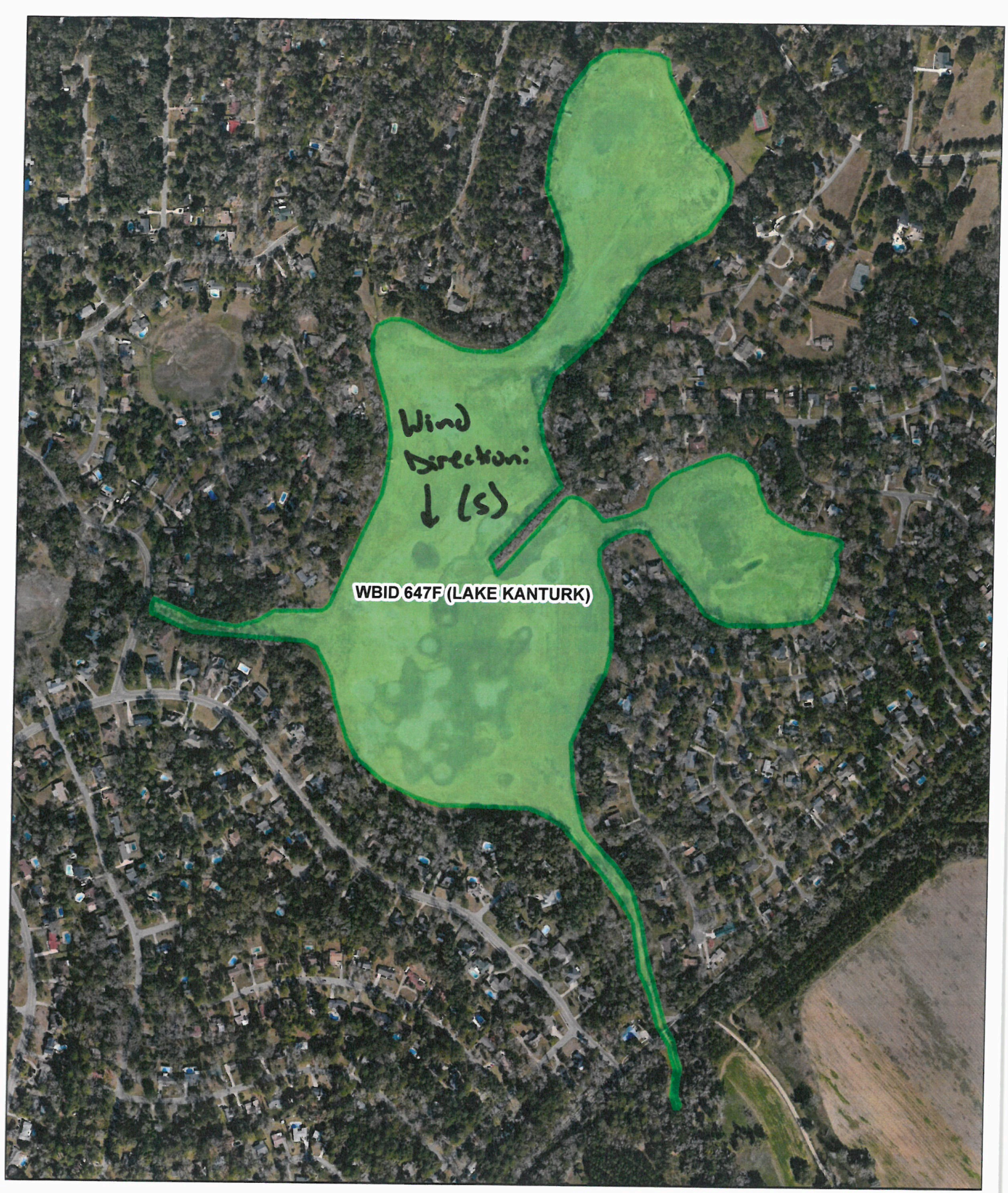
Water Clarity (check box): Clear: ☐ Slightly ☐ Turbid: ☒ Opaque: ☐

Bloom Color (check box): Green: ☒ Red: ☐ Brown: ☐ Other: ☐

Notes

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

VISIT TEAM:	AGENCY:
Robert Wilt, Ben Ralys	FDEP



Legend

Estimated area affected by algal bloom

Meters

0 100 200 400

N W E S

Request Number: RQ-2017-06-05-44
Algal Bloom responce - As Needed

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Apr 7, 2016

Customer: WQAP
Project ID: BLOOM-RESP

Requester: Curtis Musson
Collected By: Robert Wiwi, Ben Ralys
Field Report Prepared By: Robert Wiwi
Sampling Agency: FDEP

Location: Canal • Between Kanturk and Killarney	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 7/10/17 Time 14:30	(Eastern) Central	Composite end Date Time	Bottle Group(s) (See pg 2): A, B, C, D
Field ID: Algal Sample between Lakes	Matrix (type, e.g., Salt, Fresh, etc): Fresh	Diss. Oxygen 7.40 ☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
STORET #	Temp (C) 30.57	pH 9.14	Sample Depth 0.3 ☐ ft ☑ m	Sp. Conductance (umho/cm) 38	
Latitude 30.53213 ☑ dd ☐ dms / Longitude -84.19814 ☑ dd ☐ dms	Salinity (ppt) 0.02	Comments: algal bloom response samples			

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			

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:	Date/Time
[signature]	7/10/17 16:05		1	[signature]	7/10/17 16:05

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

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

Meter: Biology #2 RQ- 2017-06-05-53; 2017-06-12-30; 2017-06-05-44 Project: Algal Bloom

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 03/06/2017

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.	~~Ben Ralys~~ R. Wini	7/10/17	10:33	22.10	8.727	8.72	99.9	42.0	—	P	Lab
ICV	~~Ben Ralys~~ R. Wini	7/10/17	10:34	22.14	8.727	8.70	99.8	42.0	—	P	Lab
CCV	~~Ben Ralys~~ ↓	7/10/17	15:31	25.03	8.263	8.25	99.8	43.1	—	P	Lab
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 µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	~~Ben Ralys~~ R. Wini	7/10/17	10:36	170310D	3/18	1000	1000	P	Lab
ICV	~~Ben Ralys~~ R. Wini	7/10/17	10:37	170310D	3/18	1000	1000	P	Lab
CCV	~~Ben Ralys~~ ↓	7/10/17	15:33	170310E	3/18	100	102	P	Lab
CCV									

Report specific conductance as a whole number with no decimal figure. Conductivity Acceptance criteria ± 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.	~~Ben Ralys~~ R. Wini	7/10/17	10:39	170310B	9/18	7.0	7.00	-4.2	P	Lab
Calibr.	~~Ben Ralys~~	7/10/17	10:41	170310A	3/18	4.0	4.00	168.3	P	Lab
Calibr.	~~Ben Ralys~~	7/10/17	10:43	161111C	5/18	10.0	9.96	-16.57	P	Lab
ICV	~~Ben Ralys~~	7/10/17	10:44	170310A	3/18	4.0	3.86	174.8	P	Lab
CCV	~~Ben Ralys~~ ↓	7/10/17	15:34	161111C	5/18	10.0	10.00	-168.1	P	Lab
CCV										

Report pH with one decimal place; pH Acceptance criteria ±0.2 SU; mV pH7 Range 0±50; mV pH 4 Range +180±50;
mV pH 10 Range -180±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 ±5 % or ±0.05m, whichever is greater

Cooler Packing Worksheet for Request: RQ-2017-06-05-44
Algal Bloom responce - As Needed
Ship Cooler On: 5/29/2017
Customer/Project: WQAP/BLOOM-RESP

Assigned To: REAVES_S
Requester: Curtis Musson
Priority: 3

850-245-8453
2600 Blair Stone Rd
MS #3525
Tallahassee, FL 32399-2400

Attn: Curtis Musson

Comments:
No preservatives needed.

Analyze toxin upon receipt after consultation with Biology's Taxonomy Manager.

Bottle Groups A/B - separate event, priority 1
Bottle Groups C/D - separate event, C - priority 3, D - priority 12

Bottle group A - Priority 1
For algal dominant taxon.

Bottle Group B - Priority 1
For toxin testing

Bottle Group C - Priority 3
Water quality testing

Bottle group D - Priority 12
For algal full ID

There are multiple bottles per Group in case multiple sample targets or sample locations are needed. Samplers use best professional judgment to decide which samples are appropriate to collect for a particular response. All sets of bottles do not have to be filled at one time.

Packing Note:
No FedEx labels needed

Requested Analyses:

Bottle Group: A — # of Sites: 8

Container ID: PT-50ML **Qty: 8** **Preservation: ICE** **Lot #** 430897

Description: Plastic Tube 50 mL

Analysis	Description
BLOOM-ID	Assessment of dominant algal taxa in bloom or mat sample

Bottle Group: B — # of Sites: 4

Container ID: BG-WD250 **Qty: 4** **Preservation: ICE** **Lot #** 00065415

Description: Wide Mouth Amber Glass 250ml

Analysis	Description
W-MCYST-AA	Microcystins in water matrices by HPLC/MS/MS

Bottle Group: C # of Sites: 1

Container ID: BP-1L **Qty: 1** **Preservation: ICE** **Lot #** 1199138

Description: Brown Plastic Bottle 1L

Analysis	Description
CHLSUITE-W	Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry

Container ID: P-500ML **Qty: 1** **Preservation: ICE And H2SO4** **Lot #** 00067590

Description: Plastic Bottle 500 mL Affix YELLOW sulfuric acid dot to container.

Analysis	Description
W-NH3	Ammonia in aqueous matrices as mg N/L
W-NO2NO3	Nitrite/Nitrate in aqueous matrices as mg N/L
W-S-A-TP	Total Phosphorus in aqueous matrices as mg P/L
W-TKN	Total Kjeldahl Nitrogen in aqueous matrices

Container ID: P-125ML **Qty: 1** **Preservation: ICE-FLTR** **Lot #** 00066993

Description: Plastic Bottle 125 mL

Analysis	Description
W-PO4-F	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

Bottle Group: D # of Sites: 4

Container ID: BP-1L **Qty: 4** **Preservation: Lugols** **Lot #** 1199138

Description: Brown Plastic Bottle 1L

Analysis	Description
DTY-QN-C	No. of diatom taxa of quantitative phytoplankton sample.
PKD-QN-C	No. of wet taxa of quantitative phytoplankton sample.

Cooler Packed By: SR Number of Coolers: 2 Date: 5/25/17

Kit must also include:
- ✓ Field Sheets
- ✓ Temperature Control Bottle
- ___ FedEx Bills, if applicable
- ✓ Plastic Bags
- ___ Zip Ties

If Preservation Included:

ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____
ID _____	Exp _____	Lot # _____

PLEASE RETURN ALL COOLERS FOR RQ-2017-06-05-44