# Appendix A

## CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET (7-6-06 V2)

| WATERBODY | DATE (M/D/YY): | TIME: (AM) | Case ID#: |
|---|---|---|---|
| Manatee River canal | 06/20/19 | 1015 | |

| COUNTY: | LOCATION: | NEAREST TOWN/CITY: |
|---|---|---|
| Manatee | main canal @ 4th Ave | Ellenton |

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

Samples collected: ☒ yes ☐ no

Samples submitted to: FDEP

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 canal

Impounded: ☐ yes ☐ no

Lake/Estuary Typical depth: 2.0 m deep

Inflows: ☒ yes ☐ no

Outflows: ☒ yes ☐ no

Stream/River/Canal Typical Transect: 15 m wide; 2 m deep

Water velocity: _____ m/s (Left bank); _____ m/s (Middle); _____ m/s (Right bank)

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

Description of Bloom/ Present Weather conditions: partly Cloudy, 80s; Bloom throughout water column

Latitude: _____ Degrees _____ Minutes _____ Seconds

Longitude: _____ Degrees _____ Minutes _____ Seconds

***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.*** wind from SW

Last rain event: _____

Rainfall amount: _____

| WATER QUALITY | Depth (m): | Temp. (°C): | pH (SU): | D.O. (mg/l): | Cond. (µmho/cm) or Salinity (ppt): | DO % | sal | Secchi (m) |
|---|---|---|---|---|---|---|---|---|
| Top | 0.3 | 29.8 | 8.53 | 11.70 | 22799 | 165.0 | 13.6 | |
| Mid-depth | | | | | | | | 0.4 |
| Bottom | 1.5 | 29.8 | 8.39 | 10.57 | ~~456~~ 22905 | 152.5 | 13.66 | |

System Type: Stream: ☐ ( 1st - 2nd order, 3rd - 4th order, 5th - 6th order, 7th order or greater ) Lake: ☐ Wetland: ☐ Estuary: ☐ Other: ☒ canal

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: ☐ _____

Notes

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

VISIT TEAM: Kelly Callahan Kelly Callahan AGENCY: FDEP SW ROC

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## CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET (7-6-06 V2)

| WATERBODY | DATE (M/D/YY): | TIME: (AM) | Case ID#: |
|---|---|---|---|
| Waterstreet canal (Manatee River) | 06/20/19 | 1045 | |

| COUNTY: | LOCATION: | NEAREST TOWN/CITY: |
|---|---|---|
| Manatee | ~~mid of~~ Waterstreet canal | Ellenton |

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

Samples collected: ☒ yes ☐ no

Samples submitted to: FDEP near Ellenton

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

Contains: 1:1 $H_2SO_4$
Lot No.: SA8344070
Expires: 12/10/19
See Safety Data Sheet (SDS)

THERMO FISHER SCIENTIFIC
SULFURIC ACID <51%
Contains: 1:1 $H_2SO_4$

Estimated size of bloom: entire canal

Impounded: ☐ yes ☐ no

Lake/Estuary Typical depth: 1.4 m deep

Inflows: ☒ yes ☐ no

Outflows: ☒ yes ☐ no

Stream/River/Canal: ~~20~~ 10 m wide

Typical Transect: ____ m deep | ____ m deep | ____ m deep

Water velocity: ____ m/s (Left bank) | ____ m/s (Middle) | ____ m/s (Right bank)

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

Description of Bloom/ Present Weather conditions: Partly Cloudy, 80's. Bloom throughout water column

Latitude: ____ Degrees ____ Minutes ____ Seconds

Longitude: ____ Degrees ____ Minutes ____ Seconds

***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.***

Wind from SW

Last rain event: ____

Rainfall amount: ____

| WATER QUALITY | Depth (m): | Temp. (°C): | pH (SU): | D.O. (mg/l): | Cond. (µmho/cm) or Salinity (ppt): | DO% | Cond. | Secchi (m) |
|---|---|---|---|---|---|---|---|---|
| Top | 0.3 | 28.0 | 8.75 | 10.90 | 11.57 | 151.9 | 19551 | 0.4 |
| Mid-depth | | | | | | | | |
| Bottom | | | | | | | | |

System Type: Stream: ☐ (1st - 2nd order, 3rd - 4th order, 5th - 6th order, 7th order or greater) Lake: ☐ Wetland: ☐ Estuary: ☐ Other: ☒ canal

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: ☐

Notes

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

VISIT TEAM: Kelly Callahan — AGENCY: FDEP ~~DEP~~ SW ROC

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## CYANOBACTERIA BLOOM RESPONSE FIELD DATA SHEET (7-6-06 V2)

| WATERBODY | DATE (M/D/YY): | TIME: (AM) | Case ID#: |
|---|---|---|---|
| Manatee River | 06/20/19 | 1110 | |

COUNTY: Manatee

LOCATION: Ellenton Boat Ramp near boat ramp/near Manatee River

NEAREST TOWN/CITY: Ellenton

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

Samples collected: ☒ yes ☐ no

Samples submitted to: FDEP

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 canal

Impounded: ☐ yes ☐ no

Lake/Estuary Typical depth: 2.0 m deep

Inflows: ☒ yes ☐ no

Outflows: ☒ yes ☐ no

Stream/River/Canal: 10 m wide

Typical Transect: m deep | 2.0 m deep | m deep

Water velocity: m/s (Left bank) | m/s (Middle) | m/s (Right bank)

Contains: 1:1 H2SO4
Lot No.: SA8344070
Expires: 12/10/19
See Safety Data Sheet (SDS)

SULFURIC ACID <51%

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

Description of Bloom/ Present Weather conditions: partly cloudy, 80s. Bloom through out water column

Latitude: Degrees | Minutes | Seconds

Longitude: Degrees | Minutes | Seconds

***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: ____

wind from SW

| WATER QUALITY | Depth (m): | Temp. (°C): | pH (SU): | D.O. (mg/l): | Cond. (µmho/cm) or Salinity (ppt): | salinity (ppt) | DO%. | Secchi (m) |
|---|---|---|---|---|---|---|---|---|
| Top | 0.3 | 29.0 | 8.71 | 10.90 | 22243 | 10.20 | 155.5 | 0.4 |
| Mid-depth | | | | | | 13.16 | 94% | |
| Bottom | 1.5 | 29.8 | 8.30 | 6.47 | 29009 | 10.66 | 6.47 | |

System Type: Stream: ☐ (1st - 2nd order, 3rd - 4th order, 5th - 6th order, 7th order or greater) Lake: ☐ Wetland: ☐ Estuary: ☐ Other: ☒ canal

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: ☐ ____

Notes

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

VISIT TEAM: Kelly Callahan Kelly Callahan AGENCY: FDEP SW ROC

**Request Number: RQ-2019-06-03-42**

Algal Bloom Response - as needed

**Customer: WQAP**

**Project ID: BLOOM-RESP**

# Florida Department of Environmental Protection
## Central Laboratory Submittal Form



last revised Jan 25, 2018

Requester: Matthew Bearden

Collected By: Kelly Callahan

Field Report Prepared By: Kelly Callahan

Sampling Agency: ~~SWFWMD~~ SW ROC

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**Site Name: Main Canal to 4th Ave**

**Date: 06/20/2019**

Location

☐ dms

☐ Comp ☒ Grab | Collection (comp begin or grab) Date 06/20/2019 Time 1015 | Eastern / Central | Composite end Date Time | Bottle Group(s) (See pg 2): ABCD

Matrix (type, e.g., Salt, Fresh, etc): Salt | Diss. Oxygen: 11.70 ☒ mg/L ☐ % sat | Total Res. Chlorine (mg/L)

Temp (C): 29.8 | pH: 8.53 | Sample Depth: 0.3 ☐ ft ☒ m | Sp. Conductance (umho/cm): 22799

☐ dd ☐ dms | Salinity (ppt): 13.6 | Comments

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**Site Name: Water Street Canal- Near Ellenton**

**Date: 06/20/2019**

Location

☐ dms

☐ Comp ☒ Grab | Collection (comp begin or grab) Date 06/20/2019 Time 1045 | Eastern / Central | Composite end Date Time | Bottle Group(s): ABCD

Matrix (type, e.g., Salt, Fresh, etc): Salt | Diss. Oxygen: 10.90 ☒ mg/L ☐ % sat | Total Res. Chlorine (mg/L)

Temp (C): 28.8 | pH: 8.75 | Sample Depth: 0.3 ☐ ft ☒ m | Sp. Conductance (umho/cm): 19551

☐ dd ☐ dms | Salinity (ppt): 11.57 | Comments

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**Site Name: Ellenton Boat Ramp- Near Manatee River**

**Date: 06/20/2019**

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms

☐ Comp ☒ Grab | Collection (comp begin or grab) Date 06/20/2019 Time 1110 | Eastern / Central | Composite end Date Time | Bottle Group(s): ABCD

Matrix (type, e.g., Salt, Fresh, etc): Salt | Diss. Oxygen: 10.90 ☒ mg/L ☐ % sat | Total Res. Chlorine (mg/L)

Temp (C): 29.6 | pH: 8.71 | Sample Depth: 0.3 ☐ ft ☒ m | Sp. Conductance (umho/cm): 22243

Salinity (ppt) | Comments

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Location | Field ID | WIN/STORET #

☐ Comp ☐ Grab | Collection (comp begin or grab) Date Time | Eastern / Central | Composite end Date Time | Bottle Group(s)

Matrix (type, e.g., Salt, Fresh, etc) | Diss. Oxygen ☐ mg/L ☐ % sat | Total Res. Chlorine (mg/L)

Temp (C) | pH | Sample Depth ☐ ft ☐ m | Sp. Conductance (umho/cm)

Latitude ☐ dd ☐ dms | Longitude ☐ dd ☐ dms | Salinity (ppt) | Comments

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| Relinquished By: | Date/Time | Shipping Method | Number of Coolers Shipped: | Received By: | Date/Time |
|---|---|---|---|---|---|
| Matthew Bearden | 06/20/2019 1500 | Fed EX | 1 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Group: A | Bottle Type: BLOOM-ID | PT-50ML | # of Bottles: 5 | Preservative: | ICE | Enter Number of Bottles Sent to Lab 3 |
| Group: B | Bottle Type: W-MCYST-AA | BG-250ML-WDMTH | # of Bottles: 5 | Preservative: | ICE | Enter Number of Bottles Sent to Lab 3 |
| Group: C | Bottle Type: CHLSUITE-W | BP-1L | # of Bottles: 5 | Preservative: | ICE | Enter Number of Bottles Sent to Lab 3 |
| Group: C | Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN | P-500ML | # of Bottles: 5 | Preservative: | ICE And H2SO4 | Enter Number of Bottles Sent to Lab 3 |
| Group: C | Bottle Type: W-PO4-F | P-125ML | # of Bottles: 5 | Preservative: | FILTER-ICE | Enter Number of Bottles Sent to Lab 3 |
| Group: D | Bottle Type: DTY-QN-C PKD-QN-C | BP-1L | # of Bottles: 5 | Preservative: | Lugols | Enter Number of Bottles Sent to Lab 3 |

Ref:
Dep:

Date: 28May19
Wgt: 25.00 LBS

DV:

Svcs: PRIORITY OVERNIGHT Master 4751 8780 1723
TRCK: 4751 8780 1734

| | |
|---|---|
| SHIPPING: | 0.00 |
| SPECIAL: | 0.00 |
| HANDLING: | 0.00 |
| 0.00 TOTAL: | 0.00 |