

(Initials/Date)

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

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

Meter ID: Bio #2 RQ: 2018-03-19-26 Project: Smp

- 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.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site \_\_\_\_\_

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification \_\_\_\_\_

| 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.            | Blake Spencer | 3/21/18 | 1534       | 21.60 | 8.812           | 8.81            | 100.0 | 43.1         |            | P/F         | L/F         |
| ICV                | Blake Spencer | 3/21/18 | 1535       | 21.61 | 8.812           | 8.81            | 100.1 | 43.1         |            | P/F         | L/F         |
| CCV                | Curtis Mussen | 3/22/18 | 14:29      | 19.55 | 9.155           | 8.97            | 99.4  | 33           |            | P/F         | L/F         |
| CCV                |               |         |            |       |                 |                 |       |              |            | P/F         | L/F         |

DO Acceptance criteria from Table  $\pm 0.3$  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 $\mu$ mhos/cm | Meter Reading $\mu$ mhos/cm | Pass / Fail | Lab / Field |
|---------------------|---------------|---------|------------|---------|-------------|------------------------|-----------------------------|-------------|-------------|
| Calibr.             | Blake Spencer | 3/21/18 | 1538       | 171005D | 10/2018     | 1000                   | 1000                        | P/F         | L/F         |
| ICV                 | Blake Spencer | 3/21/18 | 1539       | 171005D | 10/2018     | 1000                   | 1001                        | P/F         | L/F         |
| CCV                 | Curtis Mussen | 3/22/18 | 1433       | 171005E | 10/2018     | 100                    | 101                         | 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 | Meter reading SU | mV     | Pass / Fail | Lab / Field |
|--------------------|---------------|---------|------------|---------|-------------|--------------|------------------|--------|-------------|-------------|
| Calibr.            | Blake Spencer | 3/21/18 | 1548       | 171005B | 4/2019      | 7.0          | 7.00             | 5.2    | P/F         | L/F         |
| Calibr.            | Blake Spencer | 3/21/18 | 1557       | 171005A | 10/2018     | 4.0          | 4.00             | 175.0  | P/F         | L/F         |
| Calibr.            | Blake Spencer | 3/21/18 | 1552       | 171005C | 04/19       | 10.0         | 10.00            | -162.9 | P/F         | L/F         |
| ICV                | Blake Spencer | 3/21/18 | 1558       | 171005A | 10/2018     | 4.00         | 4.00             | +175.3 | P/F         | L/F         |
| CCV                | Curtis Mussen | 3/22/18 | 1435       | 171005C | 04/2019     | 10.01        | 10.17            | -170   | P/F         | L/F         |
| CCV                |               |         |            |         |             |              |                  |        | P/F         | L/F         |

pH Acceptance criteria  $\pm 0.2$  SU; mV pH 7 Range  $0 \pm 50$ ;

mV pH 4 Range  $+180 \pm 50$ ;

mV pH 10 Range  $-180 \pm 50$ ;

If mV are recorded: slope from 7 to 10 \_\_\_\_\_, slope from 4 to 7 \_\_\_\_\_ (both must be between 165 and 180 mV)

Is meter equipped with depth sensor? Yes / No If yes, list date of last quarterly depth 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                   |      |      |            |                                           |                  | P/F         | L/F         |

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

COMMENTS:

Florida Department of Environmental Protection  
Central Laboratory Submittal Form

Customer: WAS-SECT

Project ID: SMP

Requester: Curtis Musson

Field Report Prepared By:

Collected By:

Sampling Agency:

| Location                                                |              | WIN ID / Field ID                     |           | Collection (comp begin or grab) |              | Composite end |                     | Bottle Group(s) |                 |
|---------------------------------------------------------|--------------|---------------------------------------|-----------|---------------------------------|--------------|---------------|---------------------|-----------------|-----------------|
| Field ID                                                | WIN/STORET # | Matrix (type, e.g., Salt, Fresh, etc) | Date      | Time                            | Diss. Oxygen | mg/L          | Total Res. Chlorine | Time            | (See pg 2)      |
| <b>Sand Pond Middle</b>                                 |              |                                       |           |                                 |              |               |                     |                 |                 |
| Latitude                                                | 30.334       | dd dms                                | Longitude | -84.387                         | dd dms       | Temp (C)      | 18.64               | pH              | 7.59            |
| Salinity (ppt)                                          | 0.01         | dd dms                                | Comments  |                                 |              |               |                     |                 |                 |
| <b>Eight Mile Pond Middle</b>                           |              |                                       |           |                                 |              |               |                     |                 |                 |
| Field ID                                                | WIN/STORET # | Matrix (type, e.g., Salt, Fresh, etc) | Date      | Time                            | Diss. Oxygen | mg/L          | Total Res. Chlorine | Time            | Bottle Group(s) |
| Latitude                                                | 30.32635     | dd dms                                | Longitude | -84.30273                       | dd dms       | Temp (C)      | 16.94               | pH              | 6.81            |
| Salinity (ppt)                                          | 0.03         | dd dms                                | Comments  |                                 |              |               |                     |                 |                 |
| <b>Black Creek upstream of CR158</b>                    |              |                                       |           |                                 |              |               |                     |                 |                 |
| Field ID                                                | WIN/STORET # | Matrix (type, e.g., Salt, Fresh, etc) | Date      | Time                            | Diss. Oxygen | mg/L          | Total Res. Chlorine | Time            | Bottle Group(s) |
| Latitude                                                | 30.4172381   | dd dms                                | Longitude | -84.057057                      | dd dms       | Temp (C)      | 14.79               | pH              | 5.74            |
| Salinity (ppt)                                          | 0.02         | dd dms                                | Comments  |                                 |              |               |                     |                 |                 |
| <b>Central Drainage Ditch downstream of Orange Ave.</b> |              |                                       |           |                                 |              |               |                     |                 |                 |
| Field ID                                                | WIN/STORET # | Matrix (type, e.g., Salt, Fresh, etc) | Date      | Time                            | Diss. Oxygen | mg/L          | Total Res. Chlorine | Time            | Bottle Group(s) |
| Latitude                                                | 30.4095      | dd dms                                | Longitude | -84.3073                        | dd dms       | Temp (C)      | 15.48               | pH              | 7.38            |
| Salinity (ppt)                                          | 0.06         | dd dms                                | Comments  |                                 |              |               |                     |                 |                 |

Relinquished By:

Date/Time

3/22/18 1347

Shipping Method

HD

Number of Coolers Shipped:

43

Received By:

Date/Time

3/22/18 1348

Sampling Agency:

|                  |           |                 |                            |                    |           |
|------------------|-----------|-----------------|----------------------------|--------------------|-----------|
| Relinquished By: | Date/Time | Shipping Method | Number of Coolers Shipped: | Received By:       | Date/Time |
| <i>Cobb</i>      | 2/22/18   | HD              | 43                         | <i>[Signature]</i> | 3/22/18   |

|          |              |                |                 |               |                            |                                     |   |
|----------|--------------|----------------|-----------------|---------------|----------------------------|-------------------------------------|---|
| Group: A | Bottle Type: | P-1L           | # of Bottles: 7 | Preservative: | ICE                        | Enter Number of Bottles Sent to Lab | 6 |
|          | ALKALINITY   |                |                 |               |                            |                                     |   |
|          | TURBIDITY    |                |                 |               |                            |                                     |   |
|          | W-CL-IC      |                |                 |               |                            |                                     |   |
|          | W-COLOR      |                |                 |               |                            |                                     |   |
|          | W-F          |                |                 |               |                            |                                     |   |
|          | W-SO4-IC     |                |                 |               |                            |                                     |   |
|          | W-TDS        |                |                 |               |                            |                                     |   |
|          | W-TSS        |                |                 |               |                            |                                     |   |
| Group: A | Bottle Type: | BP-1L          | # of Bottles: 7 | Preservative: | ICE                        | Enter Number of Bottles Sent to Lab | 6 |
|          | CHLSUITE-W   |                |                 |               |                            |                                     |   |
| Group: A | Bottle Type: | P-500ML        | # of Bottles: 7 | Preservative: | ICE And H2SO4              | Enter Number of Bottles Sent to Lab | 6 |
|          | W-NH3        |                |                 |               |                            |                                     |   |
|          | W-NO2NO3     |                |                 |               |                            |                                     |   |
|          | W-S-A-TP     |                |                 |               |                            |                                     |   |
|          | W-TKN        |                |                 |               |                            |                                     |   |
|          | W-TOC        |                |                 |               |                            |                                     |   |
| Group: A | Bottle Type: | P-125ML        | # of Bottles: 7 | Preservative: | FILTER-ICE                 | Enter Number of Bottles Sent to Lab | 6 |
|          | W-PO4-F      |                |                 |               |                            |                                     |   |
| Group: B | Bottle Type: | P-500ML        | # of Bottles: 2 | Preservative: | HNO3                       | Enter Number of Bottles Sent to Lab | 3 |
|          | W-ICP        |                |                 |               |                            |                                     |   |
|          | W-ICPMS      |                |                 |               |                            |                                     |   |
| Group: C | Bottle Type: | P-250ML-WO-THI | # of Bottles: 8 | Preservative: | ICE                        | Enter Number of Bottles Sent to Lab | 8 |
|          | ECOLI-18QT   |                |                 |               |                            |                                     |   |
| Group: D | Bottle Type: | QPCR-P-250ML   | # of Bottles: 8 | Preservative: | ICE                        | Enter Number of Bottles Sent to Lab | 8 |
|          | PCR-FILTER   |                |                 |               |                            |                                     |   |
| Group: D | Bottle Type: | BG-500ML       | # of Bottles: 4 | Preservative: | ICE                        | Enter Number of Bottles Sent to Lab | 4 |
|          | W-E8321-DI   |                |                 |               |                            |                                     |   |
|          | W-E8321-MS   |                |                 |               |                            |                                     |   |
| Group: E | Bottle Type: | BG-500ML       | # of Bottles: 1 | Preservative: | CH2ClCOOH<br>Pre-Preserved | Enter Number of Bottles Sent to Lab | 1 |
|          | W-CARB-AA    |                |                 |               |                            |                                     |   |
| Group: E | Bottle Type: | BG-500ML       | # of Bottles: 4 | Preservative: | ICE                        | Enter Number of Bottles Sent to Lab | 4 |

|          |                                          |          |                 |               |     |                                     |   |
|----------|------------------------------------------|----------|-----------------|---------------|-----|-------------------------------------|---|
| Group: E | Bottle Type:<br>W-CT-CI-R<br>W-PCL-SQ-R  | BG-500ML | # of Bottles: 4 | Preservative: | ICE | Enter Number of Bottles Sent to Lab | 4 |
| Group: E | Bottle Type:<br>W-E8321-DI<br>W-E8321-MS | BG-500ML | # of Bottles: 1 | Preservative: | ICE | Enter Number of Bottles Sent to Lab | 1 |
| Group: E | Bottle Type:<br>W-PSNP-TQ                | BG-1L    | # of Bottles: 4 | Preservative: | ICE | Enter Number of Bottles Sent to Lab | 4 |

Cooler Packing Worksheet for Request: RQ-2018-03-19-26  
CDD, Godby, Megginnis, Chicken, Sand, 8, Black158, Big Branch

Ship Cooler On: 3/15/2018  
Customer/Project: WAS-SECT/SMP

Assigned To: GREENWOO\_J  
Requester: Curtis Musson  
Priority: 3

850-245-8453  
2600 Blair Stone Rd  
  
Tallahassee, FL 32399  
  
Attn: Curtis Musson

Comments:

Group A: Freshwater Kit  
Group B: Metals  
Group C: E. coli  
Group D: Tracers/Markers (Aherb short list)  
Group E: Pesticides (AHERB Long List)

Packing Notes:

No FedEx Labels  
No Trash Bags  
2 - submittal forms  
1 - case of sulfuric acid

Requested Analyses:

**Bottle Group: A**

**# of Sites: 7**

Container ID: P-1L

Qty: 7      Preservation: ICE

Lot # 00070298

Description: Plastic Bottle 1L

**Analysis**

ALKALINITY  
TURBIDITY  
W-CL-IC  
W-COLOR  
W-F  
W-SO4-IC  
W-TDS  
W-TSS

**Description**

Alkalinity in aqueous matrices as mg CaCO3/L  
Turbidity in aqueous matrices  
Chloride in aqueous matrices  
True Color measured at 450 nm  
Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)  
Sulfate in aqueous matrices  
Total Dissolved Solids in aqueous matrices  
Total Suspended Solids in aqueous matrices

Container ID: BP-1L

Qty: 7      Preservation: ICE

Lot # 1217342

Description: Brown Plastic Bottle 1L

**Analysis**

CHLSUITE-W

**Description**

Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

Container ID: P-500ML

Qty: 7 Preservation: ICE And H2SO4

Lot # 0070302

Description: Plastic Bottle 500 mL

Affix YELLOW sulfuric acid dot to container.

**Analysis**

W-NH3  
W-NO2NO3  
W-S-A-TP  
W-TKN  
W-TOC

**Description**

Ammonia in aqueous matrices as mg N/L  
Nitrite/Nitrate in aqueous matrices as mg N/L  
Total Phosphorus in aqueous matrices as mg P/L  
Total Kjeldahl Nitrogen in aqueous matrices  
Nonpurgeable Organic Carbon in aqueous matrices

Container ID: P-125ML

Qty: 7 Preservation: FILTER-ICE

Lot # 0069347

Description: Plastic Bottle 125 mL

**Analysis**

W-PO4-F

**Description**

Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

**Bottle Group: B**

**# of Sites: 2**

Container ID: P-500ML

Qty: 2 Preservation: HNO3

Lot # 0070302

Description: Plastic Bottle 500 mL

Affix RED nitric acid dot to container.

**Analysis**

W-ICP  
W-ICPMS

**Description**

Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects  
Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

**Bottle Group: C**

**# of Sites: 8**

Container ID: P-250ML-WO-THI

Qty: 8 Preservation: ICE

Lot # 117167

Description:

**Analysis**

ECOLI-18QT

**Description**

Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems

**Bottle Group: D**

**# of Sites: 4**

Container ID: QPCR-P-250ML

Qty: 8

Preservation: ICE

Lot # 00069545

Description: 250ml Sterile Nalgene (2)

Analysis

PCR-FILTER

Description

Preparation of Samples by Filtration and held for qPCR Analysis

Container ID: BG-500ML

Qty: 4

Preservation: ICE

Lot # 0007377

Description: Brown Glass Bottle 500ML

Affix BLUE dot to container.

Analysis

W-E8321-DI

W-E8321-MS

Description

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Bottle Group: E

# of Sites: 1

Container ID: BG-500ML

Qty: 1

Preservation: CH<sub>2</sub>ClCOOH Pre-Preserved

Lot # 00069229

Description: Brown Glass Bottle 500ML

Affix BLUE dot to container.

Analysis

W-CARB-AA

Description

Carbamates in water matrices by HPLC/MS/MS

Container ID: BG-500ML

Qty: 4

Preservation: ICE

Lot # 0007107

Description: Brown Glass Bottle 500ML

Affix BLUE dot to container.

Analysis

W-CT-CI-R

W-PCL-SQ-R

Description

Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization

Organochlorine pesticides in water matrices by GC/MS-SIM

Container ID: BG-500ML

Qty: 1

Preservation: ICE

Lot # 0007107

Description: Brown Glass Bottle 500ML

Affix BLUE dot to container.

Analysis

W-E8321-DI

W-E8321-MS

Description

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

Container ID: BG-1L

Qty: 4 Preservation: ICE

Lot # 00069911

Description: Brown Glass Bottle 1L

Affix BLUE dot to container.

**Analysis**

W-PSNP-TQ

**Description**

Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS

Cooler Packed By: J.D.

Number of Coolers: 5

Date: 3/13/18

Kit must also include:

- ☒ Field Sheets
- ☒ Temperature Control Bottle
- ☐ FedEx Bills, if applicable
- ☒ Plastic Bags
- ☒ Zip Ties

If Preservation Included:

|    |                      |     |         |       |            |
|----|----------------------|-----|---------|-------|------------|
| ID | MCAT Buffer Solution | Exp | 1/10/19 | Lot # | 98817      |
| ID | Sulfuric Acid        | Exp | 12/7/18 | Lot # | JA 7341020 |
| ID |                      | Exp |         | Lot # |            |
| ID |                      | Exp |         | Lot # |            |
| ID |                      | Exp |         | Lot # |            |

**PLEASE RETURN ALL COOLERS FOR RQ-2018-03-19-26**