# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

PAGE 1 OF ____

Data Qualified? Yes / ~~No~~ Cond

**Location/STORET Station Name:** Big Branch 50 meters upstream of CR 67 **Date:** 10/17/2017 (mm/dd/yyyy)

**STORET #** G2WA0001 **WBID:** 1049 **Latitude:** 30.3110 (Decimal Degrees)

**County:** Liberty **RQ -** 2017-09-18-26 **ORG ID:** 21FLWQA **Longitude:** -84.7651 (Decimal Degrees)

**Receiving Body of Water:** Ochlockonee River **Field ID:** G2WA0001_10172017

| Sampling Team Members | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|---|---|---|---|---|---|
| Curtis Musson | | X | | X | |
| Ben Ralys | X | | X | | |
| Raymond Stuart | | | | X | X |
| | | | | | |

**Sampling Equipment**

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

Equipment ID

**Collection Method**

- [X] Wading
- [ ] 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)

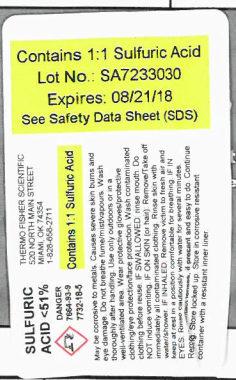
| Time Zone | Time | Sample Depth (m) | Total Depth (m) | DO (mg/L) | DO (%SAT) | pH | Salinity (ppt) | Secchi Disk (m) | Sp COND (µmhos/cm) | Temp. (C°) |
|---|---|---|---|---|---|---|---|---|---|---|
| (EST) | 10:00 | ~~0.3~~ ODS | 0.3 | 7.40 | 82.0 | 6.18 | 0.02 J | VOB | 37 J | 20.38 |
| CEN | | | | | | | | | | |

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

**SBIO ID Numbers:** SBIO-ID: 78060 RPS-ID: 8922 Macrophyte-ID: LIMS#: 1937335

| 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] $H_2SO_4$ | SA7233030 | 8/21/18 | [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 | [X] MI-FW-QLDC | [X] Formalin | | | |
| Periphyton | [ ] ALGAE-ID | [ ] Ice | | | |
| Microbiology | [X] E Coli [ ] F Coli [ ] Enterococci [ ] qPCR | [X] Ice | | | |
| Tracers | [X] W-SUC-AA-R [X] W-UHERB-AA [X] W-AHERB-AA | [X] 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 | | | |
| | | | | | |

Contains 1:1 Sulfuric Acid
Lot No.: SA7233030
Expires: 08/21/18
See Safety Data Sheet (SDS)




Sticker(s) Here

**Notes:** SCI, HA Kit-A RPS/LVS Bact Tracers Markers

**Big Branch 50 meters upstream of CR 67**

STORET ↓ G1WA0001

Field ID → Big Branch 50 meters upstream of CR 67 Oct 17 2017 G1WA0001_10172017

**Signature:** [signature] **Date:** 10/17/2017

Field Parameters Entered into LIMS: CM 10/20/17 (Initials/Date) Field Parameters QC in LIMS: [illegible] 4/11/18 (Initials/Date)

Date Migrated to STORET: 4/13/18 (Initials/Date) Field Sheets Scanned/Saved: ____ (Initials/Date)

# DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Big Branch 50 meters upstream CR 67 | County: Liberty | Date: 10/17/17 | Investigators: Ben Raley, Curtis Mosser, Ray

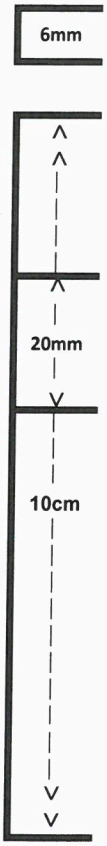
STORET Station Number: GLA0001

| Transect (m) | Point 1=right 9=left | Algal Thickness Rank (N-6, X) | Estimated | Canopy Cover |
|---|---|---|---|---|
| 0 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 10 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 20 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 30 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 40 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 50 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 60 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 70 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 80 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 90 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |
| 100 | 1 | N | | |
| | 2 | | | |
| | 3 | | | |
| | 4 | | | |
| | 5 | | | 96 |
| | 6 | | | |
| | 7 | | | |
| | 8 | | | |
| | 9 | | | |

| | |
|---|---|
| Secchi depth | VOB |
| Estimated? | NO |
| # points ranked 4-6 | 0 |
| total points assessed | 99 |
| % points ranked 4-6 | 0 |

| Check accompanying data collected at same site/date. | |
|---|---|
| Algal mat sample | NO |
| Linear Veg Survey | Yes |
| Habitat Assessment | Yes |
| SCI/~~Biorecon~~ | Yes |
| Water sample | Yes |
| RQ- 2017-09-18-26 | |

| Algal Thickness Rank | |
|---|---|
| N | rough, no algae, slimy, algae up to 1mm |
| 3 | >1mm - 6mm |
| 4 | >6mm - 20mm |
| 5 | >20mm - 10 cm |
| 6 | >10 cm |




SBIOID 78060

RBS ID 8922

entered cm

qc cm 3-1-18

Authorized cm

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

# DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET GIWA0001

| | | | |
|---|---|---|---|
| Waterbody: Big Branch | Date: 10/17 | County: Liberty | Storet Number: |
| Analyst: Ben Raley, Curtis Mussen | | Signature: Ben Raley | |

Comments: SMP Sampling

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 $m^2$ of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

| HERBACEOUS SPECIES | Meter Mark 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 | Specimen collected (check) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alternanthera philoxeroides | | | | | | | | | | | |
| Bacopa caroliniana | | | | | | | | | | | |
| Bacopa monneri | | | | | | | | | | | |
| Bidens mitis | | | | | | | | | | | |
| Boehmeria cylindrica | | | | | | | | | | | |
| Centella asiatica | | | | | | | | | | | |
| Ceratophyllum demersum | | | | | | | | | | | |
| Chara | | | | | | | | | | | |
| Cicuta maculata | | | | | | | | | | | |
| Cladium jamaicense | | | | | | | | | | | |
| Colocasia esculenta | | | | | | | | | | | |
| Commelina diffusa | | | | | | | | | | | |
| Commelina virginica | | | | | | | | | | | |
| Crinum americanum | | | | | | | | | | | |
| Diodia virginiana | | | | | | | | | | | |
| Eichhornia crassipes | | | | | | | | | | | |
| Eleocharis (wispy viviparous) | | | | | | | | | | | |
| Hydrilla verticillata | | | | | | | | | | | |
| Hydrocotle | | | | | | | | | | | |
| Hygrophila polysperma | | | | | | | | | | | |
| Hymenocallis | | | | | | | | | | | |
| Lachnanthes caroliniana | | | | | | | | | | | |
| Landoltia punctata | | | | | | | | | | | |
| Lemna | | | | | | | | | | | |
| Limnophila sessiflora | | | | | | | | | | | |
| Ludwigia leptocarpa | | | | | | | | | | | |
| Ludwigia palustris | | | | | | | | | | | |
| Ludwigia peruviana | | | | | | | | | | | |
| Ludwigia repens | | | | | | | | | | | |
| Luziola fluitans | | | | | | | | | | | |
| Micranthemum glomeratum | | | | | | | | | | | |
| Micranthemum umbrosum | | | | | | | | | | | |
| Mikania scandens | | | | | | | | | | | |
| Myriophyllum aquaticum | | | | | | | | | | | |
| | | | | | | | | | | | |
| If no Dominant or Co-Dominant were selected, indicate with "X" | | | | | | | | | | | |

| HERBACEOUS SPECIES | Meter Mark 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 | Specimen collected (check) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Myriophyllum heterophyllum | | | | | | | | | | | |
| Najas guadelupensis | | | | | | | | | | | |
| Nuphar luteum | | | | | | | | | | | |
| Orontium aquaticum | | | | | | | | | | | |
| Panicum hemitomon | | | | | | | | | | | |
| Panicum repens | | | | | | | | | | | |
| Panicum rigidulum | | | | | | | | | | | |
| Peltandra virginica | | | | | | | | | | | |
| Pistia stratioides | | | | | | | | | | | |
| Polygonum glabra | | | | | | | | | | | |
| Polygonum hydropiperoides | | | | | | | | | | | |
| Polygonum punctatum | | | | | | | | | | | |
| Pontedaria cordata | | | | | | | | | | | |
| Potamogeton illinoensis | | | | | | | | | | | |
| Rhynchospora inundata | | | | | | | | | | | |
| Rosa palustris | | | | | | | | | | | |
| Ruellia simplex | | | | | | | | | | | |
| Rumex verticillatus | | | | | | | | | | | |
| Sacciolepis striata | | | | | | | | | | | |
| Sagittaria kurziana | | | | | | | | | | | |
| Sagittaria lancifolia | | | | | | | | | | | |
| Sagittaria latifolia | | | | | | | | | | | |
| Salvinia minima | | | | | | | | | | | |
| Samolus parviflora | | | | | | | | | | | |
| Saururus cernuus | | | | | | | | | | | |
| Scirpus (schenoplectus) californicus | | | | | | | | | | | |
| Sparganium americanum | | | | | | | | | | | |
| Typha | | | | | | | | | | | |
| Vallisneria americana | | | | | | | | | | | |
| Zizania aquatica | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| Indicate % cover macrophytes per section | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0-5% Macrophyte Coverage | X | X | X | X | X | X | X | X | X | X | |
| >5 and ≤10% Macrophyte Coverage | | | | | | | | | | | |
| >10 and ≤25% Macrophyte Coverage | | | | | | | | | | | |
| >25 and ≤50% Macrophyte Coverage | | | | | | | | | | | |
| > 50% Macrophyte Coverage | | | | | | | | | | | |

Notes: no macrophytes

X < 2m2

## DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SBID: 79660 HA: 15091

| SAMPLING AGENCY: Florida Department of Environmental Protection | | STORET STATION NUMBER: GIWK0001 | DATE (MM/DD/YY): 10/17/17 | RECEIVING BODY OF WATER: Telogia Creek |
|---|---|---|---|---|
| REMARKS: | COUNTY: Liberty | LOCATION: Big Branch | | FIELD ID/NAME: |

| Habitat Parameter | Optimal | Suboptimal | Marginal | Poor |
|---|---|---|---|---|
| Primary Habitat Components (Snag, Leaf, Aquatic Vegtation, Roots, Rock) **Substrate Diversity** 9 | Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16 | Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11 | Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 (9) 8 7 6 | One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1 |
| **Substrate Availability** 7 ____% | Major productive habitat present at site (>30% 27.2% 25.8% 24.4% 26.6%) 20 19 18 17 16 | Major productive habitat, by aerial extent (21.6% 20.2% 18.8% 17.4% 16%) 15 14 13 12 11 | 6% to 15% major productive habitat (15% 13% 11% 9% 6%) 10 9 8 (7) 6 | Less than 5% major productive habitat 5 4 3 2 1 |
| **Water Velocity** 14 .20 m/s | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16 | Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 (14) 13 12 11 | Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6 | Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1 |
| **Habitat Smothering** 18 ---------- Primary Score 48 | Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 (18) 17 16 | Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11 | Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6 | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 3 2 1 |
| Secondary Habitat Components **Artificial Channelization** 20 | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. (20) 19 18 17 16 | Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 11 | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6 | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1 |
| **Bank Stability** Right Bank 10 Left Bank 10 If Banks are PipeClay, BedRock or Concrete at Bank full: Optimal | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. (+,+,+) (10) 9 | Only meets 2 of the 3 requirements for optimal bank stability. (+,+,-) 8 7 6 | Only meets 1 of the 3 requirements for optimal bank stability. (+,-,-) 5 4 | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. (-,-,-) 3 2 1 |
| **Riparian Buffer Zone Width** Right Bank 10 Left Bank 10 | Width of vegetation greater than 18 m (10) 9 | Width of vegetation >12 to 18m 8 7 6 (18m 15m 12m) | Width of vegetation 6 to 12 m. human activities close to system 5 4 (9m) | Less than 6 m of buffer zone due to intensive human activities 3 2 1 (6-5m) (4-3m) (<2m) |
| **Riparian Zone Vegetation Quality** Right Bank 10 Left Bank 10 ---------- Secondary Score 80 | Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance (10) 9 | >50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6 | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4 | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1 |

128 **TOTAL SCORE**

| Date: 10/17/2017 | Analyst: Curtis Musson | Signature: Curtis Musson |
|---|---|---|

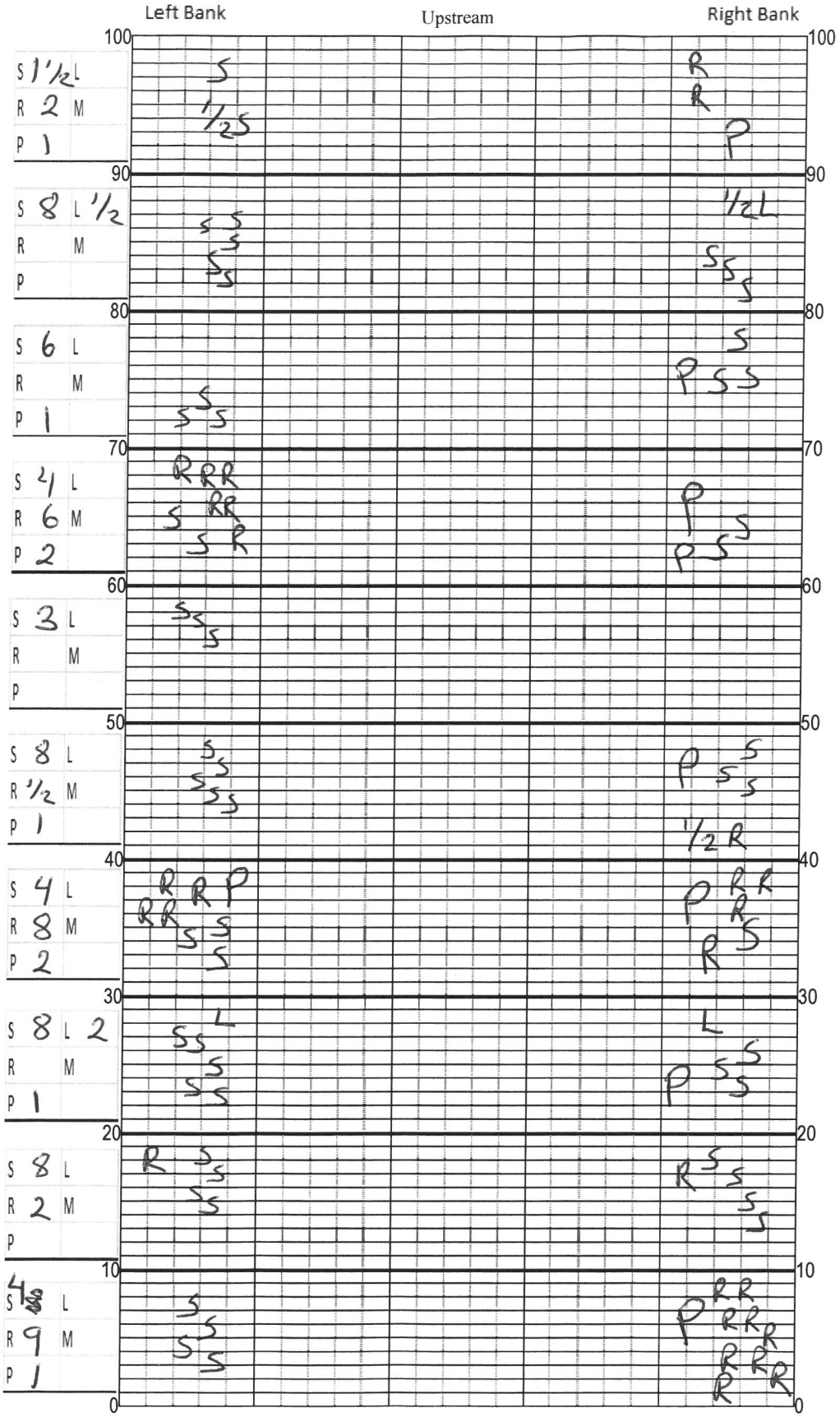
Entered by: [illegible] 4/11/18

QC CM 4-11-18

62-160.800, F.A.C.

Revision Date: March 1, 2014

## DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet




Location: Big Branch

Date: 10/17/17

Sampler: Ben Ralys, Curtis Mosse

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

| | | |
|---|---|---|
| S | Snags | |
| R | Roots/undercut banks | |
| L | Leaf Packs (or mats) | |
| M | Aquatic Macrophytes | |
| Rc | Rock | |
| | | |
| P | Pools | total # observed = ____ # range expected = ____ |

Average width 2.4 m
Average depth 0.3 m

Velocity measured at 45 meter mark.
Velocity .20 m/s

WQ & chemistry taken at 10 meter mark.

Habitat Smothering:
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:
Note areas (on map) where natural vegetation is altered or eliminated.

Notes/Plants Observed:
$2m^2$ = 16 Sweeps

| Meter Mark | Depth (m) | Width (m) | Velocity Measurement (Sec) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| Avg. | | | |

Length of grid represents 100 m of stream (not linear meters). (Horizontal scale is double vertical scale, draw proportionately).

Expected Number of Pools

$\left(\frac{100}{12 * \_\_\_\_W}\right) * 1 =$

$\left(\frac{100}{12 * \_\_\_\_W}\right) * 2 =$

| # of Sweeps | Conversion | $m^2$ | % |
|---|---|---|---|
| Snag 54.5 | ÷ 8 (6.3375) | 6.8 $m^2$ | 9 |
| Root 27.5 | ÷ 8 | 3.4 $m^2$ | 5 |
| Leaf 2.5 | ÷ 8 | .3 $m^2$ | .4 |
| Macrophyte 0 | ÷ 8 | $m^2$ | |
| Rock 0 | ÷ 8 | $m^2$ | |
| **Total Available Habitat** | | 10.5 $m^2$ | 14.4 |
| **Total Area** | | 240 $m^2$ | |
| **Total Unavailable Habitat** | | $m^2$ | |

# DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID 78060 | ORG ID 21FLWQA | LATITUDE 30.3110
COUNTY Liberty | STORET # GIWA0001 | LONGITUDE -84.7651
DATE 10/17/17 | TIME 10:10 | SAMPLING AGENCY FDEP
SITE NAME Big Branch 50meters upstream
FIELD ID/NAME GIWA0001_10172017 | RECEIVING BODY OF WATER Telogia Creek

## RIPARIAN ZONE / STREAM FEATURES

**PREDOMINANT LAND-USE IN WATERSHED** (specify relative percent in each category) :

| Forest/Natural | Silviculture | Field/Pasture | Agricultural | Residential | Commercial | Industry | Other (Specify) |
|---|---|---|---|---|---|---|---|
| 61.7 | 37.2 | — | 0.7 | 0.1 | — | — | 0.2 Water |

**Landscape Development Intensity Index (LDI)**: 1.3

Local Watershed Erosion (select one) : [X] None [ ] Slight [ ] Moderate [ ] Heavy

Local Watershed NPS Pollution : [ ] No evidence [X] Slight [ ] Moderate [ ] Heavy

**Width of Riparian Vegetation (m) on Each Buffer Side**: Left Bank : >18 | Right Bank : >18

**Hydrologic Modification Score** (per FT 3101): 3-4

**High Water Mark:** 0.7 (m) + 0.3 (above present water level) = 1.0 (present depth) (above bed)

**Artificially Impounded**: [ ] Yes [X] No

**Typical Width (m) Depth (m)/Velocity (m/sec) Transect**: 2.4 m wide

| | | |
|---|---|---|
| m/s | 0.20 m/s | m/s |
| m deep | 0.3 m deep | m deep |

**Artificially Channelized** : [X] No [ ] Some recovery [ ] Mostly recovered, more sinuous [ ] Recent, severe

**Canopy Cover %** [ ] Open [ ] Lightly Shaded (11-45%) [X] Heavily Shaded [ ] Moderate Shaded (46-80%)

## SEDIMENT / SUBSTRATE

**Sediment Oils** [ ] Absent [ ] Slight [ ] Moderate [ ] Profuse

**Sediment Odors** [ ] Normal [ ] Sewage [ ] Petroleum [ ] Chemical [ ] Anaerobic [ ] Other (Specify) :

**Smothering of Substrates**

| | None | Slight | Moderate | Severe |
|---|---|---|---|---|
| Sand Smothering: | [ ] | [X] | [ ] | [ ] |
| Silt Smothering: | [ ] | [X] | [ ] | [ ] |
| Algae Smothering: | [X] | [ ] | [ ] | [ ] |

**SUBSTRATE TYPE**

Assessment Tool: [X] SCI [X] RPS [X] LVS [ ] LCI [ ] BioRecon

| | % Coverage | INVERT # Times Sampled | PERI # Times Sampled |
|---|---|---|---|
| Woody Debris (Snags) | 90% | 7 | |
| Undercut Banks / Roots | 5% | 7 | |
| Leaf Packs or Mat ..... | .4% | 2 | |
| Aquatic Vegetation ..... | — | — | |
| Rock or Shell Rubble.. | — | — | |
| Sand..... | — | 4 | |
| Mud / Muck / Silt ..... | — | — | |
| Other ..... | — | — | |
| Other ..... | — | — | |

**WATER QUALITY**

| | Depth (M) | Temp. (°C) | pH (SU) | D.O. (MG/L) | D.O. Sat (%) | Cond. (UMHO/CM) | Salinity (PPT) | SECCHI (M) |
|---|---|---|---|---|---|---|---|---|
| Top : | 0.3 | 20.38 | 6.18 | 7.40 | 92.0 | 37 | 0.02 | |
| Mid: | | | | | | | | [X] VOB |
| Bottom | | | | | | | | TOTAL DEPTH |

**Meter ID:** Bio #2 | TOTAL DEPTH: 0.3

**Water Odors** Normal [ ] Petroleum [ ] Sewage [ ] Chemical [ ] Other [ ]

**Water Surface Oils** Normal [ ] Sheen [ ] Globs [ ] Slick [ ] Other [ ]

Water Sample Taken? [X] Yes [ ] No
Sample Preserved? [X] Yes [ ] No
Lot Number: SA7233030 Exp: 8/21/18

**Color** Tannic [X] Green (Algae) [ ] Clear [ ] Other (Specify) [ ]

Algae Sample Taken? [ ] Yes [X] No
Sample Preserved? [ ] Yes [X] No
Lot Number: ~~SA7233030~~ 28 Exp: ~~8/21/18~~ 28

**Clarity** Clear [X] Slightly Turbid [ ] Turbid [ ] Opaque [ ]

**ABUNDANCE**

| | Not Obs. | Rare | Common | Abundant |
|---|---|---|---|---|
| Periphyton: | [X] | [ ] | [ ] | [ ] |
| Fish: | [X] | [ ] | [ ] | [ ] |
| Aquatic Plants: | [X] | [ ] | [ ] | [ ] |
| Iron/Sulfur Bacteria: | [X] | [ ] | [ ] | [ ] |

**System Type:** Stream [X] Lake [ ] Wetland [ ] Estuary [ ] Other(Specify) [ ]

**AMBIENT FIELD CONDITIONS / NOTES:**

[X] The antecedent hydrologic conditions have been met to my best knowledge.

**SAMPLING TEAM**: Ben Ralys, Curtis Musson, Ray Stuart

SIGNATURE : [signature]

DATE : 10/17/17

62-160.800, F.A.C.

0.7 from water to top of bank

Revision Date: March 1, 2014

Big Branch

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

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

Meter ID: Bio #2 RQ- 2017-09-19-26 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. | Curtis Musson | 10/17/17 | 703 | 21.53 | 8.829 | 8.82 | 100.0 | S1 | — | (P) / F | (L) / F |
| ICV | Curtis Musson | 10/17/17 | 704 | 21.53 | 8.829 | 8.82 | 100.0 | S1 | — | (P) / F | (L) / F |
| CCV | Curtis Musson | 10/17/17 | 1504 | 23.00 | 8.578 | 8.53 | 99.4 | S1 | — | (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; 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. | Curtis Musson | 10/17/17 | 705 | 170614E | 6/18 | 1000 | 1000 | (P) / F | (L) / F |
| ICV | Curtis Musson | 10/17/17 | 706 | 170614E | 6/18 | 1000 | 1000 | (P) / F | (L) / F |
| CCV | Curtis Musson | 10/17/17 | 1506 | 170614D | 6/18 | 100 | 108 | P / (F) | L / (F) |
| CCV | | | | | | | | P / F | L / F |

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. | Curtis Musson | 10/17/17 | 708 | 170614B | 12/18 | 7.0 | 7.01 | 43 | (P) / F | (L) / F |
| Calibr. | Curtis Musson | 10/17/17 | 709 | 170614A | 6/18 | 4.01 | 4.01 | 213 | (P) / F | (L) / F |
| Calibr. | Curtis Musson | 10/17/17 | 710 | 1703DC | 9/18 | 10.01 | 9.97 | -114 | (P) / F | (L) / F |
| ICV | Curtis Musson | 10/17/17 | 712 | 170614A | 6/18 | 4.01 | 3.92 | 216 | (P) / F | (L) / F |
| CCV | Curtis Musson | 10/17/17 | 1510 | 170614B | 12/18 | 7.0 | 7.04 | 46 | (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 ± 50; mV pH 10 Range -180 ± 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 | Curtis Musson | 10/17/17 | 706 | 0.000 | 0.000 | (P) / F | (L) / F |

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

**COMMENTS:**

# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
## Central Lab Sample Submittal Form

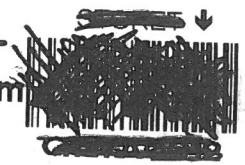
Request Number: RQ-2017-09-18-26
Big Branch, Soapstone
Customer: WAS-SECT
Project ID: SMP

Requester: Curtis Musson
Collected By: Curtis Musson, Ben Ralls

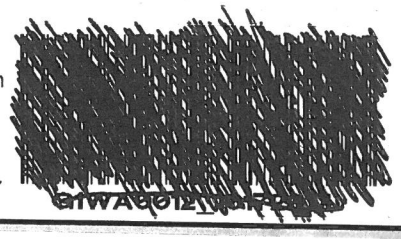
Page 1 of 1
Field Report Prepared By: Curtis Musson
Sampling Agency: FDEP

**Location**

~~Soapstone Branch 100 meters upstream of SR 375~~



~~Field ID → Soapstone Branch 100 meters upstream of SR 375 Oct 17, 2017~~



| Comp / Grab | Collection (comp begin or grab) Date | Time | Eastern Central | Collection (comp begin or grab) Date | Time | Bottle Group(s) |
|---|---|---|---|---|---|---|
| | | | | | | X |

| Matrix (Salt, Fresh) | Diss. Oxygen (mg/L) | | |
|---|---|---|---|
| | | | |

| Temp (C) | pH | Sample Depts (m) | Sp. Conductance (umho/cm) |
|---|---|---|---|
| | | | |

| Salinity (ppt) | Comments |
|---|---|
| | Not Collected |

| Latitude (Decimal Degrees) | Longitude (Decimal Degrees) |
|---|---|
| | |

**Location**

Big Branch 50 meters upstream of CR 67

STORET

G1WA0001

Field ID → Big Branch 50 meters upstream of CR 67 Oct 17 2017

G1WA0001_10172017

| Comp / Grab | Collection (comp begin or grab) Date | Time | Eastern Central | Collection (comp begin or grab) Date | Time | Bottle Group(s) |
|---|---|---|---|---|---|---|
| Grab | 10/17/17 | 10:10 | Eastern Central | X | X | A, B, C, D, E |

| Matrix (Salt, Fresh) | Diss. Oxygen (mg/L) | | |
|---|---|---|---|
| Fresh | 7.40 | | |

| Temp (C) | pH | Sample Depts (m) | Sp. Conductance (umho/cm) |
|---|---|---|---|
| 20.38 | 6.18 | 0.15 | 37 |

| Salinity (ppt) | Comments |
|---|---|
| 0.02 | SCI |

| Latitude (Decimal Degrees) | Longitude (Decimal Degrees) |
|---|---|
| 30.3110 | -84.7651 |

**Location**

**Field ID**

**STORET #**

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

| Matrix (Salt, Fresh) | Diss. Oxygen (mg/L) | | |
|---|---|---|---|
| | | | |

| Temp (C) | pH | Sample Depts (m) | Sp. Conductance (umho/cm) |
|---|---|---|---|
| | | | |

| Salinity (ppt) | Comments |
|---|---|
| | |

| Latitude (Decimal Degrees) | Longitude (Decimal Degrees) |
|---|---|
| | |

| Relinquished By: | Date/Time | Number of Coolers | Received By: | Date/Time |
|---|---|---|---|---|
| Curtis Musson | 10/17/17 / 12:41 | 1 x 2 SCI Jug | SR | 10-17-17 / 1:20 |

# RQ-2017-09-18-26



Date of Request: 21-AUG-2017
Created By: MUSSON_C On: 21-AUG-2017
Modified By: SWANSON_C On: 21-AUG-2017
Customer: WAS-SECT
Project: SMP
Division:
District:
Sampling Event: Big Branch, Soapstone

**Send Coolers To:**

Phone: 850-245-8453
2600 Blair Stone Rd

Tallahassee, FL 32399
Attn: Curtis Musson

**Send Final Report To:**

2600 Blair Stone Rd

Tallahassee, FL 32399
Attn: Curtis Musson

Program Module Number:
Priority: 3
Event Status: A
Criminal Investigation: NO
Chemistry Request Reviewed By: WATTS_J On: 21-AUG-2017
Biology Request Reviewed By: SWANSON_C On: 21-AUG-2017
Sampling Kit Required: NO Ship on:
Sampling Kit Shipped:
Sampling Kit Packed By:
Preservatives Needed: NO
Date to Receive Samples: 19-SEP-2017
Received By:

Report Type: Final Only
FTP Data: NO
QC Report: YES
Date Log: NO
Authorization Log: NO

Comments:
Group A: Freshwater Kit, No Metals
Group B: E.coli
Group C: SCI
Group D: Tracers (A-HERB Short list)
Group E: PCR

## Bottle Group A (Water) With 2 Samples:

Bottle Type: P-1L Number of Bottles: 2 Preserved With: ICE

| | | |
|---|---|---|
| ALKALINITY<br>Total Alkalinity | Template: DEFAULT | (SM 2320 B-97) Alkalinity in aqueous matrices as mg CaCO3/L |
| TURBIDITY<br>Turbidity | Template: DEFAULT | (EPA 180.1 Rev. 2.0) Turbidity in aqueous matrices |
| W-CL-IC<br>Chloride | Template: DEFAULT | (EPA 300.0 Rev. 2.1) Chloride in aqueous matrices |
| W-COLOR<br>Color (true) | Template: DEFAULT | (SM 2120 B) True Color measured at 450 nm |
| W-F<br>Fluoride | Template: DEFAULT | (SM 4500 F-C-97) Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring) |
| W-SO4-IC<br>Sulfate | Template: DEFAULT | (EPA 300.0 Rev. 2.1) Sulfate in aqueous matrices |
| W-TDS<br>TDS | Template: DEFAULT | (SM 2540 C-97) Total Dissolved Solids in aqueous matrices |
| W-TSS<br>TSS | Template: DEFAULT | (SM 2540 D-97) Total Suspended Solids in aqueous matrices |

Bottle Type: BP-1L Number of Bottles: 2 Preserved With: ICE

| | | |
|---|---|---|
| CHLSUITE-W<br>Chlorophyll-a, Corrected<br>Chlorophyll-a, Uncorrected<br>Phaeophytin-a | Template: DEFAULT | (SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry |

Bottle Type: P-500ML Number of Bottles: 2 Preserved With: ICE And H2SO4

| | | |
|---|---|---|
| W-NH3 | Template: DEFAULT | (EPA 350.1 Rev. 2.0) Ammonia in aqueous matrices as mg N/L |

## Bottle Group A (Water) With 2 Samples:

Bottle Type: P-500ML Number of Bottles: 2 Preserved With: ICE And H2SO4

W-NH3 Template: DEFAULT (EPA 350.1 Rev. 2.0) Ammonia in aqueous matrices as mg N/L
Ammonia-N

W-NO2NO3 Template: DEFAULT (EPA 353.2 Rev. 2.0) Nitrite/Nitrate in aqueous matrices as mg N/L
NO2NO3-N

W-S-A-TP Template: DEFAULT (EPA 365.1 Rev. 2.0) Total Phosphorus in aqueous matrices as mg P/L
Total-P

W-TKN Template: DEFAULT (EPA 351.2 Rev. 2.0) Total Kjeldahl Nitrogen in aqueous matrices
Kjeldahl Nitrogen

W-TOC Template: DEFAULT (SM 5310 B-00) Nonpurgeable Organic Carbon in aqueous matrices
Organic Carbon

Bottle Type: P-125ML Number of Bottles: 2 Preserved With: FILTER-ICE

W-PO4-F Template: DEFAULT (EPA 365.1 Rev. 2.0) Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L
O-Phosphate-P

## Bottle Group B (Water) With 3 Samples:

Bottle Type: Number of Bottles: 3 Preserved With: ICE

ECOLI-18QT Template: DEFAULT (SM 9223 Quanti-Tray) Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems
Escherichia Coli-Quanti-Tray

## Bottle Group C (Biological) With 2 Samples:

Bottle Type: PJ-2L Number of Bottles: 4 Preserved With: Formalin

MI-FW-QLDC Template: DEFAULT (SOP-IZ06) No. Taxa of FW macroinverts, qual samp, 20 dipnets.
*Macroinvert-FW-Qual-DipnetX20-#Taxa-Rep2
*Stream Condition Index (SCI)

## Bottle Group D (Water) With 1 Samples:

Bottle Type: BG-1L Number of Bottles: 1 Preserved With: ICE

W-AHERB-AA Template: DEFAULT (USGS O-2060-01) Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS
*Triclopyr
2,4-D
Bentazon
MCPP

W-SUC-AA-R Template: DEFAULT (EPA 8321B) Analysis of sucralose in water matrices by HPLC/MS/MS
*Sucralose

W-UHB-AA-R Template: DEFAULT (EPA 8321B) Urea herbicides and other chemicals in water matrices by HPLC/MS/MS
*Acetaminophen
*Carbamazepine
*Fluridone
*Primidone
Diuron
Fenuron
Imidacloprid
Linuron

## Bottle Group E (Water) With 1 Samples:

Bottle Type: QPCR-P-250ML Number of Bottles: 2 Preserved With: ICE

PCR-FILTER Template: DEFAULT (SOP-PCR-4.0) Preparation of Samples by Filtration and held for qPCR Analysis
*HF183 - Human Source Marker

* - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.