



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION BASIN MANAGEMENT ACTION PLAN FIELD SHEET

January 2020

Meter Passed End  
of Day CCV  
☒ Yes / ☐ No

**WIN Station Name:** Long Branch @ 0.7 mi DS OF CR 13 **Date:** 12/16/2021  
**WIN/Field ID:** G2CE0036 **WBID:** 3030 **ENR:** - **Latitude:** 28.5351  
**County:** ORANGE **Org ID:** 21FLCEN **Longitude:** -81.11  
**Receiving Body of Water:** Middle St. Johns **RQ:** 2021-12-13-12

| Sampling Team Members               |                   | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|-------------------------------------|-------------------|-----------------|-------------------|---------------|--------------|--------------------|
| <input checked="" type="checkbox"/> | Elizabeth Bates   |                 |                   | x             |              |                    |
| <input checked="" type="checkbox"/> | Victoria Schwartz |                 |                   | x             |              |                    |
| <input checked="" type="checkbox"/> | Katie March       |                 |                   | x             |              |                    |
| <input checked="" type="checkbox"/> | Leif Boman        | x               |                   |               |              |                    |

| Sampling Equipment                                   |                                         |
|------------------------------------------------------|-----------------------------------------|
| <input checked="" type="checkbox"/> Sample Container | <input type="checkbox"/> Carboy         |
| <input type="checkbox"/> Dipper                      | <input type="checkbox"/> Van Dorn       |
| <input type="checkbox"/> Syringe                     | <input type="checkbox"/> Pole           |
| Depth measured with: Secchi                          |                                         |
| Secchi Equipment ID: Knothead                        |                                         |
| Collection Method                                    |                                         |
| <input checked="" type="checkbox"/> Wading           | <input type="checkbox"/> Canoe/Kayak    |
| <input type="checkbox"/> From Shore                  | <input type="checkbox"/> Electric Motor |
| <input type="checkbox"/> Other _____                 | <input type="checkbox"/> Gasoline Motor |

|                                                                                                                                                                                                                                                                                              |                   |                                |                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------|----------------------------------|
| <b>Water Level:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Low <input type="checkbox"/> High <input type="checkbox"/> Dry <input type="checkbox"/> Pooled <input type="checkbox"/> Flooded                                                                      |                   | <b>Meter ID#</b><br>CRAW DADDY |                                  |
| <b>Photos:</b> NA                                                                                                                                                                                                                                                                            | <b>Flow:</b> FLOW | <b>Tide:</b>                   | <b>Tide Times:</b><br>High: Low: |
| <b>Biological Samples Collected:</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> HA <input checked="" type="checkbox"/> SCI <input checked="" type="checkbox"/> RPS <input type="checkbox"/> Algae ID <input type="checkbox"/> LVS <input type="checkbox"/> LVI Other: |                   |                                |                                  |
| <b>SBIO ID Numbers:</b> SBIO 83567 HA 17143 RPS 9845                                                                                                                                                                                                                                         |                   |                                | LIMS 2296213                     |
| <b>Notes:</b>                                                                                                                                                                                                                                                                                |                   |                                |                                  |

## Duplicate Sample

|                             |              |                  |              |
|-----------------------------|--------------|------------------|--------------|
| <b>Time Zone:</b> EST       | <b>Time:</b> | <b>Field ID:</b> | (WIN ID_DUP) |
| <b>WIN DMT Activity ID:</b> |              |                  |              |

## Blank

|                                |                      |                           |                       |
|--------------------------------|----------------------|---------------------------|-----------------------|
| <b>Time Zone:</b>              | <b>Time:</b>         | <b>Field ID:</b>          | (Blank Type_DDDMMYYY) |
| <b>DI Source:</b>              | <b>Location:</b>     |                           |                       |
| <b>DI Type:</b>                | <b>Equipment ID:</b> |                           |                       |
| <b>DI Container (Name/ID):</b> |                      | <b>DI Container Type:</b> |                       |

LIMS EVENT ID: CEN-DIST-2021-12-20-01 WIN Import ID: 31674  
Enter Field Parameters, Verify Station ID In LIMS DMT: EB 1/7/22 QC Station ID, Field Parameters In LIMS DMT: KWM 1/26/22  
(Initials/Date) (Initials/Date)  
Scan/Save Field Sheets KWM 3/18/22 Migrate Data to WIN: KWM 3/18/22 Verify Data In WIN: \_\_\_\_\_  
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-12-13-12

Customer: WQAP

Project ID: SMP

Collected By: Elizabeth Bates, Victoria Schwartz

Field Report Prepared By: Elizabeth Bates

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G2CE0036

Location: Long Branch @ 0.7 mi DS OF CR 13

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

| Date                                       | Time        | DO (mg/L)                                                                                                                                                                                             | DO (%SAT)                                   | Temp. (C°) | pH                                           | Sample Depth (m)                                             | Secchi Disk (m)                                    | Total Depth (m)             | Sp COND (µmhos/cm)    | Salinity (PPT) |  |  |  |
|--------------------------------------------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------------|----------------------------------------------|--------------------------------------------------------------|----------------------------------------------------|-----------------------------|-----------------------|----------------|--|--|--|
|                                            | 1218<br>EST | 5.65                                                                                                                                                                                                  | 63.3                                        | 20.9       | 6.89                                         | 0.2                                                          | 0.4<br><input checked="" type="checkbox"/> VOB (S) | 0.4                         | 307                   | 0.15           |  |  |  |
| 12/16/2021                                 |             |                                                                                                                                                                                                       |                                             |            |                                              |                                                              |                                                    |                             |                       |                |  |  |  |
|                                            | EST         |                                                                                                                                                                                                       |                                             |            |                                              |                                                              |                                                    |                             |                       |                |  |  |  |
| Parameter Suite                            |             | Parameter Methods                                                                                                                                                                                     |                                             |            |                                              | Preservation                                                 |                                                    | pH Check                    | # Bottles sent to Lab | Bottle Group   |  |  |  |
| Preserved Nutrients (P-500ML)              |             | <input type="checkbox"/> W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP                                                                                                                                  |                                             |            |                                              | <input type="checkbox"/> Ice <input type="checkbox"/> H2SO4* |                                                    | <input type="checkbox"/> <2 |                       |                |  |  |  |
|                                            |             | Lot #                                                                                                                                                                                                 |                                             | Exp:       |                                              |                                                              |                                                    |                             |                       |                |  |  |  |
| Metals (P-500ML)                           |             | <input type="checkbox"/> W-ICPMS <input type="checkbox"/> W-ICP <input type="checkbox"/> W-HARD                                                                                                       |                                             |            |                                              | <input type="checkbox"/> Ice <input type="checkbox"/> HNO3*  |                                                    | <input type="checkbox"/> <2 |                       |                |  |  |  |
|                                            |             | Lot #                                                                                                                                                                                                 |                                             | Exp:       |                                              |                                                              |                                                    |                             |                       |                |  |  |  |
| Filtered Nutrients (P125ML)                |             | <input type="checkbox"/> W-PO4-F <input type="checkbox"/> Field Filtered 0.45 µm Filter                                                                                                               |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
|                                            |             | Filter Lot #                                                                                                                                                                                          |                                             |            |                                              |                                                              |                                                    |                             |                       |                |  |  |  |
|                                            |             | Syringe Lot #                                                                                                                                                                                         |                                             |            |                                              |                                                              |                                                    |                             |                       |                |  |  |  |
| Chlorophyll (BP-1L)                        |             | <input type="checkbox"/> CHLSUITE-W                                                                                                                                                                   |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Physical/Aggregate (Fresh) (P-1L)          |             | <input type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS                                                                                                  |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Physical/Aggregate (Marine) (P-1L)         |             | <input type="checkbox"/> Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY                                                                                                                               |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Macroinvertebrates (PJ-2L)                 |             | <input type="checkbox"/> MI-FW-QLDC                                                                                                                                                                   | Formalin Lot #                              | 10.50911HN | <input checked="" type="checkbox"/> Formalin |                                                              |                                                    | 2                           | B                     |                |  |  |  |
| Periphyton (PT-50ML)                       |             | <input type="checkbox"/> ALGAE-ID                                                                                                                                                                     |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Microbiology (Contract Lab Bottle)         |             | <input type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enterococci<br><input type="checkbox"/> Contract Lab                                                         |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Molecular (QPCR-P-500ML)                   |             | <input type="checkbox"/> PCR-HF183 <input type="checkbox"/> PCR-BacR <input type="checkbox"/> PCR-DG3<br><input type="checkbox"/> PCR-GULL2 <input type="checkbox"/> PCR-GFD <input type="checkbox"/> |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Tracers (BG-500ML)                         |             | <input type="checkbox"/> W-E8321-DI <input type="checkbox"/> W-E8321-MS                                                                                                                               |                                             |            |                                              | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Pesticides (BG-500ML) (BG-1L)              |             | W-E8321-DI                                                                                                                                                                                            | WE8321-MS                                   | W-PSNP-TQ  | W-CT-CL-R                                    | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Phytoplankton/Periphyton                   |             | W-PCL-TQ-R                                                                                                                                                                                            | W-CARB-AA ( 5 ml of MCAA** Buffer Solution) | DTY-QN-C   | PKD-QN-BV                                    | <input type="checkbox"/> Ice                                 |                                                    |                             |                       |                |  |  |  |
| Name: Elizabeth Bates<br>Victoria Schwartz |             |                                                                                                                                                                                                       |                                             |            | Signature: Kathryn March                     |                                                              |                                                    |                             |                       | Date: 12/16/21 |  |  |  |

\*2.0 ml of Preservative used unless noted otherwise.

\*\*MCAA: Monochloroacetic acid buffer solution

7  
DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID \_\_\_\_\_ ORG ID 21FLCEN LATITUDE 28.5351  
 COUNTY Orange STORET # \_\_\_\_\_ LONGITUDE -81.11  
 DATE 12/16/21 TIME 12:18 SAMPLING AGENCY 21FLCEN  
 SITE NAME Long Branch @ 0.7 mi DS of CR 13  
 FIELD ID/NAME G2CE0036 RECEIVING BODY OF WATER Middle St. Johns

RIPARIAN ZONE / STREAM FEATURES

WBID: 3030

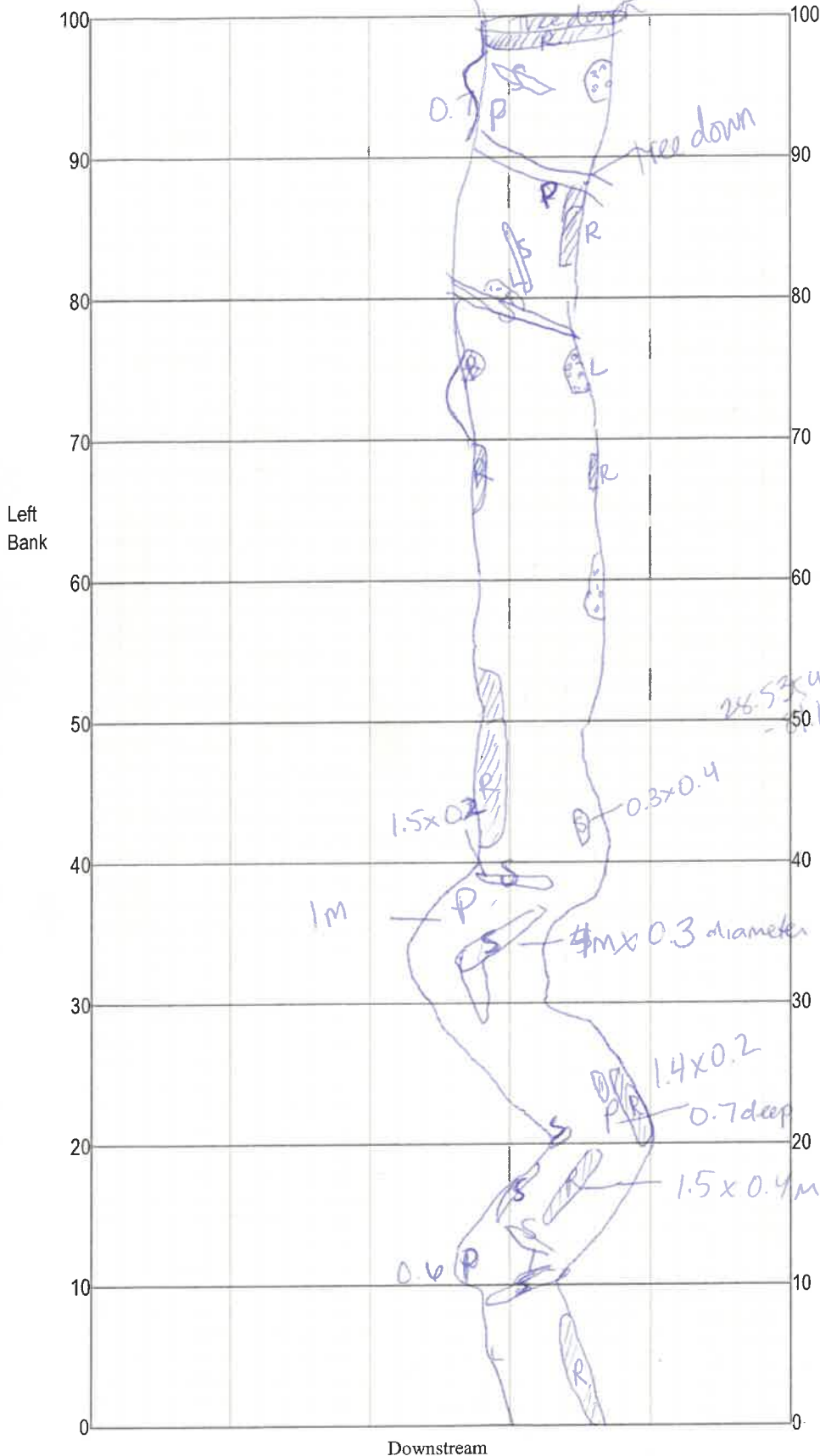
|                                                                                                                                                                                                                                                                                                                                              |              |               |              |             |            |          |                 |                                                                                                                                                                                                              |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|--------------|-------------|------------|----------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category): <u>face track</u>                                                                                                                                                                                                                                      |              |               |              |             |            |          |                 | <b>Landscape Development Intensity Index (LDI)</b>                                                                                                                                                           |  |
| Forest/Natural                                                                                                                                                                                                                                                                                                                               | Silviculture | Field/Pasture | Agricultural | Residential | Commercial | Industry | Other (Specify) |                                                                                                                                                                                                              |  |
| <u>50</u>                                                                                                                                                                                                                                                                                                                                    |              | <u>10</u>     |              | <u>70</u>   | <u>15</u>  | <u>5</u> |                 | <u>1</u>                                                                                                                                                                                                     |  |
| Local Watershed Erosion (select one): <input type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy<br>Local Watershed NPS Pollution: <input type="checkbox"/> No evidence <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |              |               |              |             |            |          |                 | <b>Typical Width (m) Depth (m)/Velocity (m/sec) Transect</b>                                                                                                                                                 |  |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank: <u>&gt;18</u> Right Bank: <u>&gt;18</u>                                                                                                                                                                                                                            |              |               |              |             |            |          |                 | <u>2.5</u> m wide                                                                                                                                                                                            |  |
| <b>Hydrologic Modification Score</b> (per FT 3101)                                                                                                                                                                                                                                                                                           |              |               |              |             |            |          |                 | m/s <u>0.21</u> m/s                                                                                                                                                                                          |  |
| <b>High Water Mark:</b> <u>0.1</u> + <u>0.4</u> = <u>0.5</u><br>(m) (above present water level) (present depth) (above bed)                                                                                                                                                                                                                  |              |               |              |             |            |          |                 | m deep <u>0.4</u> m deep                                                                                                                                                                                     |  |
| <b>Artificially Impounded</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                                                                                                         |              |               |              |             |            |          |                 | <b>Canopy Cover %</b> <input type="checkbox"/> Open <input type="checkbox"/> Lightly Shaded (11-45%)<br><input checked="" type="checkbox"/> Heavily Shaded <input type="checkbox"/> Moderate Shaded (46-80%) |  |
| <b>Artificially Channelized:</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Some recovery <input type="checkbox"/> Mostly recovered, more sinuous <input type="checkbox"/> Recent, severe                                                                                                                               |              |               |              |             |            |          |                 |                                                                                                                                                                                                              |  |

SEDIMENT / SUBSTRATE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>Sediment Oils</b><br><input checked="" type="checkbox"/> Absent <input type="checkbox"/> Slight<br><input type="checkbox"/> Moderate <input type="checkbox"/> Profuse                                                                                                                                                                                                                                                                                                                                                                                                          |  |  | <b>Sediment Odors</b><br><input checked="" type="checkbox"/> Normal <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum<br><input type="checkbox"/> Chemical <input type="checkbox"/> Anaerobic<br><input type="checkbox"/> Other (Specify):                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  | <b>Smothering of Substrates</b><br>Sand Smothering: None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/><br>Silt Smothering: None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/><br>Algae Smothering: None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> |  |  |
| <b>SUBSTRATE TYPE</b><br>Assessment Tool: <input checked="" type="checkbox"/> SCI <input checked="" type="checkbox"/> RPS <input type="checkbox"/> LVS <u>NO</u> <u>2m<sup>2</sup> veg</u><br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon                                                                                                                                                                                                                                                                                                                      |  |  | <b>WATER QUALITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  | <b>WATER SURFACE OILS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |
| Woody Debris (Snags) <u>4</u> <u>5</u><br>Undercut Banks / Roots <u>9</u> <u>5</u><br>Leaf Packs or Mat ..... <u>3</u> <u>5</u><br>Aquatic Vegetation .....<br>Rock or Shell Rubble..<br>Sand ..... <input checked="" type="checkbox"/> <u>5</u><br>Mud / Muck / Silt .....<br>Other .....<br>Other .....                                                                                                                                                                                                                                                                         |  |  | Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)<br>Top: <u>0.2</u> <u>20.9</u> <u>6.89</u> <u>5.65</u> <u>63.3</u> <u>307</u> <u>0.15</u> <u>0.4</u><br>Mid: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> VOB<br>Bottom: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> TOTAL DEPTH <u>0.4</u><br>Meter ID: <u>CrawDaddy</u> |  |  | Normal <input checked="" type="checkbox"/> Petroleum <input type="checkbox"/><br>Sewage <input type="checkbox"/> Chemical <input type="checkbox"/> Other <input type="checkbox"/><br>Globbs <input type="checkbox"/> Slick <input type="checkbox"/> Other <input type="checkbox"/><br>Color Tannic <input checked="" type="checkbox"/> Green (Algae) <input type="checkbox"/><br>Clear <input type="checkbox"/> Other (Specify) <input type="checkbox"/>                                                                      |  |  |
| <b>ABUNDANCE</b><br>Not Obs. Rare Common Abundant<br>Periphyton: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Fish: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Aquatic Plants: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Iron/Sulfur Bacteria: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |  |  | Water Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot Number: Exp:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  | Algae Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot Number: Exp:                                                                                                                                                                                                                                                                                                                                     |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  | System Type: Stream <input checked="" type="checkbox"/> Lake <input type="checkbox"/> Wetland <input type="checkbox"/> Estuary <input type="checkbox"/> Other(Specify) <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  | <b>CLARITY</b> Clear <input checked="" type="checkbox"/> Slightly Turbid <input type="checkbox"/><br>Turbid <input type="checkbox"/> Opaque <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                          |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  | <b>AMBIENT FIELD CONDITIONS / NOTES:</b><br><u>high pig activity in area</u><br><u>* water sample collected 12/13/21</u><br><input checked="" type="checkbox"/> The antecedent hydrologic conditions have been met to my best knowledge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |
| <b>SAMPLING TEAM</b> <u>Leif Boman</u> <u>Liz Bates</u><br><u>Katie Marsh</u> <u>Victoria Schwartz</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |  | <b>SIGNATURE:</b> <u>Leif Boman</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |  | <b>DATE:</b> <u>12/16/21</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |  |

SBIO VISIT ID: 83567

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



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

Location: Long Branch (BMAP)  
Date: 12/16/21  
Sampler: Leif Buman, Kahle March  
Elizabeth Bates, Victoria March

|                                                                                                                |                                |
|----------------------------------------------------------------------------------------------------------------|--------------------------------|
| 100 m: Latitude                                                                                                | <u>28.5356</u>                 |
| Longitude                                                                                                      | <u>-81.10834</u>               |
| 0 m: Latitude                                                                                                  |                                |
| Longitude                                                                                                      |                                |
| Substrates: Code key, draw proportionate habitat abundance. %                                                  |                                |
| <u>5</u> <input type="checkbox"/> S                                                                            | Snags <u>4</u>                 |
| <u>5</u> <input checked="" type="checkbox"/> R                                                                 | Roots/undercut banks <u>92</u> |
| <u>5</u> <input type="checkbox"/> L                                                                            | Leaf Packs (or mats) <u>3</u>  |
| <input type="checkbox"/>                                                                                       | Aquatic Macrophytes            |
| <u>5</u> <input type="checkbox"/>                                                                              | Minor <u>Sand etc</u>          |
| <input type="checkbox"/>                                                                                       |                                |
| <input type="checkbox"/> P                                                                                     | Pools                          |
| total # observed =                                                                                             |                                |
| # range expected =                                                                                             |                                |
| Average width                                                                                                  | <u>2.5</u> m                   |
| Average depth                                                                                                  | <u>0.4</u> m                   |
| Velocity measured at                                                                                           | <u>0</u> meter mark.           |
| WQ & chemistry taken at                                                                                        | <u>0</u> meter mark.           |
| Habitat Smothering:<br>Note areas (on map) where sand or silt is smothering substrates, limiting habitability. |                                |
| Bank Stability:<br>Note areas (on map) with unstable, eroding banks.                                           |                                |
| Riparian Buffer Width:<br>Note areas (on map) where natural vegetation is altered or eliminated.               |                                |

Plants observed / other notes:

high pig activity in area

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

|                                    |                          |                                      |                                     |                                             |
|------------------------------------|--------------------------|--------------------------------------|-------------------------------------|---------------------------------------------|
| SAMPLING AGENCY:<br><u>21FLCEN</u> |                          | STORET STATION NUMBER:               | DATE (MM/DD/YY):<br><u>12/16/21</u> | RECEIVING BODY OF WATER:<br><u>GACE0036</u> |
| REMARKS:                           | COUNTY:<br><u>Orange</u> | LOCATION:<br><u>Long Branch BMAP</u> |                                     | FIELD ID/NAME:<br><u>GACE0036</u>           |

| Habitat Parameter                                                                 | Optimal                                                                                                                                                                                                           | Suboptimal                                                                                                                                                     | Marginal                                                                                                                                   | Poor                                                                                                                          |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Primary Habitat Components                                                        | Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]                                                                                      | Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)                                             | Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed                                        | One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered                            |
| Substrate Diversity <u>14</u>                                                     | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                 | 10 9 8 7 6                                                                                                                                 | 5 4 3 2 1                                                                                                                     |
| Substrate Availability <u>16</u>                                                  | Greater than 30% major productive habitat present at site<br>20 19 18 17 <u>16</u>                                                                                                                                | 16% to 30% major productive habitat, by aerial extent<br>15 14 13 12 11                                                                                        | 6% to 15% major productive habitat<br>10 9 8 7 6                                                                                           | Less than 5% major productive habitat<br>5 4 3 2 1                                                                            |
| Water Velocity <u>14</u>                                                          | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec<br>≥0.33 0.31 0.29 0.27 >0.25<br>20 19 18 17 16                                                                                                    | Max. observed at typical transect: >0.1 to 0.25 m/sec<br>0.25 0.21 0.17 0.13 >0.1<br>15 14 13 12 11                                                            | Max. observed at typical transect: 0.05 to 0.1 m/sec<br>0.1 0.09 0.07 0.06 0.05<br>10 9 8 7 6                                              | Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec<br><0.05 0.04 0.03 0.01 <0.01<br>5 4 3 2 1      |
| Habitat Smothering <u>18</u><br>-----<br>Primary Score <u>62</u>                  | Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.<br>20 19 <u>18</u> 17 16                                                                          | Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.<br>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).<br>10 9 8 7 6         | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br>5 4 3 2 1                            |
| Secondary Habitat Components                                                      | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.                                                                                                   | Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.                                  | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.                        | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. |
| Artificial Channelization <u>20</u>                                               | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                 | 10 9 8 7 6                                                                                                                                 | 5 4 3 2 1                                                                                                                     |
| Bank Stability                                                                    | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas.                                                      | Only meets 2 of the 3 requirements for optimal bank stability.                                                                                                 | Only meets 1 of the 3 requirements for optimal bank stability.                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.             |
| Right Bank <u>10</u><br>Left Bank <u>10</u>                                       | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |
| Riparian Buffer Zone Width                                                        | Width of vegetation greater than 18 m                                                                                                                                                                             | Width of vegetation >12 to 18m                                                                                                                                 | Width of vegetation 6 to 12 m. human activities close to system                                                                            | Less than 6 m of buffer zone due to intensive human activities                                                                |
| Right Bank <u>10</u><br>Left Bank <u>10</u>                                       | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |
| Riparian Zone Vegetation Quality                                                  | 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. | >50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).     |
| Right Bank <u>10</u><br>Left Bank <u>10</u><br>-----<br>Secondary Score <u>80</u> | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |

142 TOTAL SCORE

|                       |                                                                              |                               |
|-----------------------|------------------------------------------------------------------------------|-------------------------------|
| Date: <u>12/16/21</u> | Analyst: <u>Leif Boman/Victoria Schwartz</u><br><u>Katie March/Liz Bates</u> | Signature: <u>[Signature]</u> |
|-----------------------|------------------------------------------------------------------------------|-------------------------------|

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

| Site: <u>Long Branch</u>                  |                            |                                  |           |              | County: <u>Orange</u> |                            | Date: <u>12/10/21</u>            |           | Investigators: <u>Katie March</u> |  |  |
|-------------------------------------------|----------------------------|----------------------------------|-----------|--------------|-----------------------|----------------------------|----------------------------------|-----------|-----------------------------------|--|--|
| STORE Station Number: <u>WIN G2CE0036</u> |                            |                                  |           |              |                       |                            |                                  |           |                                   |  |  |
| Transect (m)                              | Point<br>1=right<br>9=left | Algal Thickness Rank<br>(N-6, X) | Estimated | Canopy Cover | Transect (m)          | Point<br>1=right<br>9=left | Algal Thickness Rank<br>(N-6, X) | Estimated | Canopy Cover                      |  |  |
| 0                                         | 1                          | 2                                |           |              | 60                    | 1                          | 2                                |           |                                   |  |  |
|                                           | 2                          | 2                                |           |              |                       | 2                          | 2                                |           |                                   |  |  |
|                                           | 3                          | 2                                |           |              |                       | 3                          | 2                                |           |                                   |  |  |
|                                           | 4                          | 2                                |           |              |                       | 4                          | 2                                |           |                                   |  |  |
|                                           | 5                          | 2                                |           | 94           |                       | 5                          | 2                                |           | 86                                |  |  |
|                                           | 6                          | 2                                |           |              |                       | 6                          | 2                                |           |                                   |  |  |
|                                           | 7                          | 2                                |           |              |                       | 7                          | 2                                |           |                                   |  |  |
|                                           | 8                          | 2                                |           |              |                       | 8                          | 2                                |           |                                   |  |  |
|                                           | 9                          | 2                                |           |              |                       | 9                          | 2                                |           |                                   |  |  |
| 10                                        | 1                          | 2                                |           |              | 70                    | 1                          | 2                                |           |                                   |  |  |
|                                           | 2                          | 2                                |           |              |                       | 2                          | 2                                |           |                                   |  |  |
|                                           | 3                          | 2                                |           |              |                       | 3                          | 2                                |           |                                   |  |  |
|                                           | 4                          | 2                                |           | 96           |                       | 4                          | 2                                |           |                                   |  |  |
|                                           | 5                          | 2                                |           | 98           |                       | 5                          | 2                                |           | 82                                |  |  |
|                                           | 6                          | 2                                |           |              |                       | 6                          | 2                                |           |                                   |  |  |
|                                           | 7                          | 2                                |           |              |                       | 7                          | 2                                |           |                                   |  |  |
|                                           | 8                          | 2                                |           |              |                       | 8                          | 2                                |           |                                   |  |  |
|                                           | 9                          | 2                                |           |              |                       | 9                          | 2                                |           |                                   |  |  |
| 20                                        | 1                          | 2                                |           |              | 80                    | 1                          | 2                                |           |                                   |  |  |
|                                           | 2                          | 2                                |           |              |                       | 2                          | 2                                |           |                                   |  |  |
|                                           | 3                          | 2                                |           |              |                       | 3                          | 2                                |           |                                   |  |  |
|                                           | 4                          | 2                                |           | 96           |                       | 4                          | 2                                |           |                                   |  |  |
|                                           | 5                          | 2                                |           | 98           |                       | 5                          | 2                                |           | 78                                |  |  |
|                                           | 6                          | 2                                |           |              |                       | 6                          | 2                                |           |                                   |  |  |
|                                           | 7                          | 2                                |           |              |                       | 7                          | 2                                |           |                                   |  |  |
|                                           | 8                          | 2                                |           |              |                       | 8                          | 2                                |           |                                   |  |  |
|                                           | 9                          | 2                                |           |              |                       | 9                          | 2                                |           |                                   |  |  |
| 30                                        | 1                          | 2                                |           |              | 90                    | 1                          | 2                                |           |                                   |  |  |
|                                           | 2                          | 2                                |           |              |                       | 2                          | 2                                |           |                                   |  |  |
|                                           | 3                          | 2                                |           |              |                       | 3                          | 2                                |           |                                   |  |  |
|                                           | 4                          | 2                                |           |              |                       | 4                          | 2                                |           |                                   |  |  |
|                                           | 5                          | 2                                |           | 96           |                       | 5                          | 2                                |           | 72                                |  |  |
|                                           | 6                          | 2                                |           |              |                       | 6                          | 2                                |           |                                   |  |  |
|                                           | 7                          | 2                                |           |              |                       | 7                          | 2                                |           |                                   |  |  |
|                                           | 8                          | 2                                |           |              |                       | 8                          | 2                                |           |                                   |  |  |
|                                           | 9                          | 2                                |           |              |                       | 9                          | 2                                |           |                                   |  |  |
| 40                                        | 1                          | 2                                |           |              | 100                   | 1                          | 2                                |           |                                   |  |  |
|                                           | 2                          | 2                                |           |              |                       | 2                          | 2                                |           |                                   |  |  |
|                                           | 3                          | 2                                |           |              |                       | 3                          | 2                                |           |                                   |  |  |
|                                           | 4                          | 2                                |           |              |                       | 4                          | 2                                |           |                                   |  |  |
|                                           | 5                          | 2                                |           | 92           |                       | 5                          | 2                                |           | 86                                |  |  |
|                                           | 6                          | 2                                |           |              |                       | 6                          | 2                                |           |                                   |  |  |
|                                           | 7                          | 2                                |           |              |                       | 7                          | 2                                |           |                                   |  |  |
|                                           | 8                          | 2                                |           |              |                       | 8                          | 2                                |           |                                   |  |  |
|                                           | 9                          | 2                                |           |              |                       | 9                          | 2                                |           |                                   |  |  |
| 50                                        | 1                          | 2                                |           |              |                       | 1                          | 2                                |           |                                   |  |  |
|                                           | 2                          | 2                                |           |              |                       | 2                          | 2                                |           |                                   |  |  |
|                                           | 3                          | 2                                |           |              |                       | 3                          | 2                                |           |                                   |  |  |
|                                           | 4                          | 2                                |           |              |                       | 4                          | 2                                |           |                                   |  |  |
|                                           | 5                          | 2                                |           | 90           |                       | 5                          | 2                                |           |                                   |  |  |
|                                           | 6                          | 2                                |           |              |                       | 6                          | 2                                |           |                                   |  |  |
|                                           | 7                          | 2                                |           |              |                       | 7                          | 2                                |           |                                   |  |  |
|                                           | 8                          | 2                                |           |              |                       | 8                          | 2                                |           |                                   |  |  |
|                                           | 9                          | 2                                |           |              |                       | 9                          | 2                                |           |                                   |  |  |

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%.

Secchi depth 0.4  
Estimated?

# 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 ☐  
Linear Veg Survey ☐  
Habitat Assessment ☒  
SCI/Biorecon ☒  
Water sample ☐

RQ- 2021-12-13-12

| 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                                  |

heavily shaded system, usually no periphyton here

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

|                                          |                        |                |                        |
|------------------------------------------|------------------------|----------------|------------------------|
| Waterbody: Long Branch SMAP              | Date: 12/16/21         | County: Orange | Store Number: 62CE0036 |
| Analyst: Victoria Schwartz               | Signature: [Signature] |                |                        |
| Comments: < 2m <sup>2</sup> veg - No LWS |                        |                |                        |

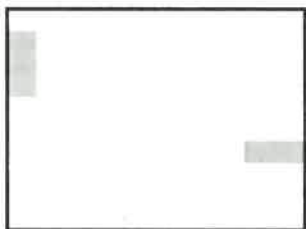
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m<sup>2</sup> of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa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

[illegible]

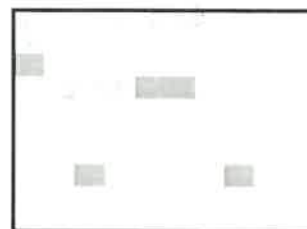
# FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

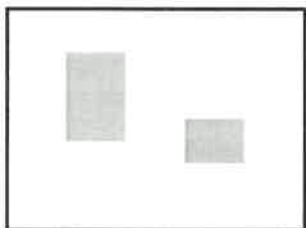
5% Macrophyte Coverage



5% Macrophyte Coverage



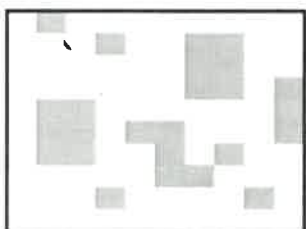
10% Macrophyte Coverage



10% Macrophyte Coverage



25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



1  
12  
225  
60  
300