



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

## STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter  
Passed End  
of Day CCV

Yes ☒ No ☐

|                          |            |             |         |        |  |              |               |           |  |
|--------------------------|------------|-------------|---------|--------|--|--------------|---------------|-----------|--|
| WIN Station Name:        |            | Long Branch |         |        |  | Sample Date: |               | 8/22/2023 |  |
| WIN / Field ID:          | G4NW0051   | ORG ID:     | 21FLPNS | ENR:   |  | Latitude:    | 30.9377       |           |  |
| County:                  | Santa Rosa | WBID:       | 22      | STREAM |  | Longitude:   | -86.9679      |           |  |
| Receiving Body of Water: |            | -           |         |        |  | RQ-          | 2023-08-21-23 |           |  |

| Sampling Team Members | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|-----------------------|-----------------|-------------------|---------------|--------------|--------------------|
| Lauren McNally        | x               |                   | x             |              |                    |
| C. Stopher Slade      |                 | x                 |               | x            |                    |
|                       |                 |                   |               |              |                    |
|                       |                 |                   |               |              |                    |

| Sampling Equipment   |                  |             |                |
|----------------------|------------------|-------------|----------------|
| x                    | Sample Container |             | Carboy         |
|                      | Dipper           |             | Van Dorn       |
|                      | Syringe          |             | Pole           |
| Syringe Lot#         |                  | Filter Lot# |                |
| Secchi Equipment ID: |                  | Secchi -1   |                |
| Collection Method    |                  |             |                |
| x                    | Wading           |             | Canoe/Kayak    |
|                      | From Shore       |             | Electric Motor |
|                      |                  |             | Gasoline Motor |
| Depth Measured With  |                  | Meter       |                |

|                 |                 |
|-----------------|-----------------|
| Water Level:    | Normal          |
| Flow:           | Flowing         |
| Matrix:         | Fresh           |
| Tide Stage:     |                 |
| High Tide:      |                 |
| Low Tide:       |                 |
| Photos:         | No              |
| Meter ID:       | 154179 (ProDSS) |
| Depth Gauge ID: | depth_gauge     |
|                 |                 |

| Time Zone | Time | Total Depth (m) | Sample Depth (m) | DO (mg/L) | DO (%SAT) | Temp. (°C) | pH   | Secchi Disk (m) | Sp COND (µmhos/cm) | Salinity (PPTth) |
|-----------|------|-----------------|------------------|-----------|-----------|------------|------|-----------------|--------------------|------------------|
| CEN       | 925  | 0.1             | 0.05             | 5.32      | 64.5      | 25.2       | 4.16 | 0.1             | 30                 | 0.01             |
|           |      |                 |                  |           |           |            |      |                 |                    |                  |
|           |      |                 |                  |           |           |            |      |                 |                    |                  |
| VOB (s)   |      |                 |                  |           |           |            |      |                 |                    |                  |

### Biological Samples Collected:

HA LVS RPS SCI

SBIO Visit ID: 87775

HA ID: 18613

RPS ID: 10143

Macrophyte ID: 12542

LIMS Sample ID

In The Macrophyte Module:

2432995

| Parameter Suite              | Parameter Methods (LIMS Test Codes)                      |                               |        | Preservation |                                                                                              |                 |            |
|------------------------------|----------------------------------------------------------|-------------------------------|--------|--------------|----------------------------------------------------------------------------------------------|-----------------|------------|
|                              |                                                          |                               |        | Type         | Lot#                                                                                         | Expiration Date | pH Check   |
| Microbiology                 | E. coli                                                  | Contract Lab                  | UWF    | ICE          |                                                                                              |                 |            |
| Chlorophyll                  | CHLSUITE-W                                               |                               |        | ICE          |                                                                                              |                 |            |
| Physical/Aggregate Nutrients | ALKALINITY, TURBIDITY, W-F, W-TSS                        |                               |        | ICE          |                                                                                              |                 |            |
|                              | W-CL-IC, W-COLOR, W-SO4-IC, W-TDS                        |                               |        | ICE          |                                                                                              |                 |            |
| Filtered Nutrients           | W-PO4-F                                                  | Field Filtered 0.45 µm Filter |        | ICE          | Syringe Lot#; Filter Lot#:                                                                   |                 |            |
| Acid Preserved Nutrients     | W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP              |                               |        | ICE          | H2SO4*                                                                                       | SA 2229010      | 08/30/2023 |
| Metals                       | W-ICPMS                                                  | W-ICP                         | W-HARD | ICE          | HNO3**                                                                                       | NA2230040       | 09/01/2023 |
| Organics (LC)                | W-E8321-DI                                               | W-E8321-MS                    |        |              |                                                                                              |                 |            |
| Macroinvertebrates           | MI-FW-QLDC                                               |                               |        |              |                                                                                              |                 |            |
| Organics (GC)                | W-PSNP-TQ                                                | W-TR-SQ-R                     |        | Ice          | *2.0 ml of H2SO4 Used Unless Noted Otherwise<br>**2.0 ml of HNO3 Used Unless Noted Otherwise |                 |            |
| Molecular                    |                                                          |                               |        |              |                                                                                              |                 |            |
| Periphyton                   |                                                          |                               |        |              |                                                                                              |                 |            |
| Phytoplankton                |                                                          |                               |        |              |                                                                                              |                 |            |
| BOD                          |                                                          |                               |        |              |                                                                                              |                 |            |
| DOC                          |                                                          |                               |        |              |                                                                                              |                 |            |
| Other(s)                     |                                                          |                               |        | SyringeLot#  |                                                                                              | FilterLot#      |            |
| Field Comments:              | / SCI Collection Time: 1025                              |                               |        |              |                                                                                              |                 |            |
| Comments on COC:             | Microbiology sample(s) submitted to contract laboratory. |                               |        |              |                                                                                              |                 |            |
| Relinquish Date:             | 08/22/2023                                               | Signature:                    |        |              |                                                                                              |                 |            |

LIMS EVENT ID: \_\_\_\_\_ WIN Import ID: \_\_\_\_\_

Enter Field Parameters, Verify Station ID In LIMS DMT: \_\_\_\_\_

(Initials/Date)

QC Station ID, Field Parameters In LIMS DMT: \_\_\_\_\_

(Initials/Date)

Save Field Sheets on Network: \_\_\_\_\_

(Initials/Date)

Migrate Data to WIN: \_\_\_\_\_

(Initials/Date)

Site Name Long Branch

Date: 8/22/23

WIN ID G4NW0051 Field ID G4NW0051

Project: SMP/TMDL Studies

Visit ID 87775

RQ: 2023-08-21-23

RPS ID 10143

LIMS ID: 2432995

Macro ID 12542

WBID: 22

HA ID 18613

☒ SCI

☐ RPS/LVS Only

☒ Sample Site Created in SBIO

☒ Phys/Chem in SBIO Initial FB

☒ Date and Initial QA: 9/18/23 JS

☒ HA entered in SBIO Initial FB

☒ Date and Initial QA: JS 9/18/23

☒ RPS entered in SBIO Initial FB

☒ Date and Initial QA: 9/18/23 JS

☒ LVS entered in SBIO Initial FB

☒ Date and Initial QA: 9/18/23 JS

☐ < 2 m<sup>2</sup> vegetation

☒ Plants getting verified

Date submitted: N/A

☒ Plants verified

Date returned: N/A

☒ RPS authorized in SBIO

☒ Date and Initial: 9/19/23 FB

☒ RPS score: 0.0

☒ Macro authorized in SBIO

☒ Date and Initial: FB

☒ LVS Score: FLORC 0, MAC 4.77

☒ SCI complete: M. Heyn 11/01/23 SCI Score: 48

☒ Add SBIO-ID, HA-ID, RPS-ID, MACROPHYTE-ID and LIMS# to field sheet in database

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

SAMPLE ID 07775 ORG ID 21FLPNS LATITUDE 30.93770  
 COUNTY Santa Rosa WIN ID/STORET # G4NW0051 LONGITUDE -86.96790  
 DATE 8/22/23 TIME 0925 CTZ  SAMPLING AGENCY FL DEP - NWROC  
 SITE NAME Long Branch RQ- 2023-08-21-23  
 FIELD ID/NAME G4NW0051 RECEIVING BODY OF WATER  WBID 22 Project: SMP

RIPARIAN ZONE / STREAM FEATURES WBID: 22 Proj: SMP LIMS ID: 2432995

|                                                                                                                                                                                                                                                                                                                                                                                                         |  |  |                                                                                                                                                                                                              |  |  |                                                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category):<br>Forest/Natural <input type="checkbox"/> Silviculture <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Commercial <input type="checkbox"/> Industry <input type="checkbox"/> Other (Specify) <input type="checkbox"/> |  |  |                                                                                                                                                                                                              |  |  | <b>Landscape Development Intensity Index (LDI)</b><br><u>N/A</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><br><u>6.55m</u> <u>3</u> m wide<br><u></u> m/s <u>.15</u> m/s <u></u> m/s<br><u></u> m deep <u>3</u> m deep <u></u> m deep |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank: <u>70</u> Right Bank: <u>210</u>                                                                                                                                                                                                                                                                                              |  |  | <b>Hydrologic Modification Score</b> (per FT 3101) <u>1-2</u>                                                                                                                                                |  |  |                                                                                                                                                                                         |
| <b>High Water Mark:</b> <u>8</u> + <u>3</u> = <u>1.1</u><br>(m) (above present water level) (present depth) (above bed)                                                                                                                                                                                                                                                                                 |  |  | <b>Artificially Impounded</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                         |  |  |                                                                                                                                                                                         |
| <b>Artificially</b> <input checked="" type="checkbox"/> No <input type="checkbox"/> Mostly recovered, more sinuous<br><b>Channelized:</b> <input type="checkbox"/> Some recovery <input type="checkbox"/> Recent, severe                                                                                                                                                                                |  |  | <b>Canopy Cover %</b> <input type="checkbox"/> Open <input type="checkbox"/> Lightly Shaded (11-45%)<br><input type="checkbox"/> Heavily Shaded <input checked="" type="checkbox"/> Moderate Shaded (46-80%) |  |  |                                                                                                                                                                                         |

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 checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/><br>Silt Smothering: None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input checked="" 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 checked="" type="checkbox"/> LVS<br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon<br><table border="1"> <thead> <tr> <th></th> <th>% Coverage</th> <th>INVERT<br/># Times Sampled</th> <th>PERI<br/># Times Sampled</th> </tr> </thead> <tbody> <tr> <td>Woody Debris (Snags)</td> <td><u>3.5</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Undercut Banks / Roots</td> <td><u>2.7</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Leaf Packs or Mat .....</td> <td><u>4.8</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Aquatic Vegetation .....</td> <td><u>31.0</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Rock or Shell Rubble..</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sand.....</td> <td><u>58</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Mud / Muck / Silt .....</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other .....</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other .....</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          | % Coverage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | INVERT<br># Times Sampled | PERI<br># Times Sampled | Woody Debris (Snags) | <u>3.5</u>                              | <u>4</u>                            |                          | Undercut Banks / Roots   | <u>2.7</u>               | <u>4</u> |                          | Leaf Packs or Mat .....  | <u>4.8</u>                          | <u>4</u>                 |                 | Aquatic Vegetation ..... | <u>31.0</u>              | <u>4</u>                 |                                     | Rock or Shell Rubble.. |                                     |                          |                          | Sand.....                | <u>58</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>4</u> |  | Mud / Muck / Silt ..... |  |  |  | Other ..... |  |  |  | Other ..... |  |  |  | <b>WATER QUALITY</b><br><table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.05</u></td> <td><u>25.2</u></td> <td><u>4.23</u></td> <td><u>5.42</u></td> <td><u>15.7</u></td> <td><u>27.3</u></td> <td><u>0.01</u></td> <td><u>0.1</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input checked="" type="checkbox"/> VOB</td> </tr> <tr> <td>Bottom:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> Meter ID: <u>154179</u> TOTAL DEPTH <u>0.1</u> |  |  |  | Depth (M) | Temp. (°C) | pH (SU) | D.O. (MG/L) | D.O. Sat (%) | Cond. (UMHO/CM) | Salinity (PPT) | SECCHI (M) | Top: | <u>0.05</u> | <u>25.2</u> | <u>4.23</u> | <u>5.42</u> | <u>15.7</u> | <u>27.3</u> | <u>0.01</u> | <u>0.1</u> | Mid: |  |  |  |  |  |  |  | <input checked="" type="checkbox"/> VOB | Bottom: |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | % Coverage                          | INVERT<br># Times Sampled                                                                                                                                                                                                                                   | PERI<br># Times Sampled                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Woody Debris (Snags)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <u>3.5</u>                          | <u>4</u>                                                                                                                                                                                                                                                    |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Undercut Banks / Roots                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <u>2.7</u>                          | <u>4</u>                                                                                                                                                                                                                                                    |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Leaf Packs or Mat .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <u>4.8</u>                          | <u>4</u>                                                                                                                                                                                                                                                    |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Aquatic Vegetation .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <u>31.0</u>                         | <u>4</u>                                                                                                                                                                                                                                                    |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Rock or Shell Rubble..                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Sand.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>58</u>                           | <u>4</u>                                                                                                                                                                                                                                                    |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Mud / Muck / Silt .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Other .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Other .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Depth (M)                           | Temp. (°C)                                                                                                                                                                                                                                                  | pH (SU)                                                                                                                                                                  | D.O. (MG/L)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | D.O. Sat (%)              | Cond. (UMHO/CM)         | Salinity (PPT)       | SECCHI (M)                              |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Top:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <u>0.05</u>                         | <u>25.2</u>                                                                                                                                                                                                                                                 | <u>4.23</u>                                                                                                                                                              | <u>5.42</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>15.7</u>               | <u>27.3</u>             | <u>0.01</u>          | <u>0.1</u>                              |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Mid:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      | <input checked="" type="checkbox"/> VOB |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Bottom:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| <b>ABUNDANCE</b><br><table border="1"> <thead> <tr> <th></th> <th>Not Obs.</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Fish:</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Aquatic Plants:</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table>                                                                                                                                                                                                                                  |                                     |                                                                                                                                                                                                                                                             |                                                                                                                                                                          | Not Obs.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Rare                      | Common                  | Abundant             | Periphyton:                             | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Fish:    | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | Aquatic Plants: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Iron/Sulfur Bacteria:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <b>Water Odors</b> Normal <input checked="" type="checkbox"/> Petroleum <input type="checkbox"/><br>Sewage <input type="checkbox"/> Chemical <input type="checkbox"/> Other <input type="checkbox"/><br><b>Water Sample Taken?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br><b>Sample Preserved?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot Number: _____ Exp: _____<br><b>Algae Sample Taken?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br><b>Sample Preserved?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot Number: _____ Exp: _____<br><b>Water Surface Oils</b> Normal <input checked="" type="checkbox"/> Sheen <input type="checkbox"/><br>Globbs <input type="checkbox"/> Slick <input type="checkbox"/> Other <input type="checkbox"/><br><b>Color</b> Tannic <input checked="" type="checkbox"/> Green (Algae) <input type="checkbox"/><br>Clear <input type="checkbox"/> Other (Specify) <input type="checkbox"/><br><b>Clarity</b> Clear <input type="checkbox"/> Slightly Turbid <input type="checkbox"/><br>Turbid <input checked="" type="checkbox"/> Opaque <input type="checkbox"/> |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Not Obs.                            | Rare                                                                                                                                                                                                                                                        | Common                                                                                                                                                                   | Abundant                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Periphyton:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                                                                                                                                                                                                                    | <input type="checkbox"/>                                                                                                                                                 | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Fish:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/>            | <input type="checkbox"/>                                                                                                                                                                                                                                    | <input checked="" type="checkbox"/>                                                                                                                                      | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Aquatic Plants:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/>            | <input type="checkbox"/>                                                                                                                                                                                                                                    | <input type="checkbox"/>                                                                                                                                                 | <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| Iron/Sulfur Bacteria:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                                                                                                                                                                                                                    | <input type="checkbox"/>                                                                                                                                                 | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |
| <b>System Type:</b> Stream <input checked="" type="checkbox"/> Lake <input type="checkbox"/> Wetland <input type="checkbox"/> Estuary <input type="checkbox"/> Other(Specify) <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                     |                                                                                                                                                                                                                                                             | <b>AMBIENT FIELD CONDITIONS / NOTES:</b><br><u>mostly slow flow</u><br><input type="checkbox"/> The antecedent hydrologic conditions have been met to my best knowledge. |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                           |                         |                      |                                         |                                     |                          |                          |                          |          |                          |                          |                                     |                          |                 |                          |                          |                          |                                     |                        |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |  |           |            |         |             |              |                 |                |            |      |             |             |             |             |             |             |             |            |      |  |  |  |  |  |  |  |                                         |         |  |  |  |  |  |  |  |  |

SAMPLING TEAM: L. McNally / S. Stade

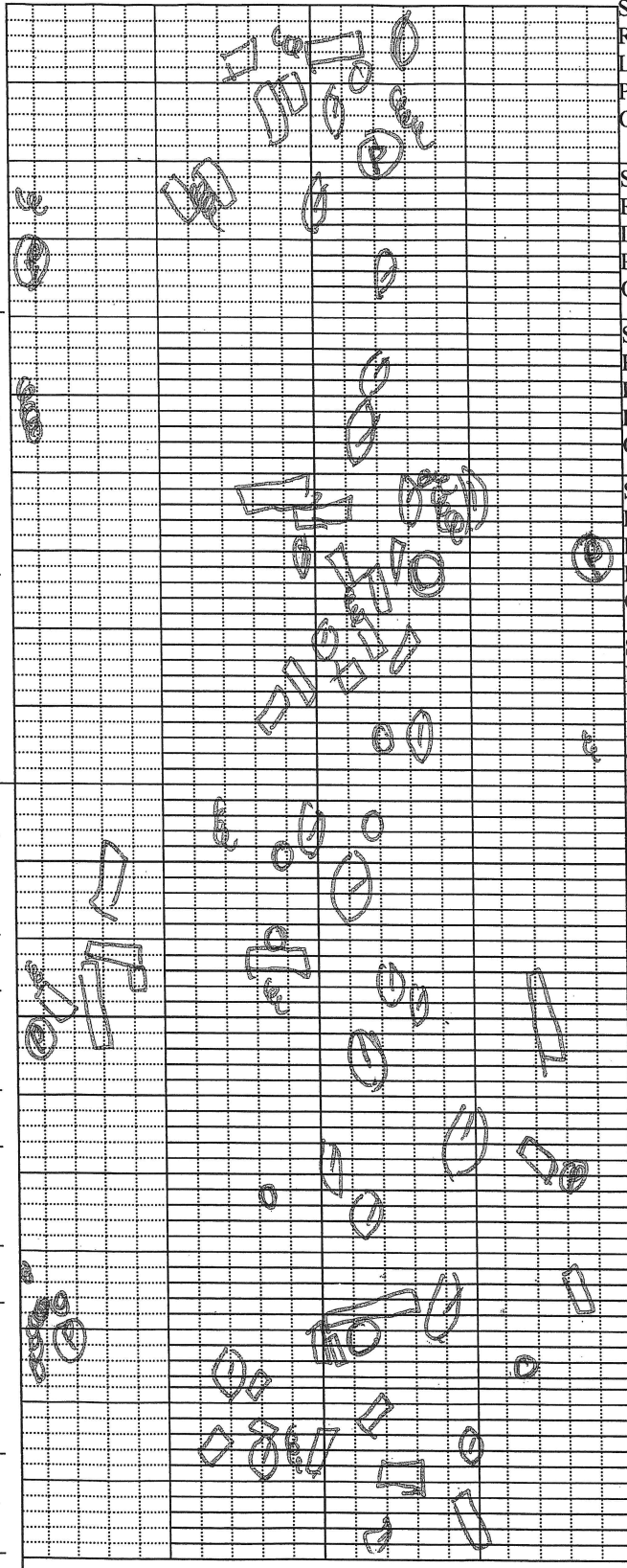
SIGNATURE: L. McNally

DATE: 8/22/23

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (June 1, 2001)

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

100  
BF  
%S  
Vg  
90  
BF  
%S  
Vg  
80  
BF  
%S  
Vg  
70  
BF  
%S  
Vg  
60  
BF  
%S  
Vg  
50  
BF  
%S  
Vg  
40  
BF  
%S  
Vg  
30  
BF  
%S  
Vg  
20  
BF  
%S  
Vg  
10  
BF  
%S  
Vg



Snag 1.6, 4  
Root 1.3, 2  
LP 1.5  
Plant 1.7  
OTR

Snag 1.6  
Root 1.1, 4  
LP 10  
Plant 10  
OTR

Snag  
Root 1.8  
LP  
Plant 15  
OTR

Snag 1.2, 6  
Root 1.1, 3  
LP 1.5  
Plant 1.2, 2  
OTR

Snag 1.2, 5.5  
Root 1.1  
LP 1.3  
Plant 1.1  
OTR

Snag 1.5  
Root 1.5  
LP 1.6  
Plant 1.5, 3  
OTR

Snag 1.4, 1.4, 1.3  
Root 1.1, 2  
LP 1.2  
Plant 1.2, 2.5, 1.5  
OTR

Snag 1.5  
Root  
LP 1  
Plant 1.1  
OTR

Snag 1.2, 4, 1  
Root 1.3  
LP 1.3, 2  
Plant 1.4, 3  
OTR

Snag 1.3, 1.1, 1.5  
Root 1.1  
LP 1.2, 1.5, 4  
Plant  
OTR

WIN ID

Substrates: Code key,  
draw proportionate habitat  
abundance.

☐ Snags

☐ Roots/undercut banks

☐ Leaf Packs (or mats)

☐ Macrophytes

☐

☐

☐

Velocity:

Note where velocity  
measures were taken. m

Habitat Smothering:

Note areas (on map) where  
sand or silt is something  
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.

Average width 2.5 m

Average depth 3 m

WQ & chemistry taken @ 20 m

Station Name:

Long Branch

Project.

Sampled By/Date: 8/12/23

0 m Latt. 30.93770

0 m Long. -86.96790

100 m Latt 30.93834

100 m Long -86.96853

Left  
Bank

Downstream

3.3  
2  
TO  
1.0  
.6  
1.8  
1.2  
.8  
1.2  
.2  
.7  
Snag 1.2  
9.4  
root 6.7  
leaf 11.4  
plant 8  
10  
15  
2  
5  
17  
3  
12  
5  
87  
83.3



| 0-10 meter [A]  | Habitat Area (M) | Left Bank | Right Bank |
|-----------------|------------------|-----------|------------|
|                 | Snag             | Bankfull  | Bankfull   |
| 0m width (m) 2  | Root             | +         | +          |
| 10m width 3     | Leaf             | Slope     | Slope      |
| Avg. Depth .2   | Veg              | +         | +          |
| Max Depth .4    | Gravel           | Veg +     | Veg +      |
| Rip. Buff L 7.0 | Rock             |           |            |
| Rip. Buff R 7.5 | Other            |           |            |

| 10-20 meter [B]  | Habitat Area (M) | Left Bank | Right Bank |
|------------------|------------------|-----------|------------|
|                  | Snag             | Bankfull  | Bankfull   |
| 20m width 2      | Root             | -         | -          |
|                  | Leaf             | Slope     | Slope      |
| Avg. Depth .2    | Veg              | +         | +          |
| Max Depth .3     | Gravel           | Veg +     | Veg +      |
| Rip. Buff L 7.15 | Rock             |           |            |
| Rip. Buff R 7.15 | Other            |           |            |

| 20-30 meter [C] | Habitat Area (M) | Left Bank | Right Bank |
|-----------------|------------------|-----------|------------|
|                 | Snag             | Bankfull  | Bankfull   |
| 30m width 4     | Root             | +         | +          |
|                 | Leaf             | Slope     | Slope      |
| Avg. Depth .1   | Veg              | +         | +          |
| Max Depth       | Gravel           | Veg +     | Veg +      |
| Rip. Buff L     | Rock             |           |            |
| Rip. Buff R     | Other            |           |            |

| 30-40 meter [D] | Habitat Area (M) | Left Bank | Right Bank |
|-----------------|------------------|-----------|------------|
|                 | Snag             | Bankfull  | Bankfull   |
| 40m width 3     | Root             | +         | +          |
|                 | Leaf             | Slope     | Slope      |
| Avg. Depth .1   | Veg              | +         | +          |
| Max Depth       | Gravel           | Veg +     | Veg +      |
| Rip. Buff L     | Rock             |           |            |
| Rip. Buff R     | Other            |           |            |

| 40 - 50 meter [E] | Habitat Area (M) | Left Bank | Right Bank |
|-------------------|------------------|-----------|------------|
|                   | Snag             | Bankfull  | Bankfull   |
| 50m width 3       | Root             |           |            |
|                   | Leaf             | Slope     | Slope      |
| Avg. Depth        | Veg              |           |            |
| Max Depth         | Gravel           | Veg +     | Veg +      |
| Rip. Buff L       | Rock             |           |            |
| Rip. Buff R       | Other            |           |            |

| 50-60 meter [F] | Habitat Area (M) | Left Bank | Right Bank |
|-----------------|------------------|-----------|------------|
|                 | Snag             | Bankfull  | Bankfull   |
| 60m width 2     | Root             |           | +          |
|                 | Leaf             | Slope     | Slope      |
| Avg. Depth .1   | Veg              |           |            |
| Max Depth       | Gravel           | Veg +     | Veg +      |
| Rip. Buff L     | Rock             |           |            |
| Rip. Buff R     | Other            |           |            |

| 60-70 meter [G] | Habitat Area (M) | Left Bank | Right Bank |
|-----------------|------------------|-----------|------------|
|                 | Snag             | Bankfull  | Bankfull   |
| 70m width 2     | Root             | +         | +          |
|                 | Leaf             | Slope     | Slope      |
| Avg. Depth      | Veg              | +         | +          |
| Max Depth       | Gravel           | Veg       | Veg +      |
| Rip. Buff L     | Rock             | +         | +          |
| Rip. Buff R     | Other            |           |            |

| 70-80 meter [H] | Habitat Area (M) | Left Bank | Right Bank |
|-----------------|------------------|-----------|------------|
|                 | Snag             | Bankfull  | Bankfull   |
| 80m width 2     | Root             | +         | -          |
|                 | Leaf             | Slope     | Slope      |
| Avg. Depth      | Veg              | +         | +          |
| Max Depth       | Gravel           | Veg +     | Veg +      |
| Rip. Buff L     | Rock             |           |            |
| Rip. Buff R     | Other            |           |            |

| 80-90 meter [I] | Habitat Area (M) | Left Bank | Right Bank |
|-----------------|------------------|-----------|------------|
|                 | Snag             | Bankfull  | Bankfull   |
| 90m width 3     | Root             |           |            |
|                 | Leaf             | Slope     | Slope      |
| Avg. Depth      | Veg              | +         | +          |
| Max Depth       | Gravel           | Veg +     | Veg +      |
| Rip. Buff L     | Rock             |           |            |
| Rip. Buff R     | Other            |           |            |

| 90 - 100 meter [J] | Habitat Area (M) | Left Bank | Right Bank |
|--------------------|------------------|-----------|------------|
|                    | Snag             | Bankfull  | Bankfull   |
| 100m width         | Root             |           |            |
|                    | Leaf             | Slope     | Slope      |
| Avg. Depth         | Veg              |           |            |
| Max Depth          | Gravel           | Veg       | Veg        |
| Rip. Buff L        | Rock             |           |            |
| Rip. Buff R        | Other            |           |            |

Station Name

Long Br. Velocity  
Storet: 64W0001  
Date 8/22/13 6.39/m  
0 meter (Dec Deg)

100 meter (Dec Deg)

Water Quality Measured at

Stream Velocity and location.

0.15 m/s meter mark

Number of Pools & Location

High Water: 0.8

Silt smothering @

Sand Smothering @

Algae Smothering @

Degraded Banks @

Fe/Sulfur Bact. @

| Total Habitat  | Sq. Meters | Percent |
|----------------|------------|---------|
| Snags          | 8.7        | 3.5     |
| Roots          | 6.2        | 2.7     |
| Leaf           | 11.9       | 4.8     |
| Veg            | 77.3       | 31%     |
| Rock           |            |         |
| Gravel         |            |         |
| Sand           |            |         |
| Other          |            |         |
| Sum 1° Habitat |            |         |

| Avg. Depth | Max. Depth | Avg. Width |
|------------|------------|------------|
|            |            | 2.5        |

Bank Stability Score. Left Bank \_\_\_\_\_ Right Bank \_\_\_\_\_ Category Left Bk \_\_\_\_\_ Right Bk \_\_\_\_\_  
Add all plus signs (Max. 30 possible) and Divide by 10. Scoring. Poor: 0.0 - 0.9 pts. Marginal: 1.0-1.9 pts. Suboptimal: 2.0 - 2.9 Optimal: 2.1 +

Notes.

SR10 ID 87775

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

|                                      |                              |                                           |                                    |                          |
|--------------------------------------|------------------------------|-------------------------------------------|------------------------------------|--------------------------|
| SAMPLING AGENCY: DEAR-NWROC. 21FLPNS |                              | STORET STATION NUMBER:<br><u>G4NW0051</u> | DATE (MM/DD/YY):<br><u>8/22/23</u> | RECEIVING BODY OF WATER: |
| REMARKS:                             | COUNTY:<br><u>Santa Rosa</u> | LOCATION:<br><u>Long Branch</u>           | FIELD ID/NAME:<br><u>G4NW0051</u>  |                          |
| WBID <u>12</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>18</u>                                                                                         | 20 19 <u>18</u> 17 16                                                                                                                                                                                                            | 15 14 13 12 11                                                                                                                                                          | 10 9 8 7 6                                                                                                                                        | 5 4 3 2 1                                                                                                                                  |
| Substrate Availability <u>20</u>                                                                                      | Greater than 30% major productive habitat present at site<br><u>20</u> 19 18 17 16                                                                                                                                               | 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>12</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 <u>12</u> 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>15</u><br>-----<br>Primary Score <u>165</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 18 17 16                                                                                                | Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.<br><u>15</u> 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<br>Artificial Channelization <u>20</u>                                                   | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.<br><u>20</u> 19 18 17 16                                                                                         | Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.<br>15 14 13 12 11                                          | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.<br>10 9 8 7 6                 | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.<br>5 4 3 2 1 |
| Bank Stability<br>Right Bank <u>9</u> <u>1</u><br>Left Bank                                                           | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas.<br>10 <u>9</u>                                                            | Only meets 2 of the 3 requirements for optimal bank stability.<br>8 7 6                                                                                                 | Only meets 1 of the 3 requirements for optimal bank stability.<br>5 4                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.<br>3 2 1                       |
| Riparian Buffer Zone Width<br>Right Bank <u>10</u> <u>10</u><br>Left Bank                                             | Width of vegetation greater than 18 m<br><u>10</u> 9                                                                                                                                                                             | Width of vegetation >12 to 18m<br>8 7 6                                                                                                                                 | Width of vegetation 6 to 12 m. human activities close to system<br>5 4                                                                            | Less than 6 m of buffer zone due to intensive human activities<br>3 2 1                                                                    |
| Riparian Zone Vegetation Quality<br>Right Bank <u>10</u> <u>10</u><br>Left Bank<br>-----<br>Secondary Score <u>78</u> | 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.<br><u>10</u> 9 | >50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.<br>8 7 6 | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.<br>5 4 | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).<br>3 2 1         |

143

**TOTAL SCORE**

|                      |                           |                             |
|----------------------|---------------------------|-----------------------------|
| Date: <u>8/22/23</u> | Analyst: <u>L McNally</u> | Signature: <u>L McNally</u> |
|----------------------|---------------------------|-----------------------------|

SBIO ID: B7775  
62-160.800, F.A.C.

HA ID: 18613

Revision Date: March 1, 2014

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

| Site: <u>Long Branch</u> |                            |                                  |           |              | County: <u>Santa Rosa</u>              |                            | Date: <u>8/22/23</u>             |           | Investigators: <u>L. McNally/S. Slade</u> |  |
|--------------------------|----------------------------|----------------------------------|-----------|--------------|----------------------------------------|----------------------------|----------------------------------|-----------|-------------------------------------------|--|
|                          |                            |                                  |           |              | STORET Station Number: <u>G4NWOOS1</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                          | N                                | No        | 73           | 60                                     | 1                          | N                                | No        | 52                                        |  |
|                          | 2                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 3                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 4                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 5                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 6                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 7                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 8                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 9                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
| 10                       | 1                          | N                                | No        | 61           | 70                                     | 1                          | N                                | No        | 66                                        |  |
|                          | 2                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 3                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 4                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 5                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 6                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 7                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 8                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 9                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
| 20                       | 1                          | N                                | No        | 60           | 80                                     | 1                          | N                                | No        | 56                                        |  |
|                          | 2                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 3                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 4                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 5                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 6                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 7                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 8                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 9                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
| 30                       | 1                          | N                                | No        | 91           | 90                                     | 1                          | N                                | No        | 74                                        |  |
|                          | 2                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 3                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 4                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 5                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 6                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 7                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 8                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 9                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
| 40                       | 1                          | N                                | No        | 85           | 100                                    | 1                          | N                                | No        | 63                                        |  |
|                          | 2                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 3                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 4                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 5                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 6                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 7                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 8                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 9                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
| 50                       | 1                          | N                                | No        | 71           |                                        | 1                          | N                                | No        |                                           |  |
|                          | 2                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 3                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 4                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 5                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 6                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 7                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 8                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |
|                          | 9                          |                                  |           |              |                                        |                            |                                  |           |                                           |  |

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 0.1  
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   
Linear Veg Survey 1  
Habitat Assessment 1  
SCI/Biorecon 1  
Water sample 1  
RQ-2023-08-21-23

| 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                                  |

SBIO Visit ID. 87775

RPS ID. 10143

RPS Score 0

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

Waterbody: Long Branch Date: 8/22/23 County: Santa Rosa Storet Number: G4NW0051  
 Analyst: L McNally, S. Stode Signature: L McNally

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m<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.

| HERBACEOUS SPECIES                                             | Meter Mark |       |       |       |       |       |       |       |       |        | Specimen collected (check) | HERBACEOUS SPECIES        | Meter Mark |       |       |       |       |       |       |       |       |        | Specimen collected (check) |
|----------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------------------------|---------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------------------------|
|                                                                | 0-10       | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 |                            |                           | 0-10       | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 |                            |
| Alternanthera philoxeroides                                    |            |       |       |       |       |       |       |       |       |        |                            | Micranthemum glomeratum   |            |       |       |       |       |       |       |       |       |        |                            |
| Bacopa caroliniana                                             |            |       |       |       |       |       |       |       |       |        |                            | Micranthemum umbrosum     |            |       |       |       |       |       |       |       |       |        |                            |
| Bacopa monnieri                                                |            |       |       |       |       |       |       |       |       |        |                            | Myriophyllum aquaticum    |            |       |       |       |       |       |       |       |       |        |                            |
| Bidens mitis                                                   |            |       |       |       |       |       |       |       |       |        |                            | Najas guadelupensis       |            |       |       |       |       |       |       |       |       |        |                            |
| Boehmeria cylindrica                                           |            |       |       |       |       |       |       |       |       |        |                            | Nuphar luteum             |            |       |       |       |       |       |       |       |       |        |                            |
| Centella asiatica                                              |            |       |       |       |       |       |       |       |       |        |                            | Orontium aquaticum        |            |       |       |       |       |       |       |       |       |        |                            |
| Ceratophyllum demersum                                         |            |       |       |       |       |       |       |       |       |        |                            | Panicum hemitomon         |            |       |       |       |       |       |       |       |       |        |                            |
| Chara                                                          |            |       |       |       |       |       |       |       |       |        |                            | Panicum repens            |            |       |       |       |       |       |       |       |       |        |                            |
| Cicuta maculata                                                |            |       |       |       |       |       |       |       |       |        |                            | Panicum rigidulum         |            |       |       |       |       |       |       |       |       |        |                            |
| Cladium jamaicense                                             |            |       |       |       |       |       |       |       |       |        |                            | Pistia stratioides        |            |       |       |       |       |       |       |       |       |        |                            |
| Colocasia esculenta                                            |            |       |       |       |       |       |       |       |       |        |                            | Polygonum glabra          |            |       |       |       |       |       |       |       |       |        |                            |
| Commelina diffusa                                              |            |       |       |       |       |       |       |       |       |        |                            | Polygonum hydropiperoides |            |       |       |       |       |       |       |       |       |        |                            |
| Commelina virginica                                            |            |       |       |       |       |       |       |       |       |        |                            | Polygonum punctatum       |            |       |       |       |       |       |       |       |       |        |                            |
| Crinum americanum                                              |            |       |       |       |       |       |       |       |       |        |                            | Pontedaria cordata        |            |       |       |       |       |       |       |       |       |        |                            |
| Diodia virginiana                                              |            |       |       |       |       |       |       |       |       |        |                            | Potamogeton illinoensis   |            |       |       |       |       |       |       |       |       |        |                            |
| Eichhornia crassipes                                           |            |       |       |       |       |       |       |       |       |        |                            | Ruellia simplex           |            |       |       |       |       |       |       |       |       |        |                            |
| Eleocharis (wispy viviparous)                                  |            |       |       |       |       |       |       |       |       |        |                            | Sacciolepis striata       |            |       |       |       |       |       |       |       |       |        |                            |
| Hydrilla verticillata                                          |            |       |       |       |       |       |       |       |       |        |                            | Sagittaria kurziana       |            |       |       |       |       |       |       |       |       |        |                            |
| Hydrocotyle                                                    |            |       |       |       |       |       |       |       |       |        |                            | Sagittaria lancifolia     |            |       |       |       |       |       |       |       |       |        |                            |
| Hygrophila polysperma                                          |            |       |       |       |       |       |       |       |       |        |                            | Sagittaria latifolia      |            |       |       |       |       |       |       |       |       |        |                            |
| Hymenocallis                                                   |            |       |       |       |       |       |       |       |       |        |                            | Salvinia minima           |            |       |       |       |       |       |       |       |       |        |                            |
| Lachnanthes caroliniana                                        |            |       |       |       |       |       |       |       |       |        |                            | Samolus parviflora        |            |       |       |       |       |       |       |       |       |        |                            |
| Landoltia punctata                                             |            |       |       |       |       |       |       |       |       |        |                            | Saururus cernuus          |            |       |       |       |       |       |       |       |       |        |                            |
| Lemna                                                          |            |       |       |       |       |       |       |       |       |        |                            | Sparganium americanum     |            |       |       |       |       |       |       |       |       |        |                            |
| Limnophila sessiflora                                          |            |       |       |       |       |       |       |       |       |        |                            | Typha                     |            |       |       |       |       |       |       |       |       |        |                            |
| Ludwigia leptocarpa                                            |            |       |       |       |       |       |       |       |       |        |                            | Vallisneria americana     |            |       |       |       |       |       |       |       |       |        |                            |
| Ludwigia palustris                                             |            |       |       |       |       |       |       |       |       |        |                            | Zizania aquatica          |            |       |       |       |       |       |       |       |       |        |                            |
| Ludwigia peruviana                                             |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |
| Ludwigia repens                                                |            |       |       |       |       |       |       |       |       |        |                            | <del>Eurcolia</del>       |            |       |       |       |       |       |       |       |       |        |                            |
| Luziola fluitans                                               |            |       |       |       |       |       |       |       |       |        |                            | <del>Not neverwet</del>   |            |       |       |       |       |       |       |       |       |        |                            |
|                                                                |            |       |       |       |       |       |       |       |       |        |                            | Xyris                     |            |       |       |       |       |       |       |       |       |        |                            |
|                                                                |            |       |       |       |       |       |       |       |       |        |                            | birds head *              |            |       |       |       |       |       |       |       |       |        |                            |
|                                                                |            |       |       |       |       |       |       |       |       |        |                            | microphyllum native       |            |       |       |       |       |       |       |       |       |        |                            |
|                                                                |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |
|                                                                |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |
| If no Dominant or Co-Dominant were selected, indicate with "X" |            |       |       |       |       |       |       |       |       |        |                            | Eriocaulon                |            |       |       |       |       |       |       |       |       |        |                            |
| Indicate % cover macrophytes per section                       |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |
| 0-5% Macrophyte Coverage                                       |            |       |       |       |       |       |       |       |       |        |                            | Rhynchospora              |            |       |       |       |       |       |       |       |       |        |                            |
| >5 and ≤10% Macrophyte Coverage                                |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |
| >10 and ≤25% Macrophyte Coverage                               |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |
| >25 and ≤50% Macrophyte Coverage                               |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |
| > 50% Macrophyte Coverage                                      |            |       |       |       |       |       |       |       |       |        |                            |                           |            |       |       |       |       |       |       |       |       |        |                            |

Field ID: G4NW0051

RPS ID: 10143

SBIO ID: 87775

VPDB ID: 12542

LIMS ID: 2432995