



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: G2TLHR0041 Unnamed Branch @ Hardaway Rd 2 Date: 03/26/2019

WIN/ Field ID: G2TLHR0041 WBID: 488 Latitude: 30.6306

County: Alachua ORG ID: 21FLTLHR Longitude: 84.7664

Receiving Body of Water: Flat Creek RQ: 2018-12-31-35

| Sampling Team Members                                                                                 |             |                                                                                                                                                                                                                                                         |                  |                 | WQ Measurements                                  | Sample Collection                   | Documentation                                                                     | Preservation                        | Preservation Check                  | Sampling Equipment                                   |                                         |                               |  |  |                             |  |  |  |  |
|-------------------------------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-----------------|--------------------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|------------------------------------------------------|-----------------------------------------|-------------------------------|--|--|-----------------------------|--|--|--|--|
| <u>Ben Harden</u><br><u>Eric Butcher</u><br><u>Chris Green</u>                                        |             |                                                                                                                                                                                                                                                         |                  |                 | <input checked="" type="checkbox"/>              | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/>                                               | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> Sample Container | <input type="checkbox"/> Van Dorn       | <input type="checkbox"/> Pole |  |  |                             |  |  |  |  |
|                                                                                                       |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     | <input type="checkbox"/> Carboy                      | <input type="checkbox"/> Syringe        |                               |  |  |                             |  |  |  |  |
|                                                                                                       |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     | <input type="checkbox"/> Dipper                      | <input type="checkbox"/> Other          |                               |  |  |                             |  |  |  |  |
|                                                                                                       |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     | Depth Measured with <u>ProDS</u>                     |                                         |                               |  |  |                             |  |  |  |  |
|                                                                                                       |             |                                                                                                                                                                                                                                                         |                  |                 | Equipment ID <u>155075</u>                       |                                     |                                                                                   |                                     |                                     | Collection Method                                    |                                         |                               |  |  |                             |  |  |  |  |
|                                                                                                       |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     | <input checked="" type="checkbox"/> Wading           | <input type="checkbox"/> Canoe/Kayak    |                               |  |  |                             |  |  |  |  |
|                                                                                                       |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     | <input type="checkbox"/> From Shore                  | <input type="checkbox"/> Electric Motor |                               |  |  |                             |  |  |  |  |
|                                                                                                       |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     | <input type="checkbox"/> Other                       | <input type="checkbox"/> Gasoline Motor |                               |  |  |                             |  |  |  |  |
| Water Level: Dry/ Pooled/ <u>Low</u> / Normal / High / Flooded                                        |             |                                                                                                                                                                                                                                                         |                  |                 | Meter ID# <u>155075</u>                          |                                     |                                                                                   |                                     |                                     | Matrix: <u>Fresh</u> / Marine / DI                   |                                         |                               |  |  |                             |  |  |  |  |
| Photos: <u>Yes</u> / No                                                                               |             |                                                                                                                                                                                                                                                         |                  |                 | Flow: No Flow / Intestinal / <u>Flowing</u> / NA |                                     |                                                                                   |                                     |                                     | Tide: Rising/ Falling/ Slack/ <u>NA</u>              |                                         |                               |  |  | Tide Times: High <u>Low</u> |  |  |  |  |
| Time Zone                                                                                             | Time        | Total Depth (m)                                                                                                                                                                                                                                         | Sample Depth (m) | Secchi Disk (m) | DO (mg/L)                                        | DO (%SAT)                           | pH                                                                                | Salinity (PPT)                      | Sp COND (µmhos/cm)                  | Temp. (C°)                                           |                                         |                               |  |  |                             |  |  |  |  |
| <u>EST</u>                                                                                            | <u>0940</u> | <u>0.4</u>                                                                                                                                                                                                                                              | <u>0.2</u>       | <u>0.45</u>     | <u>94.7</u>                                      | <u>92.0</u>                         | <u>7.5</u>                                                                        | <u>0.01</u>                         | <u>25.1</u>                         | <u>16.8</u>                                          |                                         |                               |  |  |                             |  |  |  |  |
| CEN                                                                                                   |             |                                                                                                                                                                                                                                                         |                  |                 | <u>9.20</u>                                      | <u>94.7</u>                         |                                                                                   |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>RPS</u> Algae ID <u>LVS</u> LVI Other:     |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| SBIO ID Numbers: SBIO-ID: <u>79287</u> HA-ID: <u>15714</u> RPS-ID: <u>92826</u> Macrophyte-ID: LIMS#: |             |                                                                                                                                                                                                                                                         |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Parameter Suite                                                                                       |             | Parameter Methods                                                                                                                                                                                                                                       |                  |                 |                                                  |                                     | Preservation                                                                      | Lot#                                | Expiration                          | pH Check                                             |                                         |                               |  |  |                             |  |  |  |  |
| Preserved Nutrients                                                                                   |             | <input checked="" type="checkbox"/> W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP                                                                                                                                                                         |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H2SO4 | <u>S48344080</u>                    | <u>12/10/19</u>                     | <input checked="" type="checkbox"/> <2               |                                         |                               |  |  |                             |  |  |  |  |
| Metals                                                                                                |             | <input checked="" type="checkbox"/> W-ICPMS <input checked="" type="checkbox"/> W-ICP                                                                                                                                                                   |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> HNO3  | <u>N48344050</u>                    | <u>12/10/19</u>                     | <input checked="" type="checkbox"/> <2               |                                         |                               |  |  |                             |  |  |  |  |
| Filtered Nutrients                                                                                    |             | <input checked="" type="checkbox"/> W-PO4-F <input checked="" type="checkbox"/> Field Filtered 0.45 µm Filter                                                                                                                                           |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Chlorophyll                                                                                           |             | <input checked="" type="checkbox"/> CHLSUITE-W                                                                                                                                                                                                          |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Physical/Aggregate (Fresh)                                                                            |             | <input checked="" type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS                                                                                                                                         |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Physical/Aggregate (Marine)                                                                           |             | <input type="checkbox"/> Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY                                                                                                                                                                                 |                  |                 |                                                  |                                     | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Macroinvertebrates                                                                                    |             | <input type="checkbox"/> MI-FW-QLDC                                                                                                                                                                                                                     |                  |                 |                                                  |                                     | <input type="checkbox"/> Formalin                                                 |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Periphyton                                                                                            |             | <input checked="" type="checkbox"/> ALGAE-ID                                                                                                                                                                                                            |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Microbiology                                                                                          |             | <input checked="" type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enterococci                                                                                                                                         |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Molecular                                                                                             |             | <input type="checkbox"/> PCR-FILTER <input type="checkbox"/> PCR-BacR <input type="checkbox"/> PCR-GULL2<br><input type="checkbox"/> PCR-HF1B3 <input type="checkbox"/> PCR-DG3 <input type="checkbox"/> PCR-GFD                                        |                  |                 |                                                  |                                     | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Tracers                                                                                               |             | <input type="checkbox"/> W-E8321-DI <input type="checkbox"/> W-E8321-MS                                                                                                                                                                                 |                  |                 |                                                  |                                     | <input type="checkbox"/> Ice                                                      |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Pesticides                                                                                            |             | <input checked="" type="checkbox"/> W-PSNP-TQ <input type="checkbox"/> W-CT-CL-R <input checked="" type="checkbox"/> W-E8321-DI<br><input type="checkbox"/> W-PCL-SQ-R <input checked="" type="checkbox"/> WE8321-MS <input type="checkbox"/> W-CARB-AA |                  |                 |                                                  |                                     | <input checked="" type="checkbox"/> Ice                                           |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |
| Phytoplankton                                                                                         |             | <input type="checkbox"/> DTY-QN-C <input type="checkbox"/> PKD-QN-C                                                                                                                                                                                     |                  |                 |                                                  |                                     |                                                                                   |                                     |                                     |                                                      |                                         |                               |  |  |                             |  |  |  |  |

## Notes:

SBIO station created 3/27

Field/WIN ID →



G2TLHR0041

Location ↓

Unnamed Branch @ Hardaway Rd 2

Signature: [Signature]

Date: 03/26/2019

LIMS EVENT ID: TLH-ROC-2019-03-26-01

WIN Import ID:

Enter Field Parameters, Verify Station ID in LIMS DMT: 03-27-19

QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets 03-27-19 Migrate Data to WIN: 03-27-19

Verify Data in WIN:

(Initials/Date)

(Initials/Date)

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

|                                 |                           |                                                  |                                     |                                               |
|---------------------------------|---------------------------|--------------------------------------------------|-------------------------------------|-----------------------------------------------|
| SAMPLING AGENCY:<br><u>8034</u> |                           | STORET-STATION NUMBER:<br><u>GZTLHR0041</u>      | DATE (MM/DD/YY):<br><u>3/26/19</u>  | RECEIVING BODY OF WATER:<br><u>Flat Creek</u> |
| REMARKS:                        | COUNTY:<br><u>Gadsden</u> | LOCATION:<br><u>Unimetal Branch @ Hardaway 2</u> | FIELD ID/NAME:<br><u>GZTLHR0041</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>12</u>                                                     | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                 | 10 9 8 7 6                                                                                                                                 | 5 4 3 2 1                                                                                                                     |
| Substrate Availability <u>4</u>                                                   | Greater than 30% major productive habitat present at site<br>20 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>20</u>                                                          | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec<br>≥0.33 0.31 0.29 0.27 >0.25<br>20 19 18 17 16                                                                                                    | Max. observed at typical transect: >0.1 to 0.25 m/sec<br>0.25 0.21 0.17 0.13 >0.1<br>15 14 13 12 11                                                            | Max. observed at typical transect: 0.05 to 0.1 m/sec<br>0.1 0.09 0.07 0.06 0.05<br>10 9 8 7 6                                              | Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec<br><0.05 0.04 0.03 0.01 <0.01<br>5 4 3 2 1      |
| Habitat Smothering <u>12</u><br>-----<br>Primary Score <u>52</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>15 14 13 12 11                              | Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).<br>10 9 8 7 6         | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br>5 4 3 2 1                            |
| Secondary Habitat Components                                                      | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.                                                                                                   | Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.                                  | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.                        | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. |
| Artificial Channelization <u>19</u>                                               | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                 | 10 9 8 7 6                                                                                                                                 | 5 4 3 2 1                                                                                                                     |
| Bank Stability                                                                    | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas.                                                      | Only meets 2 of the 3 requirements for optimal bank stability.                                                                                                 | Only meets 1 of the 3 requirements for optimal bank stability.                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.             |
| Right Bank <u>8</u><br>Left Bank <u>7</u>                                         | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |
| Riparian Buffer Zone Width                                                        | Width of vegetation greater than 18 m                                                                                                                                                                             | Width of vegetation >12 to 18m                                                                                                                                 | Width of vegetation 6 to 12 m. human activities close to system                                                                            | Less than 6 m of buffer zone due to intensive human activities                                                                |
| Right Bank <u>10</u><br>Left Bank <u>9</u>                                        | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |
| Riparian Zone Vegetation Quality                                                  | Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. | >50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).     |
| Right Bank <u>10</u><br>Left Bank <u>10</u><br>-----<br>Secondary Score <u>73</u> | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |

125 **TOTAL SCORE**

|                        |                                                                          |                               |
|------------------------|--------------------------------------------------------------------------|-------------------------------|
| Date: <u>3-26-2019</u> | Analyst: <u>Chris Green</u><br><u>Ben Harden</u><br><u>Jade Burchett</u> | Signature: <u>[Signature]</u> |
|------------------------|--------------------------------------------------------------------------|-------------------------------|

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

SAMPLE ID 62TLHR0041 ORG ID 21FLTLHR LATITUDE \_\_\_\_\_  
 COUNTY Gadsden STORET # 62TLHR0041 LONGITUDE \_\_\_\_\_  
 DATE 3-26-2019 TIME 10:00 SAMPLING AGENCY 8034  
 SITE NAME Unnamed Branch & Hardaway Rd 2  
 FIELD ID/NAME 62TLHR0041 RECEIVING BODY OF WATER Flat Creek

RIPARIAN ZONE / STREAM FEATURES

|                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |                                                                                                                                                                                                              |  |                                                                                                                                                                                                                |  |                                                                                   |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------|--|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category):<br>Forest/Natural <u>50</u> Silviculture <u>30</u> Field/Pasture <u>20</u> Agricultural <u>20</u> Residential <u>20</u> Commercial <u>20</u> Industry <u>20</u> Other (Specify) <u>20</u>                                                                                    |  |  |  |                                                                                                                                                                                                              |  |                                                                                                                                                                                                                |  | <b>Landscape Development Intensity Index (LDI)</b><br><u>                    </u> |  |
| Local Watershed Erosion (select one): <input checked="" type="checkbox"/> None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy<br>Local Watershed NPS Pollution: <input checked="" 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>                    </u> m wide<br><u>0.33</u> m/s <u>0.33</u> m/s <u>0.33</u> m/s<br><u>0.2</u> m deep <u>0.4</u> m deep <u>0.2</u> m deep |  |                                                                                   |  |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank: <u>7.8m</u> Right Bank: <u>7.8m</u>                                                                                                                                                                                                                                                      |  |  |  | <b>Hydrologic Modification Score</b> (per FT 3101) <u>                    </u>                                                                                                                               |  |                                                                                                                                                                                                                |  |                                                                                   |  |
| <b>High Water Mark:</b> <u>1</u> + <u>0.4</u> = <u>1.4</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%) |  |                                                                                                                                                                                                                |  |                                                                                   |  |

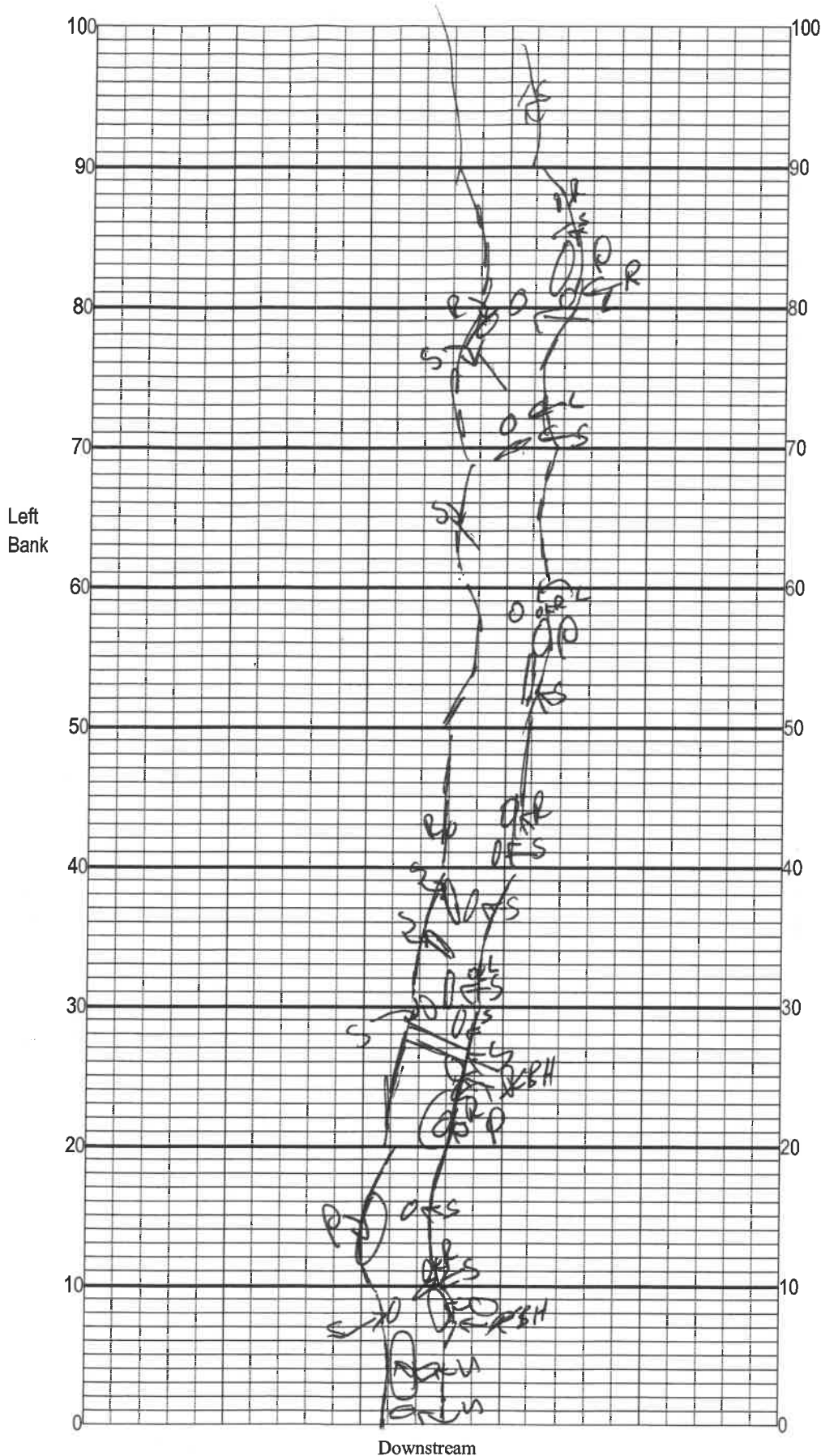
SEDIMENT / SUBSTRATE

| <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): <u>                    </u>                                                                                                                                                                                                                                                                                                                                                                                                                         |                          |              | <b>Smothering of Substrates</b><br>Sand Smothering: None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/><br>Silt Smothering: None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/><br>Algae Smothering: None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/>                                                                                                                |                |              |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-------------|--------------------------|-------------------------------------|--------------------------|--------------------------|-----------------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--------------|---------|--|--|--|--|--|--|--|--|
| <b>SUBSTRATE TYPE</b><br>Assessment Tool: <input checked="" type="checkbox"/> SCI <input type="checkbox"/> RPS <input type="checkbox"/> LVS<br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                     |                                     | <b>WATER QUALITY</b> <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>0.2</u></td> <td><u>16.8</u></td> <td><u>6.04</u></td> <td><u>9.70</u></td> <td><u>94.7</u></td> <td><u>25.1</u></td> <td><u>0.01</u></td> <td><u>0.4</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>4</u> 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> |                          |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |              |                                     | Depth (M)                | Temp. (°C)               | pH (SU)                  | D.O. (MG/L) | D.O. Sat (%)             | Cond. (UMHO/CM)                     | Salinity (PPT)           | SECCHI (M)               | Top:            | <u>0.2</u>                          | <u>16.8</u>                         | <u>6.04</u>              | <u>9.70</u>              | <u>94.7</u>           | <u>25.1</u>                         | <u>0.01</u>              | <u>0.4</u>               | Mid:                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  | <u>4</u> VOB | Bottom: |  |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Depth (M)                           | Temp. (°C)                          | pH (SU)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | D.O. (MG/L)              | D.O. Sat (%) | Cond. (UMHO/CM)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Salinity (PPT) | SECCHI (M)   |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |
| Top:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <u>0.2</u>                          | <u>16.8</u>                         | <u>6.04</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <u>9.70</u>              | <u>94.7</u>  | <u>25.1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>0.01</u>    | <u>0.4</u>   |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |
| Mid:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                     |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                | <u>4</u> VOB |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |
| Bottom:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                          |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |              |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |
| Woody Debris (Snags) <u>6</u> <u>5</u><br>Undercut Banks / Roots <u>4</u> <u>5</u><br>Leaf Packs or Mat ..... <u>3</u> <u>5</u><br>Aquatic Vegetation .....<br>Rock or Shell Rubble..<br>Sand..... <u>87</u> <u>5</u><br>Mud / Muck / Silt .....<br>Other .....<br>Other .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |                                     | <b>Meter ID:</b> <u>155075 Pro DSS</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |              | <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>Water Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Sample Preserved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot Number: _____ Exp: _____<br>Algae Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot Number: _____ Exp: _____ |                |              |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |
| <b>ABUNDANCE</b> <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 checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>Aquatic Plants:</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input 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 checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Aquatic Plants: | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Iron/Sulfur Bacteria: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <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 type="checkbox"/> Green (Algae) <input type="checkbox"/><br>Clear <input checked="" type="checkbox"/> Other (Specify) <input type="checkbox"/><br><b>Clarity</b> Clear <input checked="" type="checkbox"/> Slightly Turbid <input type="checkbox"/><br>Turbid <input 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 checked="" type="checkbox"/> | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |              |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |
| Aquatic Plants:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input 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>Hurricane Michael dropped <del>many</del> trees across stream in 10/18</u><br><input checked="" type="checkbox"/> The antecedent hydrologic conditions have been met to my best knowledge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                          |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |              |                                     |                          |                          |                          |             |                          |                                     |                          |                          |                 |                                     |                                     |                          |                          |                       |                                     |                          |                          |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |  |  |  |  |              |         |  |  |  |  |  |  |  |  |

SAMPLING TEAM Chris Green/Jade Burtchett/Ben Harden SIGNATURE: Chris Green DATE: 3-27-2019



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



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

Location: Unnamed Branch @ Harding Rd 27  
Date: 03/26/2019  
Sampler: Ben Harden

|                                                                                                                |                                                               |
|----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|
| 100 m: Latitude _____                                                                                          |                                                               |
| Longitude _____                                                                                                |                                                               |
| 0 m: Latitude _____                                                                                            |                                                               |
| Longitude _____                                                                                                |                                                               |
| Substrates: Code key, draw proportionate habitat abundance. %                                                  |                                                               |
| <input type="checkbox"/> S                                                                                     | Snags <u>36</u>                                               |
| <input type="checkbox"/> R                                                                                     | Roots/undercut banks <u>4</u>                                 |
| <input type="checkbox"/> L                                                                                     | Leaf Packs (or mats) <u>5</u>                                 |
| <input type="checkbox"/> A                                                                                     | Aquatic Macrophytes <u>0</u>                                  |
| <input type="checkbox"/> R                                                                                     | <u>Rocks</u> <u>0</u>                                         |
| <input type="checkbox"/>                                                                                       | _____                                                         |
| <input type="checkbox"/> P                                                                                     | Pools total # observed = <u>6</u><br># range expected = _____ |
| Average width <u>1</u> m                                                                                       |                                                               |
| Average depth <u>0.3</u> m                                                                                     |                                                               |
| Velocity measured at <u>10</u> meter mark.                                                                     |                                                               |
| WQ & chemistry taken at <u>0</u> meter mark.                                                                   |                                                               |
| Habitat Smothering:<br>Note areas (on map) where sand or silt is smothering substrates, limiting habitability. |                                                               |
| Bank Stability:<br>Note areas (on map) with unstable, eroding banks.                                           |                                                               |
| Riparian Buffer Width:<br>Note areas (on map) where natural vegetation is altered or eliminated.               |                                                               |

Plants observed / other notes:

0.33

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

|                                      |                        |                        |                                  |
|--------------------------------------|------------------------|------------------------|----------------------------------|
| Waterbody: <i>Unnamed Branch #16</i> | Date: <i>3-26-19</i>   | County: <i>Gadsden</i> | Storet Number: <i>62TLHR0041</i> |
| Analyst: <i>Chris Green</i>          | Signature: <i>Ch-3</i> |                        |                                  |
| Comments: <i>&lt; 3m<sup>2</sup></i> |                        |                        |                                  |

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.

|                                                                | Meter Mark |       |       |       |       |       |       |       |       |        | Specimen collected<br>(check) |                    | Meter Mark |       |       |       |       |       |       |       |       |        | Specimen collected<br>(check) |
|----------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------------------------------|--------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------------------------------|
| HERBACEOUS SPECIES                                             | 0-10       | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 |                               | HERBACEOUS SPECIES | 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         |                    |            |       |       |       |       |       |       |       |       |        |                               |
| Hypophylla 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                                                |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |
| Luziola fluitans                                               |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |
|                                                                |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |
|                                                                |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |
|                                                                |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |
|                                                                |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |
|                                                                |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |
| If no Dominant or Co-Dominant were selected, indicate with "X" |            |       |       |       |       |       |       |       |       |        |                               |                    |            |       |       |       |       |       |       |       |       |        |                               |

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

Site: Unnamed Branch @ Hardaway Rd 2 County: Goodsden Date: 3-26-19 Investigators: Chris Green

STORET Station Number: 62TLHRO041

| 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                                | N         |              | 60           | 1                          |                                  |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           |              |              | 5                          |                                  |           |              | 26 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 10           | 1                          |                                  |           |              | 70           | 1                          |                                  |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 48           |              | 5                          |                                  |           |              | 0  |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 20           | 1                          |                                  |           |              | 80           | 1                          |                                  |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 45           |              | 5                          |                                  |           |              | 0  |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 30           | 1                          |                                  |           |              | 90           | 1                          |                                  |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 68           |              | 5                          |                                  |           |              | 78 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 40           | 1                          |                                  |           |              | 100          | 1                          |                                  |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 0            |              | 5                          |                                  |           |              | 42 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          | N                                | N         |              |    |
| 50           | 1                          |                                  |           |              |              | 1                          |                                  |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 70 DBA       |              | 5                          |                                  |           |              |    |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 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 0.9  
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 ☒  
Habitat Assessment ☒  
SCI/Biorecon ☒  
Water sample ☒  
RQ-2018-12-31-35

| 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                                  |



Customer: TLH-ROC

Project ID: SMP

Requester: Michael Eckles

Collected By:

Field Report Prepared By:

Sampling Agency:

Field/WIN ID →



G2TLHR0041

Location ↓

Unnamed Branch @ Hardaway Rd 2

Latitude

☐ dd ☐ dms

Field/WIN ID →



G2TLHR0041

Location ↓

Unnamed Branch @ Hardaway Rd 2

Latitude

☐ dd ☐ dms

Field/WIN ID →



G2TLHR0039

Location ↓

South Mosquito Creek @ Power Line

Latitude

☐ dd ☐ dms

Field/WIN ID →



G2TLHR0039

Location ↓

South Mosquito Creek @ Power Line

Latitude

☐ dd ☐ dms

| Field/WIN ID                          |                                 | Collection (comp begin or grab) |                                       | Composite end                   |               | Bottle Group(s)                       |                                 |
|---------------------------------------|---------------------------------|---------------------------------|---------------------------------------|---------------------------------|---------------|---------------------------------------|---------------------------------|
| Field/WIN ID                          | Collection (comp begin or grab) | Composite end                   | Field/WIN ID                          | Collection (comp begin or grab) | Composite end | Field/WIN ID                          | Collection (comp begin or grab) |
| Unnamed Branch @ Hardaway Rd 2        | 03/26/2019 0940                 | 0940                            | Unnamed Branch @ Hardaway Rd 2        | 03/26/2019 1000                 | 1000          | Unnamed Branch @ Hardaway Rd 2        | 03/26/2019 1215                 |
| Matrix (type, e.g., Salt, Fresh, etc) | Fresh                           | 9.20                            | Matrix (type, e.g., Salt, Fresh, etc) | Fresh                           | 9.20          | Matrix (type, e.g., Salt, Fresh, etc) | Fresh                           |
| Diss. Oxygen                          | 9.20                            | 9.20                            | Diss. Oxygen                          | 9.20                            | 9.20          | Diss. Oxygen                          | 9.15                            |
| Total Res. Chlorine                   |                                 |                                 | Total Res. Chlorine                   |                                 |               | Total Res. Chlorine                   |                                 |
| % sat                                 |                                 |                                 | % sat                                 |                                 |               | % sat                                 |                                 |
| Sp. Conductance (umho/cm)             | 25.1                            | 25.1                            | Sp. Conductance (umho/cm)             | 0.7                             | 0.7           | Sp. Conductance (umho/cm)             | 53.9                            |
| Temp (C)                              | 6.04                            | 6.04                            | Temp (C)                              | 6.04                            | 6.04          | Temp (C)                              | 7.44                            |
| pH                                    |                                 |                                 | pH                                    |                                 |               | pH                                    |                                 |
| Salinity (ppt)                        | 0.01                            | 0.01                            | Salinity (ppt)                        | 0.01                            | 0.01          | Salinity (ppt)                        | 0.02                            |
| Comments                              |                                 |                                 | Comments                              |                                 |               | Comments                              |                                 |
| Sample Depth                          |                                 |                                 | Sample Depth                          |                                 |               | Sample Depth                          |                                 |
| ft                                    |                                 |                                 | ft                                    |                                 |               | ft                                    |                                 |
| m                                     |                                 |                                 | m                                     |                                 |               | m                                     |                                 |
| Eastern                               |                                 |                                 | Eastern                               |                                 |               | Eastern                               |                                 |
| Central                               |                                 |                                 | Central                               |                                 |               | Central                               |                                 |
| Time                                  |                                 |                                 | Time                                  |                                 |               | Time                                  |                                 |
| Chlorine                              |                                 |                                 | Chlorine                              |                                 |               | Chlorine                              |                                 |
| Group(s)                              |                                 |                                 | Group(s)                              |                                 |               | Group(s)                              |                                 |

Number of Coolers Shipped:

Shipping Method

Date/Time

Relinquished By:

Received By:

Shipping Method

Date/Time

Relinquished By:

Number of Coolers Shipped:

Shipping Method

Date/Time

Relinquished By:

Received By:

Shipping Method

Date/Time

Relinquished By:

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

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

Meter ID: 155075

RQ-

Project: 5m2019

- Notes: (1) Always wait for meter to stabilize before recording any readings.  
(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).  
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

## Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 12/18

| DO DEP SOP FT 1500 | Name         | Date    | Time CT-ET | Temp °C | Baro-meter mmHg | D.O. Chart mg/L | Meter D.O. mg/L | % DO  | Probe Charge | Probe Gain | Pass / Fail | Lab / Field |
|--------------------|--------------|---------|------------|---------|-----------------|-----------------|-----------------|-------|--------------|------------|-------------|-------------|
| Calibr.            | J. Burtchett | 3/26/19 | 800        | 21.3    | 757.7           | 8.86            | 8.84            | 99.7  | -            | 1.03       | P/F         | L/F         |
| ICV                | ↓            | ↓       | 810        | 19.6    | 757.7           | 9.17            | 9.10            | 99.1  | -            | -          | P/F         | L/F         |
| CCV                | ↓            | ↓       | 1533       | 9.24    | 756.8           | 9.38            | 9.38            | 100.7 | -            | -          | P/F         | L/F         |
| CCV                |              |         |            | 19.2    |                 | 9.24            |                 |       |              |            | P/F         | L/F         |

DO Acceptance criteria from Table  $\pm 0.3$  mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15 (Pro DSS 0.75 to 1.50); DO charge N/A. Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

| Spec. Cond. FT 1200 | Name         | Date    | Time CT-ET | Lot #   | Expir. Date | Standard $\mu$ mhos/cm | Meter Reading $\mu$ mhos/cm | Pass / Fail | Lab / Field |
|---------------------|--------------|---------|------------|---------|-------------|------------------------|-----------------------------|-------------|-------------|
| Calibr.             | J. Burtchett | 3/26/19 | 802        | 180621C | 07/19       | 1000                   | 1000                        | P/F         | L/F         |
| ICV                 | ↓            | ↓       | 812        | 180621C | 05/20       | 100                    | 102                         | P/F         | L/F         |
| CCV                 | ↓            | ↓       | 1535       | 180621C | 07/19       | 1000                   | 997                         | P/F         | L/F         |
| CCV                 |              |         |            |         |             |                        |                             | P/F         | L/F         |

Conductivity Acceptance criteria  $\pm 5\%$

| pH DEP SOP FT 1100 | Name         | Date    | Time CT-ET | Lot #   | Expir. Date | pH Buffer SU | Temp °C | Meter reading SU | mV    | Pass / Fail | Lab / Field |
|--------------------|--------------|---------|------------|---------|-------------|--------------|---------|------------------|-------|-------------|-------------|
| Calibr.            | J. Burtchett | 3/26/19 | 804        | 180403C | 10/19       | 7.02         | 19.2    | 7.03             | -21.5 | P/F         | L/F         |
| Calibr.            | ↓            | ↓       | 806        | 180621D | 7/19        | 4.00         | 19.4    | 4.00             | 153.6 | P/F         | L/F         |
| Calibr.            | ↓            | ↓       | 808        | 180621F | 01/20       | 10.06        | 19.5    | 10.07            | 190.3 | P/F         | L/F         |
| ICV                | ↓            | ↓       | 814        | 180621F | 01/20       | 10.06        | 19.9    | 10.10            | 193.9 | P/F         | L/F         |
| CCV                | ↓            | ↓       | 1537       | 180621D | 07/19       | 4.00         | 19.8    | 4.12             | 145.6 | P/F         | L/F         |
| CCV                |              |         |            |         |             |              |         |                  |       | P/F         | L/F         |

pH Acceptance criteria  $\pm 0.2$  SU; mV pH 7 Range 0  $\pm$  50; mV pH 4 Range  $\pm 180 \pm 50$ ; mV pH 10 Range  $-180 \pm 50$ ;

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

Does meter have a depth sensor that will be used to measure total depth & sample depth? YES / NO / NA (not surf. water project)

If YES, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 12/18

If NO, what will be used? (circle one) Secchi Disk Line / Sonar Unique ID: \_\_\_\_\_; Date of last verification: \_\_\_\_\_

| Depth Sensor (Daily Calibration & ICV) | Name | Date | Time CT-ET | Calibrated Value (0.00 or Offset), meters | ICV Value, meters | Pass / Fail | Lab / Field |
|----------------------------------------|------|------|------------|-------------------------------------------|-------------------|-------------|-------------|
| Pressure mode in air                   |      |      |            |                                           |                   | P/F         | L/F         |

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

COMMENTS: