



# FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End  
of Day CCV  
Yes / No

**WIN Station Name:** Jacks Branch Above Kirby-thompson Rd **Date:** 12/15/2020  
**WIN/Field ID:** G3SD0176 **WBID:** 3235D **ENR:** **Latitude:** 26.756  
**County:** HENDRY **Org ID:** 21FLFTM **Longitude:** -81.5341  
**Receiving Body of Water:** Caloosahatchee **RQ:** 2020-12-14-48

| Sampling Team Members               |                 | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|-------------------------------------|-----------------|-----------------|-------------------|---------------|--------------|--------------------|
| <input checked="" type="checkbox"/> | Miranda Carroll | x               |                   | x             |              |                    |
| <input checked="" type="checkbox"/> | Nicole Reistad  |                 | x                 |               | x            | x                  |
| <input type="checkbox"/>            |                 |                 |                   |               |              |                    |
| <input type="checkbox"/>            |                 |                 |                   |               |              |                    |

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

|                                                                                                                                                                                                                                                                        |                   |                  |                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|----------------------------------|
| <b>Water Level:</b> <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Low <input type="checkbox"/> High <input type="checkbox"/> Dry <input type="checkbox"/> Pooled <input type="checkbox"/> Flooded                                                |                   | <b>Meter ID#</b> |                                  |
| <b>Photos:</b> NO                                                                                                                                                                                                                                                      | <b>Flow:</b> FLOW | <b>Tide:</b>     | <b>Tide Times:</b><br>High: Low: |
| <b>Biological Samples Collected:</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> HA <input type="checkbox"/> SCI <input type="checkbox"/> RPS <input type="checkbox"/> Algae ID <input type="checkbox"/> LVS <input type="checkbox"/> LVI Other: |                   |                  |                                  |
| <b>SBIO ID Numbers:</b>                                                                                                                                                                                                                                                |                   |                  |                                  |
| <b>Notes:</b>                                                                                                                                                                                                                                                          |                   |                  |                                  |

## Duplicate Sample

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

## Blank

|                         |                  |                          |                       |
|-------------------------|------------------|--------------------------|-----------------------|
| <b>Time Zone:</b> _____ | <b>Time:</b> N/A | <b>Field ID:</b> N/A     | (Blank Type_DDMMYYYY) |
| <b>DI Source:</b> N/A   |                  | <b>Location:</b> N/A     |                       |
| <b>DI Type:</b> N/A     |                  | <b>Equipment ID:</b> N/A |                       |

LIMS EVENT ID: \_\_\_\_\_ WIN Import ID: \_\_\_\_\_  
Enter Field Parameters, Verify Station ID In LIMS DMT: \_\_\_\_\_ QC Station ID, Field Parameters In LIMS DMT: \_\_\_\_\_  
(Initials/Date) (Initials/Date)  
Scan/Save Field Sheets \_\_\_\_\_ Migrate Data to WIN: \_\_\_\_\_ Verify Data In WIN: \_\_\_\_\_  
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2020-12-14-48

Customer: WQAP

Project ID: SMP

Collected By: Miranda Carroll, Nicole Reistad

Field Report Prepared By: Miranda Carroll

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3SD0176

Location: Jacks Branch Above Kirby-thompson Rd

Comments:

Matrix: Fresh

(Check one)

☒ GRAB☐ COMPOSITE

| Date       | Time       | DO (mg/L) | DO (%SAT) | Temp. (C°) | pH   | Sample Depth (m) | Secchi Disk (m)                                    | Total Depth (m) | Sp COND (µmhos/cm) | Salinity (PPTH) |
|------------|------------|-----------|-----------|------------|------|------------------|----------------------------------------------------|-----------------|--------------------|-----------------|
| 12/15/2020 | 950<br>EST | 7.29      | 80.4      | 20         | 7.34 | 0.15             | 0.3<br><input checked="" type="checkbox"/> VOB (S) | 0.3             | 435.7              | 0.21            |

Central Lab please use top row for login purposes

|  |     |  |  |  |  |  |  |  |  |  |
|--|-----|--|--|--|--|--|--|--|--|--|
|  |     |  |  |  |  |  |  |  |  |  |
|  | EST |  |  |  |  |  |  |  |  |  |

| Parameter Suite                    | Parameter Methods                                                                                                                                                                                                                                        | Preservation                                                                       | pH Check                               | # Bottles sent to Lab | Bottle Group |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|----------------------------------------|-----------------------|--------------|
| Preserved Nutrients (P-500ML)      | <input checked="" type="checkbox"/> W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP<br>Lot # SA0038110 Exp: 2/7/21                                                                                                                                           | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H2SO4* | <input checked="" type="checkbox"/> <2 | 1                     | A            |
| Metals (P-500ML)                   | <input type="checkbox"/> W-ICPMS <input type="checkbox"/> W-ICP <input type="checkbox"/> W-HARD<br>Lot # Exp:                                                                                                                                            | <input type="checkbox"/> Ice <input type="checkbox"/> HNO3*                        | <input type="checkbox"/> <2            |                       |              |
| Filtered Nutrients (P125ML)        | <input checked="" type="checkbox"/> W-PO4-F <input checked="" type="checkbox"/> Field Filtered 0.45 µm Filter<br>Filter Lot # 17024971<br>Syringe Lot # 0079931                                                                                          | <input checked="" type="checkbox"/> Ice                                            |                                        | 1                     | A            |
| Chlorophyll (BP-1L)                | <input checked="" type="checkbox"/> CHLSUITE-W                                                                                                                                                                                                           | <input checked="" type="checkbox"/> Ice                                            |                                        | 1                     | A            |
| Physical/Aggregate (Fresh) (P-1L)  | <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                                            |                                        | 1                     | A            |
| Physical/Aggregate (Marine) (P-1L) | <input type="checkbox"/> Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY                                                                                                                                                                                  | <input type="checkbox"/> Ice                                                       |                                        |                       |              |
| Macroinvertebrates (PJ-2L)         | <input type="checkbox"/> MI-FW-QLDC                                                                                                                                                                                                                      | <input type="checkbox"/> Formalin                                                  |                                        |                       |              |
| Periphyton (PT-50ML)               | <input type="checkbox"/> ALGAE-ID                                                                                                                                                                                                                        | <input type="checkbox"/> Ice                                                       |                                        |                       |              |
| Microbiology (Contract Lab Bottle) | <input checked="" type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enterococci<br><input type="checkbox"/> Contract Lab                                                                                                 | <input checked="" type="checkbox"/> Ice                                            |                                        | 1                     | A            |
| Molecular (QPCR-P-500ML)           | <input type="checkbox"/> PCR-HF183 <input type="checkbox"/> PCR-BacR <input type="checkbox"/> PCR-DG3<br><input type="checkbox"/> PCR-GULL2 <input type="checkbox"/> PCR-GFD                                                                             | <input type="checkbox"/> Ice                                                       |                                        |                       |              |
| Tracers (BG-500ML)                 | <input type="checkbox"/> W-E8321-DI <input type="checkbox"/> W-E8321-MS                                                                                                                                                                                  | <input type="checkbox"/> Ice                                                       |                                        |                       |              |
| Pesticides (BG-500ML) (BG-1L)      | <input type="checkbox"/> W-E8321-DI <input type="checkbox"/> WE8321-MS <input type="checkbox"/> W-PSNP-TQ <input type="checkbox"/> W-CT-CL-R<br><input type="checkbox"/> W-PCL-SQ-R <input type="checkbox"/> W-CARB-AA ( 5 ml of MCAA** Buffer Solution) | <input type="checkbox"/> Ice                                                       |                                        |                       |              |
|                                    |                                                                                                                                                                                                                                                          | <input type="checkbox"/> Ice                                                       |                                        |                       |              |

Name:  
Miranda Carroll  
Nicole ReistadSignature:  
Miranda CarrollDate:  
12/15/2020

\*2.0 ml of Preservative used unless noted otherwise.

\*\*MCAA: Monochloroacetic acid buffer solution

DEP-SOP-001/01: Form FD 9000-5  
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

|                                                                |                       |                                        |                                    |                                                |
|----------------------------------------------------------------|-----------------------|----------------------------------------|------------------------------------|------------------------------------------------|
| SUBMITTING AGENCY CODE: _____<br>SUBMITTING AGENCY NAME: _____ |                       | STORET STATION NUMBER: <u>G3SD0176</u> | DATE (MM/DD/YYYY): <u>12/15/20</u> | RECEIVING BODY OF WATER: <u>Caloosahatchee</u> |
| REMARKS: _____                                                 | COUNTY: <u>Hendry</u> | LOCATION: <u>Jack's Branch</u>         | FIELD ID/NAME: <u>G3SD0176</u>     |                                                |

| Habitat Parameter                                                                                                   | Optimal                                                                                                                                                                                                                   | Suboptimal                                                                                                                                                               | Marginal                                                                                                                                                 | Poor                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Primary Habitat Components                                                                                          | Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)                                                                                              | Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)                                                       | Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed                                                      | One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered                                         |
| Substrate Diversity <u>14</u>                                                                                       | 20 19 18 17 16                                                                                                                                                                                                            | 15 <u>14</u> 13 12 11                                                                                                                                                    | 10 9 8 7 6                                                                                                                                               | 5 4 3 2 1                                                                                                                                  |
| Substrate Availability <u>19</u>                                                                                    | Greater than 30% major productive habitat present at site<br>20 <u>19</u> 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>14</u>                                                                                            | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec<br>≥ 0.33 0.31 0.29 0.27 > 0.25<br>20 19 18 17 16                                                                                                          | Max. observed at typical transect: > 0.1 to 0.25 m/sec<br>0.25 0.21 0.17 0.13 > 0.1<br>15 <u>14</u> 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>13</u><br>-----<br>Primary Score <u>60</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 <u>13</u> 12 11                                | Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (< 2 x prevailing depth).<br>10 9 8 7 6                      | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br>5 4 3 2 1                                         |
| Secondary Habitat Components<br>Artificial Channelization <u>19</u>                                                 | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.<br>20 <u>19</u> 18 17 16                                                                                  | Good sinuosity within old channelized area. Evidence of dredging in the past (> 25 yrs) but mostly recovered.<br>15 14 13 12 11                                          | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.<br>10 9 8 7 6                        | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.<br>5 4 3 2 1 |
| Bank Stability<br>Right Bank <u>8</u><br>Left Bank <u>7</u>                                                         | Bankfull > 60% of bank height. Slope of bank ≤ 30° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas.<br>10 9                                                            | Only meets 2 of the 3 requirements for optimal bank stability.<br><u>8</u> <u>7</u> 6                                                                                    | Only meets 1 of the 3 requirements for optimal bank stability.<br>5 4                                                                                    | Bankfull < 60% of bank height. Slope of bank > 30°. Bankfull is below the root zone with raw, eroded areas.<br>3 2 1                       |
| Riparian Buffer Zone Width<br>Right Bank <u>5</u><br>Left Bank <u>5</u>                                             | Width of vegetation greater than 18 m<br>10 9                                                                                                                                                                             | Width of vegetation > 12 to 18 m<br>8 7 6                                                                                                                                | Width of vegetation 6 to 12 m. human activities close to system<br><u>5</u> 4                                                                            | Less than 6 m of buffer zone due to intensive human activities<br>3 2 1                                                                    |
| Riparian Zone Vegetation Quality<br>Right Bank <u>5</u><br>Left Bank <u>5</u><br>-----<br>Secondary Score <u>54</u> | Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.<br>10 9 | > 50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.<br>8 7 6 | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.<br><u>5</u> 4 | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).<br>3 2 1         |

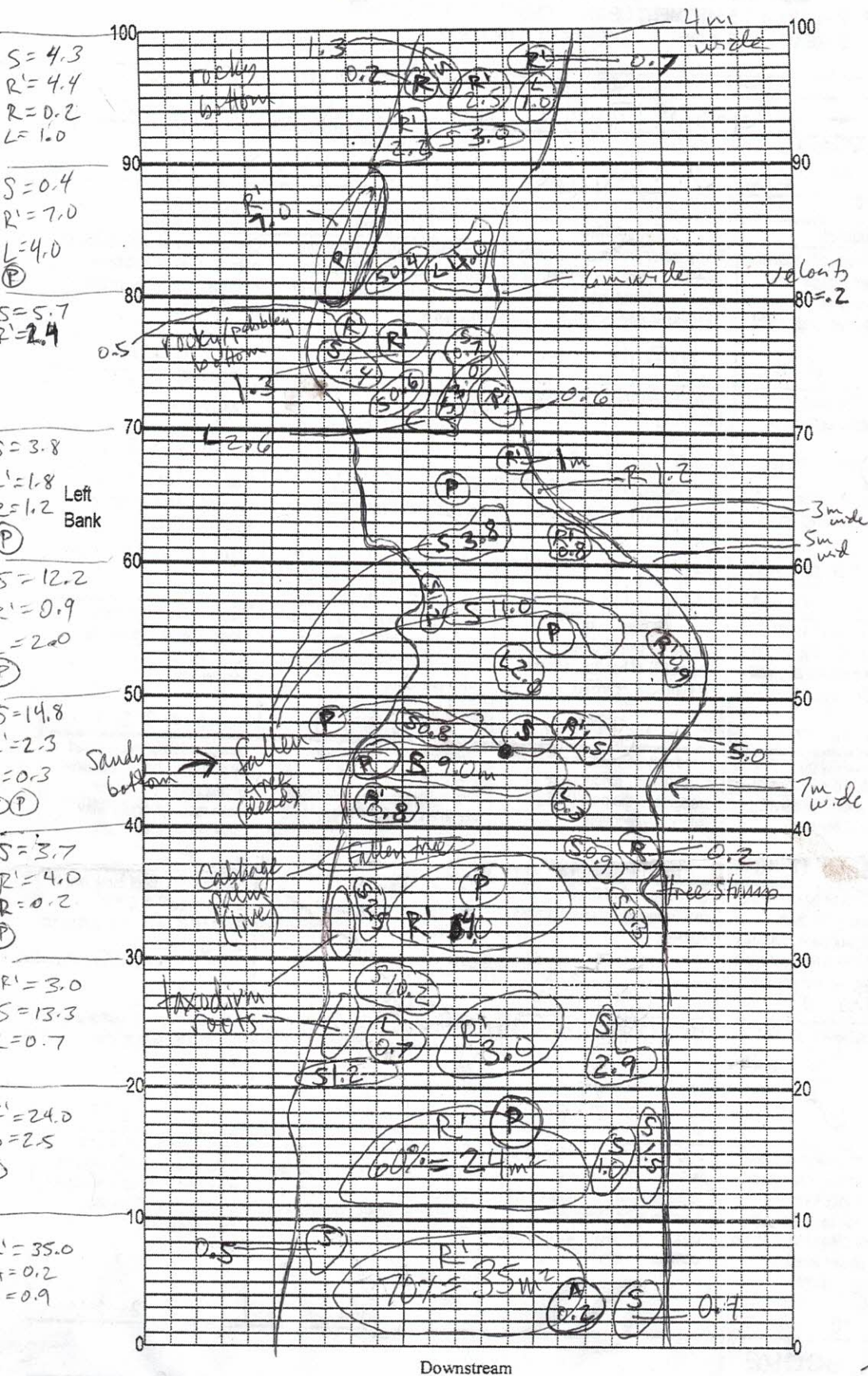
114

**TOTAL SCORE**

|                       |                                                          |                               |
|-----------------------|----------------------------------------------------------|-------------------------------|
| Date: <u>12/15/20</u> | Analyst: <u>Miranda Carroll</u><br><u>Nicole Raistad</u> | Signature: <u>[Signature]</u> |
|-----------------------|----------------------------------------------------------|-------------------------------|



# 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: G3SDU176  
Jacks Branch  
Date: 12/15/20  
Sampler: Miranda Carroll + Nicole Restak

100 m: Latitude 26.7558451  
Longitude -81.5343418  
0 m: Latitude 26.7559759  
Longitude -81.5343418

Substrates: Code key, draw 53326%  
proportionate habitat abundance.

|           |                      |                                                              |             |
|-----------|----------------------|--------------------------------------------------------------|-------------|
| <u>S</u>  | Snags                | <u>12.32</u>                                                 | <u>61.6</u> |
| <u>R</u>  | Roots/undercut banks | <u>0.32</u>                                                  | <u>84.8</u> |
| <u>L</u>  | Leaf Packs (or mats) | <u>1.6</u>                                                   | <u>8</u>    |
| <u>A</u>  | Aquatic Macrophytes  | <u>0.04</u>                                                  | <u>0.2</u>  |
| <u>R'</u> | rocks                | <u>16.96</u>                                                 | <u>84.8</u> |
| <u>P</u>  | Pools                | total # observed = <u>7</u><br># range expected = <u>3-4</u> |             |

Average width 1.5 m  
Average depth 1.0 m

Velocity measured at 80 meter mark.

WQ & chemistry taken at 0 meter mark.

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

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

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

Plants observed / other notes:  
Ludwigia repens  
Hydrocotyle  
Eleocharis viviparous  
Elodea  
Filamentous algae  
Fish present  
Taxodium  
Sand smothering  
algae smother  
sandy bottom w/ shells + pebbles  
Silty spots

Revision Date: March 1, 2014



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

|                            |  |  |  |  |                      |  |                       |  |                                                       |  |
|----------------------------|--|--|--|--|----------------------|--|-----------------------|--|-------------------------------------------------------|--|
| Site: <u>Jack's Branch</u> |  |  |  |  | County: <u>Henry</u> |  | Date: <u>12/15/20</u> |  | Investigators: <u>Nicole Reistad, Miranda Carroll</u> |  |
|                            |  |  |  |  |                      |  |                       |  | STORET Station Number: <u>G3SD0176</u>                |  |

| Transect t (m) | Point 1=right 9=left | Algal Thickness Rank (N-6, X) | Estimated | Canopy Cover | Transect t (m) | Point 1=right 9=left | Algal Thickness Rank (N-6, X) | Estimated | Canopy Cover |
|----------------|----------------------|-------------------------------|-----------|--------------|----------------|----------------------|-------------------------------|-----------|--------------|
| 0              | 1                    | 5                             |           |              | 60             | 1                    | NR                            |           |              |
|                | 2                    | 2                             |           |              |                | 2                    | NR                            |           |              |
|                | 3                    | 2                             |           |              |                | 3                    | NR                            |           |              |
|                | 4                    | 2                             |           |              |                | 4                    | NR                            |           |              |
|                | 5                    | 2                             |           | 72           |                | 5                    | NR                            |           |              |
|                | 6                    | 2                             |           |              |                | 6                    | NR                            |           |              |
|                | 7                    | 2                             |           |              |                | 7                    | NR                            |           |              |
|                | 8                    | 2                             |           |              |                | 8                    | NR                            |           |              |
|                | 9                    | 2                             |           |              |                | 9                    | NR                            |           |              |
| 10             | 1                    | 2                             |           |              | 70             | 1                    | NR                            |           |              |
|                | 2                    | 2                             |           |              |                | 2                    | NR                            |           |              |
|                | 3                    | NR                            |           |              |                | 3                    | NR                            |           |              |
|                | 4                    | NR                            |           | 91           |                | 4                    | NR                            |           |              |
|                | 5                    | NR                            |           |              |                | 5                    | NR                            |           |              |
|                | 6                    | NR                            |           |              |                | 6                    | NR                            |           |              |
|                | 7                    | NR                            |           |              |                | 7                    | NR                            |           |              |
|                | 8                    | NR                            |           |              |                | 8                    | NR                            |           |              |
|                | 9                    | NR                            |           |              |                | 9                    | NR                            |           |              |
| 20             | 1                    | 2                             |           |              | 65             | 1                    | 2                             |           |              |
|                | 2                    | 2                             |           |              |                | 2                    | 2                             |           |              |
|                | 3                    | 2                             |           |              |                | 3                    | 2                             |           |              |
|                | 4                    | NR                            |           |              |                | 4                    | 2                             |           |              |
|                | 5                    | NR                            |           |              |                | 5                    | NR                            |           |              |
|                | 6                    | NR                            |           |              |                | 6                    | NR                            |           |              |
|                | 7                    | NR                            |           |              |                | 7                    | NR                            |           |              |
|                | 8                    | NR                            |           |              |                | 8                    | NR                            |           |              |
|                | 9                    | NR                            |           |              |                | 9                    | NR                            |           |              |
| 30             | 1                    | 2                             |           |              | 90             | 1                    | NR                            |           |              |
|                | 2                    | 2                             |           |              |                | 2                    | NR                            |           |              |
|                | 3                    | NR                            |           |              |                | 3                    | NR                            |           |              |
|                | 4                    | NR                            |           |              |                | 4                    | NR                            |           |              |
|                | 5                    | NR                            |           | 85           |                | 5                    | NR                            |           |              |
|                | 6                    | NR                            |           |              |                | 6                    | NR                            |           |              |
|                | 7                    | NR                            |           |              |                | 7                    | NR                            |           |              |
|                | 8                    | NR                            |           |              |                | 8                    | NR                            |           |              |
|                | 9                    | NR                            |           |              |                | 9                    | NR                            |           |              |
| 40             | 1                    | 2                             |           |              | 100            | 1                    | 2                             |           |              |
|                | 2                    | 2                             |           |              |                | 2                    | 2                             |           |              |
|                | 3                    | 2                             |           |              |                | 3                    | 2                             |           |              |
|                | 4                    | NR                            |           |              |                | 4                    | 2                             |           |              |
|                | 5                    | NR                            |           | NR           |                | 5                    | NR                            |           |              |
|                | 6                    | NR                            |           |              |                | 6                    | NR                            |           |              |
|                | 7                    | NR                            |           |              |                | 7                    | NR                            |           |              |
|                | 8                    | NR                            |           |              |                | 8                    | NR                            |           |              |
|                | 9                    | NR                            |           |              |                | 9                    | NR                            |           |              |
| 50             | 1                    | 2                             |           |              |                | 1                    | 2                             |           |              |
|                | 2                    | 2                             |           |              |                | 2                    | 2                             |           |              |
|                | 3                    | 2                             |           |              |                | 3                    | 2                             |           |              |
|                | 4                    | NR                            |           |              |                | 4                    | 2                             |           |              |
|                | 5                    | NR                            |           | 85           |                | 5                    | NR                            |           |              |
|                | 6                    | NR                            |           |              |                | 6                    | NR                            |           |              |
|                | 7                    | NR                            |           |              |                | 7                    | NR                            |           |              |
|                | 8                    | NR                            |           |              |                | 8                    | NR                            |           |              |
|                | 9                    | NR                            |           |              |                | 9                    | NR                            |           |              |

|                       |     |
|-----------------------|-----|
| Secchi depth          | 0.3 |
| Estimated?            |     |
| # points ranked 4-6   | 29  |
| total points assessed | 99  |
| % points ranked 4-6   | 17% |

|                                                      |   |
|------------------------------------------------------|---|
| Check accompanying data collected at same site/date. |   |
| Algal mat sample                                     |   |
| Linear Veg Survey                                    | ✓ |
| Habitat Assessment                                   | ✓ |
| SCI/Biorecon                                         |   |
| Water sample                                         | ✓ |
| RQ- 2020-12-14-48                                    |   |

| 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                                  |

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

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

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

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



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

|                          |                        |                |                         |
|--------------------------|------------------------|----------------|-------------------------|
| Waterbody: Jackal Branch | Date: 12/15/20         | County: Hendry | Storet Number: G35X0176 |
| Analyst: Nicole Keistad  | Signature: [Signature] |                |                         |

Comments:

[illegible]

| spaces for additional taxa names.    |            |       |       |       |       |       |       |       |       |        |                            |                                  |      |       |       |       |       |       |       |       |       |        |                            |  |
|--------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------------------------|----------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------------------------|--|
|                                      | Meter Mark |       |       |       |       |       |       |       |       |        |                            | Meter Mark                       |      |       |       |       |       |       |       |       |       |        |                            |  |
| HERBACEOUS SPECIES                   | 0-10       | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 | Specimen collected (check) | HERBACEOUS SPECIES               | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 | Specimen collected (check) |  |
| <i>Alternanthera philoxeroides</i>   |            |       |       |       |       |       |       |       |       |        |                            | <i>Micranthemum glomeratum</i>   |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Bacopa caroliniana</i>            |            |       |       |       |       |       |       |       |       |        |                            | <i>Micranthemum umbrosum</i>     |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Bacopa monnieri</i>               | P          |       |       |       | P     |       |       |       |       |        |                            | <i>Myriophyllum aquaticum</i>    |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Bidens mitis</i>                  |            |       |       |       |       |       |       |       |       |        |                            | <i>Najas guadelupensis</i>       |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Boehmeria cylindrica</i>          |            |       |       |       |       |       |       |       |       |        |                            | <i>Nuphar luteum</i>             |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Centella asiatica</i>             |            |       |       |       |       |       |       |       |       |        |                            | <i>Orontium aquaticum</i>        |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Ceratophyllum demersum</i>        |            |       |       |       |       |       |       |       |       |        |                            | <i>Panicum hemitomon</i>         |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Chara</i>                         |            |       |       |       |       |       |       |       |       |        |                            | <i>Panicum repens</i>            |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Cicutula maculata</i>             |            |       |       |       |       |       |       |       |       |        |                            | <i>Panicum rigidulum</i>         |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Cladium jamaicense</i>            |            |       |       |       |       |       |       |       |       |        |                            | <i>Pistia stratioides</i>        |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Colocasia esculenta</i>           |            |       |       |       |       |       |       |       |       |        |                            | <i>Polygonum glabra</i>          |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Commelina diffusa</i>             |            |       |       |       |       |       |       |       |       |        |                            | <i>Polygonum hydropiperoides</i> |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Commelina virginica</i>           |            |       |       |       |       |       |       |       |       |        |                            | <i>Polygonum punctatum</i>       |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Crinum americanum</i>             |            |       |       |       |       |       |       |       |       |        |                            | <i>Pontedaria cordata</i>        |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Diodia virginiana</i>             |            |       |       |       |       |       |       |       |       |        |                            | <i>Potamogeton illinoensis</i>   |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Eichhornia crassipes</i>          |            |       |       |       |       |       |       |       |       |        |                            | <i>Ruellia simplex</i>           |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Eleocharis (wispy viviparous)</i> | P          |       |       |       | PP    |       |       |       |       |        |                            | <i>Sacciolepis striata</i>       |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Hydrilla verticillata</i>         |            |       |       |       |       |       |       |       |       |        |                            | <i>Sagittaria kurziana</i>       |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Hydrocotyle</i>                   | PPPPPPPPPP |       |       |       |       |       |       |       |       |        |                            | <i>Sagittaria lancifolia</i>     |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Hypophylla polysperma</i>         |            |       |       |       |       |       |       |       |       |        |                            | <i>Sagittaria latifolia</i>      |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Hymenocallis</i>                  |            |       |       |       |       |       |       |       |       |        |                            | <i>Salvinia minima</i>           |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Lachnanthes caroliniana</i>       |            |       |       |       |       |       |       |       |       |        |                            | <i>Samolus parviflora</i>        |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Lancoltia punctata</i>            |            |       |       |       |       |       |       |       |       |        |                            | <i>Saururus cernuus</i>          |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Lemna</i>                         |            |       |       |       |       |       |       |       |       |        |                            | <i>Sparganium americanum</i>     |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Limnophila sessiliflora</i>       |            |       |       |       |       |       |       |       |       |        |                            | <i>Typha</i>                     |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Ludwigia leptocarpa</i>           |            |       |       |       |       |       |       |       |       |        |                            | <i>Vallisneria americana</i>     |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Ludwigia palustris</i>            |            |       |       |       |       |       |       |       |       |        |                            | <i>Zizania aquatica</i>          |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Ludwigia peruviana</i>            |            |       |       |       |       |       |       |       |       |        |                            |                                  |      |       |       |       |       |       |       |       |       |        |                            |  |
| <i>Ludwigia repens</i>               | PPPPPPPPPP |       |       |       |       |       |       |       |       |        | </                         |                                  |      |       |       |       |       |       |       |       |       |        |                            |  |



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

SAMPLE ID: 21FLFTM ORG ID: 21FLFTM LATITUDE: 26.756  
 COUNTY: Hendry STORET #: — LONGITUDE: -81.5341  
 DATE: 12/15/2020 TIME: 0950 SAMPLING AGENCY: 4DEP-SOROC  
 SITE NAME: Jacks Branch  
 FIELD ID/NAME: G3SD0176 RECEIVING BODY OF WATER: Caloosahatchee

## RIPARIAN ZONE / STREAM FEATURES

|                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |                                                                                                       |  |  |  |                                                                                                                                                                                                       |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|-------------------------------------------------------------------------------------------------------|--|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category):<br>Forest/Natural: <u>20</u> Silviculture: <u>—</u> Field/Pasture: <u>60</u> Agricultural: <u>15</u> Residential: <u>5</u> Commercial: <u>—</u> Industry: <u>—</u> Other (Specify): <u>—</u>                                                                                 |  |  |  |                                                                                                       |  |  |  | <input checked="" type="checkbox"/> <b>Landscape Development Intensity Index (LDI)</b><br><u>—</u>                                                                                                    |  |
| Local Watershed Erosion (select one): <input type="checkbox"/> None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy<br>Local Watershed NPS Pollution: <input type="checkbox"/> No evidence <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |  |  |  |                                                                                                       |  |  |  |                                                                                                                                                                                                       |  |
| Width of Riparian Vegetation (m) on Each Buffer Side<br>Left Bank: <u>12</u> Right Bank: <u>12</u>                                                                                                                                                                                                                                                                 |  |  |  | <b>Hydrologic Modification Score</b> (per FT 3101)<br><u>—</u>                                        |  |  |  | Typical Width (m) Depth (m)/Velocity (m/sec) Transect<br><u>5</u> m wide<br><u>0.2</u> m/s <u>—</u> m/s <u>—</u> m/s                                                                                  |  |
| High Water Mark: <u>—</u> + <u>1.0</u> = <u>—</u><br>(m) (above present water level) (present depth) (above bed)                                                                                                                                                                                                                                                   |  |  |  | Artificially Impounded <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No |  |  |  | Canopy Cover % <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%) |  |
| Artificially <input checked="" type="checkbox"/> No <input type="checkbox"/> Mostly recovered, more sinuous<br>Channelized: <input type="checkbox"/> Some recovery <input type="checkbox"/> Recent, severe                                                                                                                                                         |  |  |  |                                                                                                       |  |  |  |                                                                                                                                                                                                       |  |

## SEDIMENT / SUBSTRATE

|                                                                                                                                                                          |                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sediment Oils</b><br><input checked="" type="checkbox"/> Absent <input type="checkbox"/> Slight<br><input type="checkbox"/> Moderate <input type="checkbox"/> Profuse | <b>Sediment Odors</b><br><input checked="" type="checkbox"/> Normal <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum<br><input type="checkbox"/> Chemical <input type="checkbox"/> Anaerobic<br><input type="checkbox"/> Other (Specify): <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 type="checkbox"/> SCI <input checked="" type="checkbox"/> RPS <input checked="" type="checkbox"/> LVS<br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon |              |                        |                      | <b>WATER QUALITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |             |             |                                                                                                                                                                                                      |                 |                |                                         |
|                                                                                                                                                                                                                          | % Coverage   | INVERT # Times Sampled | PERI # Times Sampled | Depth (M)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Temp. (°C)  | pH (SU)     | D.O. (MG/L) | D.O. Sat (%)                                                                                                                                                                                         | Cond. (UMHO/CM) | Salinity (PPT) | SECCHI (M)                              |
| Woody Debris (Snags)                                                                                                                                                                                                     | <u>12.34</u> | <u>—</u>               | <u>—</u>             | Top: <u>0.15</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <u>20.0</u> | <u>7.34</u> | <u>7.29</u> | <u>80.4</u>                                                                                                                                                                                          | <u>435.7</u>    | <u>0.21</u>    | <u>0.3</u>                              |
| Undercut Banks / Roots                                                                                                                                                                                                   | <u>0.32</u>  | <u>—</u>               | <u>—</u>             | Mid: <u>—</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <u>—</u>    | <u>—</u>    | <u>—</u>    | <u>—</u>                                                                                                                                                                                             | <u>—</u>        | <u>—</u>       | <input checked="" type="checkbox"/> VOB |
| Leaf Packs or Mat .....                                                                                                                                                                                                  | <u>1.6</u>   | <u>—</u>               | <u>—</u>             | Bottom: <u>—</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <u>—</u>    | <u>—</u>    | <u>—</u>    | <u>—</u>                                                                                                                                                                                             | <u>—</u>        | <u>—</u>       | TOTAL DEPTH: <u>0.3</u>                 |
| Aquatic Vegetation .....                                                                                                                                                                                                 | <u>0.04</u>  | <u>—</u>               | <u>—</u>             | Meter ID: <u>Friday</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |             |             |                                                                                                                                                                                                      |                 |                |                                         |
| Rock or Shell Rubble..                                                                                                                                                                                                   | <u>16.96</u> | <u>—</u>               | <u>—</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"/>                                                                                                                                                                                                                                                                                                                                                                           |             |             |             | <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"/> |                 |                |                                         |
| Sand.....                                                                                                                                                                                                                | <u>40</u>    | <u>—</u>               | <u>—</u>             | 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: <u>SA0028116</u> Exp: <u>02/04/21</u>                                                                                                                                                                                                                                                                                                                                          |             |             |             | Color Tannic <input checked="" type="checkbox"/> Green (Algae) <input type="checkbox"/><br>Clear <input type="checkbox"/> Other (Specify) <input type="checkbox"/>                                   |                 |                |                                         |
| Mud / Muck / Silt .....                                                                                                                                                                                                  | <u>20</u>    | <u>—</u>               | <u>—</u>             | 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: <u>—</u> Exp: <u>—</u>                                                                                                                                                                                                                                                                                                                                                         |             |             |             | Clarity Clear <input type="checkbox"/> Slightly Turbid <input checked="" type="checkbox"/><br>Turbid <input type="checkbox"/> Opaque <input type="checkbox"/>                                        |                 |                |                                         |
| Other .....                                                                                                                                                                                                              | <u>—</u>     | <u>—</u>               | <u>—</u>             | System Type: Stream <input checked="" type="checkbox"/> Lake <input type="checkbox"/> Wetland <input type="checkbox"/> Estuary <input type="checkbox"/> Other(Specify) <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                |             |             |             |                                                                                                                                                                                                      |                 |                |                                         |
| Other .....                                                                                                                                                                                                              | <u>—</u>     | <u>—</u>               | <u>—</u>             | <b>ABUNDANCE</b> Not Obs. Rare Common Abundant<br>Periphyton: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Fish: <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Aquatic Plants: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Iron/Sulfur Bacteria: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |             |             |             |                                                                                                                                                                                                      |                 |                |                                         |

### AMBIENT FIELD CONDITIONS / NOTES:

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM: Nicole Reistad, Miranda Carroll SIGNATURE: [Signature] DATE: 03/31/21