



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / ☒ No

WIN Station Name: HILLS RIVER SW of CR39

Date: 9-30-19  
(mm/dd/yyyy)

WIN/ Field ID: G2SW0077

WBID: 1443A

Latitude: \_\_\_\_\_

County: HILLS PASCO

ORG ID: 21FLTPA

Longitude: \_\_\_\_\_

(Decimal Degrees)

Receiving Body of Water: TAMPA BAY

RQ-2019- 09-23-12

(Decimal Degrees)

| Sampling Team Members |  |  |  |  |  | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|-----------------------|--|--|--|--|--|-----------------|-------------------|---------------|--------------|--------------------|
| J. Ashton             |  |  |  |  |  |                 |                   |               |              |                    |
| Ben Paswater          |  |  |  |  |  |                 |                   |               |              |                    |
| Sarah Meyer           |  |  |  |  |  |                 |                   |               |              |                    |

| Sampling Equipment                                   |                                   |                               |
|------------------------------------------------------|-----------------------------------|-------------------------------|
| <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: Secchi  
Equipment ID: Secchi #1

| 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 / Low / Normal / High / Flooded  
Meter ID# CH2V Matrix: Fresh Marine / DI  
Photos: Yes / No Flow: No Flow / Interstitial / Flowing / NA Tide: Rising / Falling / Slack / NA Tide Times: High / Low

| 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°) |
|-----------|------|-----------------|------------------|-----------------|-----------|-----------|------|----------------|--------------------|------------|
| EST       | 1130 | 1.0             | 0.3              | 0.8             | 5.42      | 66.4      | 6.77 | 0.16           | 328.5              | 25.6       |

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 80440 HA-ID: 16380 RPS-ID: 9482 Macrophyte-ID: L2m2 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>SAT1163030</u> | <u>06/12/18</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>NA9099030</u>  | <u>04/09/20</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 type="checkbox"/> Ice                                                      |                   |                 |                                        |
| Chlorophyll                 | <input checked="" type="checkbox"/> CHL-SUITE-W                                                                                                                                                                                    | <input 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 type="checkbox"/> Ice                                                      |                   |                 |                                        |
| Physical/Aggregate (Marine) | <input type="checkbox"/> Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY                                                                                                                                                            | <input type="checkbox"/> Ice                                                      |                   |                 |                                        |
| Macroinvertebrates          | <input checked="" type="checkbox"/> M-FW-QLDC                                                                                                                                                                                      | <input type="checkbox"/> Formalin                                                 |                   |                 |                                        |
| Periphyton                  | <input type="checkbox"/> ALGAE-ID                                                                                                                                                                                                  | <input type="checkbox"/> Ice                                                      |                   |                 |                                        |
| Microbiology                | <input checked="" type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enterococci                                                                                                                    | <input type="checkbox"/> Ice                                                      |                   |                 |                                        |
| Molecular                   | <input type="checkbox"/> PCR-FILTER <input type="checkbox"/> PCR-BacR <input type="checkbox"/> PCR-GULL2<br><input type="checkbox"/> PCR-HF183 <input type="checkbox"/> PCR-DG3 <input type="checkbox"/> PCR-GFD                   | <input type="checkbox"/> Ice                                                      |                   |                 |                                        |
| Tracers                     | <input checked="" type="checkbox"/> W-E8321-DI <input checked="" 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 type="checkbox"/> W-E8321-DI<br><input type="checkbox"/> W-PCL-SQ-R <input type="checkbox"/> W-E8321-MS <input type="checkbox"/> W-CARB-AA | <input type="checkbox"/> Ice                                                      |                   |                 |                                        |
| Phytoplankton               | <input type="checkbox"/> DTY-QN-C <input type="checkbox"/> PKD-QN-C                                                                                                                                                                |                                                                                   |                   |                 |                                        |

Place Preservative Sticker(s) Here (If Available)

Notes:

Field ID/WIN: G2SW0077

Site Name: Hills River SW of CR39

Signature: [Signature] Date: 9-30-19

LIMS EVENT ID: 2019-10-01-01 WIN Import ID: 16126

Enter Field Parameters, Verify Station ID In LIMS DMT: SM 11/13/2019 QC Station ID, Field Parameters In LIMS DMT: SM 01/06/2020

Scan/Save Field Sheets SM 03/11/2020 Migrate Data to WIN: SM 01/06/2020 Verify Data In WIN: SM 03/11/2020

(Initials/Date) (Initials/Date) (Initials/Date)

|                                                         |  |                                                                                              |  |                                                                                              |                   |        |  |  |  |                   |
|---------------------------------------------------------|--|----------------------------------------------------------------------------------------------|--|----------------------------------------------------------------------------------------------|-------------------|--------|--|--|--|-------------------|
| Client Name: FDEP SW Dist.                              |  | Project Name: SMP                                                                            |  | BOTTLE SIZE & TYPE                                                                           |                   |        |  |  |  | LABORATORY I.D. # |
| Address: 13051 N. Telecom Pkwy. Temple Terrace FL 33637 |  | P.O. Number: <del>B370AE</del> B5A496                                                        |  |                                                                                              |                   |        |  |  |  |                   |
| Phone: 813-470-5770                                     |  | Project Address:                                                                             |  |                                                                                              | Analysis Required | E Coli |  |  |  |                   |
| Contact: Judy Ashton 813-470-5772                       |  | Special Instructions: RQ-2019-09-23-12                                                       |  |                                                                                              |                   |        |  |  |  |                   |
| Sampled By:                                             |  | Turn Around Time: <input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> RUSH |  | <input type="checkbox"/> ADaPT <input type="checkbox"/> EQulS <input type="checkbox"/> Other |                   |        |  |  |  |                   |
| Page:      of                                           |  |                                                                                              |  |                                                                                              |                   |        |  |  |  |                   |

| SAMPLE ID                                                                                                            | SAMPLE DESCRIPTION                | Grab<br>Comp | SAMPLING |      | MATRIX | NO.<br>COUNT | PRE<br>SER-<br>VATI<br>ON |   |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------|----------|------|--------|--------------|---------------------------|---|--|--|--|--|--|
|                                                                                                                      |                                   |              | DATE     | TIME |        |              |                           |   |  |  |  |  |  |
| Field ID/WIN<br><b>G2SW0077</b><br> | Site Name: Hills River SW of CR39 |              | 09/30/15 | 1130 | SW     | 1            |                           | ✓ |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |
|                                                                                                                      |                                   |              |          |      |        |              |                           |   |  |  |  |  |  |

Matrix Code: WW = wastewater SW = surface water GW = ground water DW = drinking water O = oil A = air SO = soil SL = sludge      Preservation Code: I = ice H=(HCl) S = (H2SO4) N = (HNO3) T = (Sodium Thiosulfate)

Received on Ice ☐ Yes ☐ No ☐ Temp taken from sample ☐ Temp from blank      ☐ Where required, pH checked      Temperature when received \_\_\_\_\_ (in degrees celcius)

DCN: AD-051 Form last revised 04/30/2015      Device used for measuring Temp by unique identifier (circle IR temp gun used)      J: 9A    G: LT-1 LT-2    T: 10A    A: 3A    M: 3A    S: 1V

|                                     |  |                |            |                                 |  |                |            |
|-------------------------------------|--|----------------|------------|---------------------------------|--|----------------|------------|
| Relinquished by: <i>Sarah Meyer</i> |  | Date: 09/30/15 | Time: 1501 | Received by: <i>[Signature]</i> |  | Date: 09/30/15 | Time: 1501 |
|-------------------------------------|--|----------------|------------|---------------------------------|--|----------------|------------|

**FOR DRINKING WATER USE:**

PWS ID: \_\_\_\_\_

# Florida Department of Environmental Protection

## Central Laboratory Submittal Form

SCIs

last revised Jan 25, 2018

Customer: SW-DIST

Requester: Benjamin Paswater

Field Report Prepared By: S Meyer

Project ID: SMP

Collected By: J Ashton, B Paswater, S Meyer

Sampling Agency: FDEP SW ROC

|              |                                   |                                                                           |                                                               |                                                             |                                                                            |                                        |                               |  |
|--------------|-----------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------|----------------------------------------------------------------------------|----------------------------------------|-------------------------------|--|
| Location     |                                   | <input type="checkbox"/> Comp<br><input checked="" type="checkbox"/> Grab | Collection (comp begin or grab)<br>Date 09/30/2019 Time 11:30 |                                                             | Eastern<br>Central                                                         | Composite end<br>Date _____ Time _____ | Bottle Group(s)<br>(See pg 2) |  |
| Field ID/WIN | G2SW0077                          | Matrix (type, e.g., Salt, Fresh, etc)                                     |                                                               | Diss. Oxygen                                                | <input checked="" type="checkbox"/> mg/L<br><input type="checkbox"/> % sat | Total Res. Chlorine<br>(mg/L)          | A/B                           |  |
| W            |                                   | Temp (C)                                                                  | pH                                                            | Sample Depth                                                | <input type="checkbox"/> ft<br><input checked="" type="checkbox"/> m       | Sp. Conductance<br>(umho/cm)           |                               |  |
| La           | Site Name: Hills River SW of CR39 | <input type="checkbox"/> dd<br><input type="checkbox"/> dms               | Salinity (ppt)                                                | Comments                                                    |                                                                            |                                        |                               |  |
|              |                                   | <input type="checkbox"/> dd<br><input type="checkbox"/> dms               | 0.16                                                          | E. COLI PROPPED OFF 2 AEL                                   |                                                                            |                                        |                               |  |
| Location     |                                   | <input type="checkbox"/> Comp<br><input type="checkbox"/> Grab            | Collection (comp begin or grab)<br>Date _____ Time _____      |                                                             | Eastern<br>Central                                                         | Composite end<br>Date _____ Time _____ | Bottle Group(s)               |  |
| Field ID     |                                   | Matrix (type, e.g., Salt, Fresh, etc)                                     |                                                               | Diss. Oxygen                                                | <input type="checkbox"/> mg/L<br><input type="checkbox"/> % sat            | Total Res. Chlorine<br>(mg/L)          |                               |  |
| WIN/STORET # |                                   | Temp (C)                                                                  | pH                                                            | Sample Depth                                                | <input type="checkbox"/> ft<br><input type="checkbox"/> m                  | Sp. Conductance<br>(umho/cm)           |                               |  |
| Latitude     |                                   | <input type="checkbox"/> dd<br><input type="checkbox"/> dms               | Longitude                                                     | <input type="checkbox"/> dd<br><input type="checkbox"/> dms | Salinity (ppt)                                                             |                                        |                               |  |
| Comments     |                                   |                                                                           |                                                               |                                                             |                                                                            |                                        |                               |  |
| Location     |                                   | <input type="checkbox"/> Comp<br><input type="checkbox"/> Grab            | Collection (comp begin or grab)<br>Date _____ Time _____      |                                                             | Eastern<br>Central                                                         | Composite end<br>Date _____ Time _____ | Bottle Group(s)               |  |
| Field ID     |                                   | Matrix (type, e.g., Salt, Fresh, etc)                                     |                                                               | Diss. Oxygen                                                | <input type="checkbox"/> mg/L<br><input type="checkbox"/> % sat            | Total Res. Chlorine<br>(mg/L)          |                               |  |
| WIN/STORET # |                                   | Temp (C)                                                                  | pH                                                            | Sample Depth                                                | <input type="checkbox"/> ft<br><input type="checkbox"/> m                  | Sp. Conductance<br>(umho/cm)           |                               |  |
| Latitude     |                                   | <input type="checkbox"/> dd<br><input type="checkbox"/> dms               | Longitude                                                     | <input type="checkbox"/> dd<br><input type="checkbox"/> dms | Salinity (ppt)                                                             |                                        |                               |  |
| Comments     |                                   |                                                                           |                                                               |                                                             |                                                                            |                                        |                               |  |
| Location     |                                   | <input type="checkbox"/> Comp<br><input type="checkbox"/> Grab            | Collection (comp begin or grab)<br>Date _____ Time _____      |                                                             | Eastern<br>Central                                                         | Composite end<br>Date _____ Time _____ | Bottle Group(s)               |  |
| Field ID     |                                   | Matrix (type, e.g., Salt, Fresh, etc)                                     |                                                               | Diss. Oxygen                                                | <input type="checkbox"/> mg/L<br><input type="checkbox"/> % sat            | Total Res. Chlorine<br>(mg/L)          |                               |  |
| WIN/STORET # |                                   | Temp (C)                                                                  | pH                                                            | Sample Depth                                                | <input type="checkbox"/> ft<br><input type="checkbox"/> m                  | Sp. Conductance<br>(umho/cm)           |                               |  |
| Latitude     |                                   | <input type="checkbox"/> dd<br><input type="checkbox"/> dms               | Longitude                                                     | <input type="checkbox"/> dd<br><input type="checkbox"/> dms | Salinity (ppt)                                                             |                                        |                               |  |
| Comments     |                                   |                                                                           |                                                               |                                                             |                                                                            |                                        |                               |  |

|                                 |                         |                          |                                 |              |           |
|---------------------------------|-------------------------|--------------------------|---------------------------------|--------------|-----------|
| Relinquished By:<br>Sarah Meyer | Date/Time<br>09/30/2019 | Shipping Method<br>FedEx | Number of Coolers Shipped:<br>1 | Received By: | Date/Time |
|---------------------------------|-------------------------|--------------------------|---------------------------------|--------------|-----------|

|          |                                                                                    |                |                 |               |               |                                     |   |
|----------|------------------------------------------------------------------------------------|----------------|-----------------|---------------|---------------|-------------------------------------|---|
| Group: A | Bottle Type:                                                                       | P-1L           | # of Bottles: 1 | Preservative: | ICE           | Enter Number of Bottles Sent to Lab | 1 |
|          | ALKALINITY<br>TURBIDITY<br>W-CL-IC<br>W-COLOR<br>W-F<br>W-SO4-IC<br>W-TDS<br>W-TSS |                |                 |               |               |                                     |   |
| Group: A | Bottle Type:                                                                       | BP-1L          | # of Bottles: 1 | Preservative: | ICE           | Enter Number of Bottles Sent to Lab | 1 |
|          | CHLSUITE-W                                                                         |                |                 |               |               |                                     |   |
| Group: A | Bottle Type:                                                                       | P-250ML-WI-THI | # of Bottles: 1 | Preservative: | ICE           | Enter Number of Bottles Sent to Lab | 1 |
|          | SW-AEL-ECQ                                                                         |                |                 |               |               |                                     |   |
| Group: A | Bottle Type:                                                                       | BG-500ML       | # of Bottles: 1 | Preservative: | ICE           | Enter Number of Bottles Sent to Lab | 1 |
|          | W-E8321-DI<br>W-E8321-MS                                                           |                |                 |               |               |                                     |   |
| Group: A | Bottle Type:                                                                       | P-500ML        | # of Bottles: 1 | Preservative: | HNO3          | Enter Number of Bottles Sent to Lab | 1 |
|          | W-ICP<br>W-ICPMS                                                                   |                |                 |               |               |                                     |   |
| Group: A | Bottle Type:                                                                       | P-500ML        | # of Bottles: 1 | Preservative: | ICE And H2SO4 | Enter Number of Bottles Sent to Lab | 1 |
|          | W-NH3<br>W-NO2NO3<br>W-S-A-TP<br>W-TKN<br>W-TOC                                    |                |                 |               |               |                                     |   |
| Group: A | Bottle Type:                                                                       | P-125ML        | # of Bottles: 1 | Preservative: | FILTER-ICE    | Enter Number of Bottles Sent to Lab | 1 |
|          | W-PO4-F                                                                            |                |                 |               |               |                                     |   |
| Group: A | Bottle Type:                                                                       | BG-1L          | # of Bottles: 4 | Preservative: | ICE           | Enter Number of Bottles Sent to Lab | 4 |
|          | W-PSNP-TQ                                                                          |                |                 |               |               |                                     |   |
| Group: B | Bottle Type:                                                                       | PT-50ML        | # of Bottles: 1 | Preservative: | ICE           | Enter Number of Bottles Sent to Lab | 0 |
|          | ALGAL_ID                                                                           |                |                 |               |               |                                     |   |
| Group: B | Bottle Type:                                                                       | PJ-2L          | # of Bottles: 2 | Preservative: | Formalin      | Enter Number of Bottles Sent to Lab | 1 |

Group: B

Bottle Type:

PJ-2L

# of Bottles: 2

Preservative:

Formalin

Enter Number of Bottles Sent to Lab

1

MI-FW-QLDC



Site Name: Hills River SW of CR39

STORET STATION  
NUMBER:  
see stickerDATE  
(MM/DD/YY):

9.30.19

SAMPLING AGENCY:

FDEP SW ROC

FIELD ID/NAME: see sticker ^

COUNTY:

HILLS PASCO

LOCATION:

RECEIVING BODY OF WATER:

TAMPA BAY

| 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>10</u>                                                   | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                 | <u>10</u> 9 8 7 6                                                                                                                          | 5 4 3 2 1                                                                                                                     |
| Substrate Availability <u>5</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><u>5</u> 4 3 2 1                                                                     |
| Water Velocity <u>13</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 <u>13</u> 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>15</u><br>-----<br>Primary Score <u>43</u>                | Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.<br>20 19 18 17 16                                                                                 | Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.<br><u>15</u> 14 13 12 11                       | Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).<br>10 9 8 7 6         | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br>5 4 3 2 1                            |
| Secondary Habitat Components                                                    | 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 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 <u>19</u> 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 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 root zone with raw, eroded areas.                   |
| Right Bank <u>8</u><br>Left Bank <u>9</u>                                       | 10 <u>9</u>                                                                                                                                                                                                       | <u>8</u> 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>8</u><br>Left Bank <u>10</u>                                      | <u>10</u> <u>9</u>                                                                                                                                                                                                | <u>8</u> 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>9</u><br>Left Bank <u>9</u><br>-----<br>Secondary Score <u>72</u> | 10 <u>9</u>                                                                                                                                                                                                       | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |

105 115 TOTAL SCORE

Date: 09/30/2019

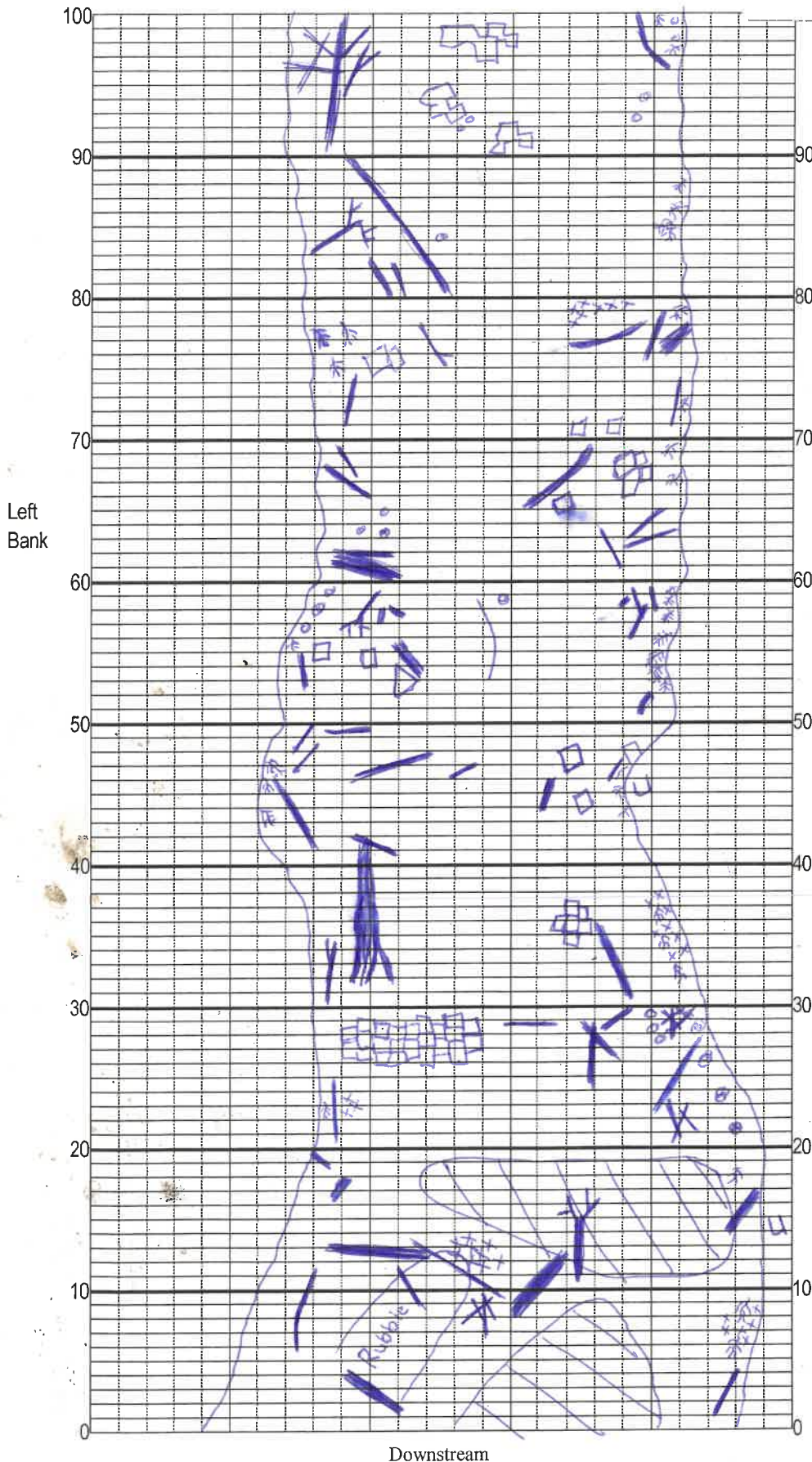
Analyst: S Meyer, J Ashton, B Paswater

Signature:

Site Name: Hills River SW of CR39

Date: 09/30/2019

Sampler: S Meyer, J Ashton, B Roswate

100 m: Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_0 m: Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_

Substrates: Code key, draw proportionate habitat abundance. %

|  |                            |                      |
|--|----------------------------|----------------------|
|  | Snags 30m                  | 3                    |
|  | Roots/undercut banks 1.25m |                      |
|  | Leaf Packs (or mats) 1.0m  |                      |
|  | Aquatic Macrophytes 0.25m  |                      |
|  | ROCKS 4m                   | 1                    |
|  | Pools                      |                      |
|  |                            | total # observed = 2 |
|  |                            | # range expected =   |

Average width 10 m

Average depth \_\_\_\_\_ m

Velocity measured at \_\_\_\_\_ meter mark.

WQ &amp; chemistry taken at \_\_\_\_\_ 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:

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

Site Name: Hills River SW of CR39

21FLTPA

LATITUDE

LONGITUDE

SITE NAME see sticker

TIME

1130

SAMPLING AGENCY FDEP SW ROC

DATE 09/30/2019

RECEIVING BODY OF WATER

TAMPA BAY

## RIPARIAN ZONE / STREAM FEATURES

|                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  |  |                                                                                                                                                                                                              |  |  |  |                                                                                                 |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|-------------------------------------------------------------------------------------------------|--|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category):<br>Forest/Natural <input type="text" value="60"/> Silviculture <input type="text"/> Field/Pasture <input type="text" value="20"/> Agricultural <input type="text" value="10"/> Residential <input type="text" value="10"/> Commercial <input type="text"/> Industry <input type="text"/> Other (Specify) <input type="text"/> |  |  |  |                                                                                                                                                                                                              |  |  |  | <b>Landscape Development Intensity Index (LDI)</b><br><input type="text"/>                      |  |
| Local Watershed Erosion (select one): <input type="checkbox"/> None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy<br>Local Watershed NPS Pollution: <input type="checkbox"/> No evidence <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy                                                  |  |  |  |                                                                                                                                                                                                              |  |  |  | <b>Typical Width (m) Depth (m)/Velocity (m/sec) Transect</b><br><input type="text"/> m wide     |  |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank: <input type="text" value="18m"/> Right Bank: <input type="text" value="18m"/>                                                                                                                                                                                                                                                             |  |  |  | <b>Hydrologic Modification Score</b> (per FT 3101) <input type="text"/>                                                                                                                                      |  |  |  | <input type="text"/> m/s <input type="text" value="0.17"/> m/s <input type="text"/> m/s         |  |
| <b>High Water Mark:</b> <input type="text" value="2.0"/> + <input type="text" value="1.0"/> = <input type="text" value="3.0"/><br>(m) (above present water level) (present depth) (above bed)                                                                                                                                                                                                                       |  |  |  | <b>Artificially Impounded</b><br><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                         |  |  |  | <input type="text"/> m deep <input type="text" value="1.0"/> m deep <input type="text"/> m deep |  |
| <b>Artificially</b> <input type="checkbox"/> No <input checked="" 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 checked="" type="checkbox"/> Heavily Shaded <input type="checkbox"/> Moderate Shaded (46-80%) |  |  |  |                                                                                                 |  |

## SEDIMENT / SUBSTRATE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>Sediment Oils</b><br><input checked="" type="checkbox"/> Absent <input type="checkbox"/> Slight<br><input type="checkbox"/> Moderate <input type="checkbox"/> Profuse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |  | <b>Sediment Odors</b><br><input checked="" type="checkbox"/> Normal <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum<br><input type="checkbox"/> Chemical <input type="checkbox"/> Anaerobic<br><input type="checkbox"/> Other (Specify):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  | <b>Smothering of Substrates</b><br>Sand Smothering: None <input type="checkbox"/> Slight <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/><br>Silt Smothering: None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Severe <input type="checkbox"/><br>Algae Smothering: None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/>                                                                                                                                                                                                                                                                                                               |  |  |
| <b>SUBSTRATE TYPE</b><br>Assessment Tool: <input type="checkbox"/> SCI <input type="checkbox"/> RPS <input type="checkbox"/> LVS<br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  | <b>WATER QUALITY</b><br>Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)<br>Top: <input type="text" value="0.3"/> <input type="text" value="25.6"/> <input type="text" value="6.77"/> <input type="text" value="5.42"/> <input type="text" value="66.4"/> <input type="text" value="328.5"/> <input type="text" value="0.16"/> <input type="text" value="0.8"/><br>Mid: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="checkbox"/> VOB<br>Bottom: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>                                                                                                                                                                                                 |  |  | Meter ID: <input type="text" value="CABW4"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| Woody Debris (Snags) <input type="text" value="3"/> <input type="text" value="7"/> <input type="text"/><br>Undercut Banks / Roots <input type="text"/> <input type="text" value="2"/> <input type="text"/><br>Leaf Packs or Mat ..... <input type="text"/> <input type="text"/> <input type="text"/><br>Aquatic Vegetation ..... <input type="text"/> <input type="text"/> <input type="text"/><br>Rock or Shell Rubble.. <input type="text" value="1"/> <input type="text" value="7"/> <input type="text"/><br>Sand..... <input type="text"/> <input type="text" value="2"/> <input type="text"/><br>Mud / Muck / Silt ..... <input type="text"/> <input type="text"/> <input type="text"/><br>Other <input type="text" value="2"/> <input type="text"/> <input type="text"/><br>Other <input type="text" value="RUBBLE"/> <input type="text" value="2"/> <input type="text"/> |  |  | <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:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |  | <b>Water Surface Oils</b> Normal <input checked="" type="checkbox"/> Sheen <input type="checkbox"/><br>Globs <input type="checkbox"/> Slick <input type="checkbox"/> Other <input type="checkbox"/><br><b>Color</b> Tannic <input checked="" type="checkbox"/> Green (Algae) <input type="checkbox"/><br>Clear <input type="checkbox"/> Other (Specify) <input type="text"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |  |
| <b>ABUNDANCE</b><br>Not Obs. Rare Common Abundant<br>Periphyton: <input type="checkbox"/> <input 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"/>                                                                                                                                                                                                                                                                                                          |  |  | <b>System</b><br><b>NITRIC ACID 20-70%</b><br>DANGER 7053-37-2 7732-18-5<br>May be corrosive to metals. May be sensitive to metals. Causes severe skin burns and eye damage. Do not breathe fumes/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection. Wash contaminated clothing before reuse. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Store in a corrosion resistant container with a resistant inner liner. Store in a well-ventilated place. Keep container tightly closed. Containers to be respiratory test. |  |  | <b>SULFURIC ACID &gt;51%</b><br>DANGER 7664-93-9 7726-18-5<br>May be corrosive to metals. Causes severe skin burns and eye damage. Do not breathe fumes/vapors. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection. Wash contaminated clothing before reuse. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Store in a corrosion resistant container with a resistant inner liner. |  |  |

## SAMPLING TEAM

B Paswater, J Ashton, S Meyer

SIGNATURE:

Sarah Meyer

DATE:

09/30/2019



Site Name: Hills River SW of CR39

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

Investigators: J Ashton B Biscuit  
S Meyer

County:

PBCO

STORET Station Number: see label

| 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                                |           |              | 60           | 1                          | N                                |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 95           |              | 5                          |                                  |           |              | 94 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 10           | 1                          | N                                |           |              | 70           | 1                          | N                                |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 96           |              | 5                          |                                  |           |              | 88 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 20           | 1                          | N                                |           |              | 80           | 1                          | N                                |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 94           |              | 5                          |                                  |           |              | 80 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 30           | 1                          | N                                |           |              | 90           | 1                          | N                                |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 95           |              | 5                          |                                  |           |              | 76 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 40           | 1                          | N                                |           |              | 100          | 1                          | N                                |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 92           |              | 5                          |                                  |           |              | 70 |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |
| 50           | 1                          | N                                |           |              |              | 1                          | N                                |           |              |    |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |    |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |    |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |    |
|              | 5                          |                                  |           | 81           |              | 5                          |                                  |           |              |    |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |    |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |    |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |    |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |    |

Secchi depth 2.5  
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  | <input checked="" type="checkbox"/> |
| Habitat Assessment | <input checked="" type="checkbox"/> |
| SOP/Biorecon       | <input checked="" type="checkbox"/> |
| Water sample       | <input checked="" type="checkbox"/> |

RQ- 2019-09-23-12

## Algal Thickness Rank

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

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 &gt;20%.

Site Name: Hills River SW of CR39

County: *PRCO*Waterbody: *See Sticker*Date: *9-30-19*Signature: *[Signature]*Analyst: *[Signature]*

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. **BOLD is exotic invasive**

| HERBACEOUS SPECIES                                             | Meter Mark |       |       |       |       |       |       |       |       |        | Specimen collected (check) | HERBACEOUS SPECIES                   | Meter Mark |       |       |       |       |       |       |       |       |        | Specimen collected (check) |
|----------------------------------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------------------------|--------------------------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|----------------------------|
|                                                                | 0-10       | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 |                            |                                      | 0-10       | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 | 90-100 |                            |
| <b>Alternanthera philoxeroides</b>                             |            |       |       |       |       |       |       |       |       |        |                            | Micranthemum glomeratum              |            |       |       |       |       |       |       |       |       |        |                            |
| Bacopa caroliniana (Lemon)                                     |            |       |       |       |       |       |       |       |       |        |                            | Micranthemum umbrosum                |            |       |       |       |       |       |       |       |       |        |                            |
| Bacopa monneri                                                 |            |       |       |       |       |       |       |       |       |        |                            | <b>Myriophyllum aquaticum</b>        |            |       |       |       |       |       |       |       |       |        |                            |
| Bidens mitis                                                   |            |       |       |       |       |       |       |       |       |        |                            | Najas guadelupensis                  |            |       |       |       |       |       |       |       |       |        |                            |
| Boehmeria cylindrica                                           |            |       |       |       |       |       |       |       |       |        |                            | Nitella sp.                          |            |       |       |       |       |       |       |       |       |        |                            |
| Centella asiatica                                              |            |       |       |       |       |       |       |       |       |        |                            | Nuphar luteum                        |            |       |       |       |       |       |       |       |       |        |                            |
| Ceratophyllum demersum                                         |            |       |       |       |       |       |       |       |       |        |                            | Orontium aquaticum                   |            |       |       |       |       |       |       |       |       |        |                            |
| Chara sp.                                                      |            |       |       |       |       |       |       |       |       |        |                            | Panicum hemitomon                    |            |       |       |       |       |       |       |       |       |        |                            |
| Cicuta maculata                                                |            |       |       |       |       |       |       |       |       |        |                            | <b>Panicum repens</b>                |            |       |       |       |       |       |       |       |       |        |                            |
| Cladium jamaicense                                             |            |       |       |       |       |       |       |       |       |        |                            | Panicum rigidulum                    |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Colocasia esculenta</b>                                     |            |       |       |       |       |       |       |       |       |        |                            | <b>Pistia stratioides</b>            |            |       |       |       |       |       |       |       |       |        |                            |
| Commelina diffusa                                              |            |       |       |       |       |       |       |       |       |        |                            | Polygonum glabra                     |            |       |       |       |       |       |       |       |       |        |                            |
| Commelina virginica                                            |            |       |       |       |       |       |       |       |       |        |                            | Polygonum hydropiperoides            |            |       |       |       |       |       |       |       |       |        |                            |
| Crinum americanum                                              |            |       |       |       |       |       |       |       |       |        |                            | Polygonum punctatum                  |            |       |       |       |       |       |       |       |       |        |                            |
| Cyperus                                                        |            |       |       |       |       |       |       |       |       |        |                            | Pontedaria cordata                   |            |       |       |       |       |       |       |       |       |        |                            |
| Diodia virginiana                                              |            |       |       |       |       |       |       |       |       |        |                            | Potamogeton illinoensis              |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Eichhornia crassipes</b>                                    |            |       |       |       |       |       |       |       |       |        |                            | <b>Ruellia simplex (Mex Petunia)</b> |            |       |       |       |       |       |       |       |       |        |                            |
| Eleocharis (wispy viviparous)                                  |            |       |       |       |       |       |       |       |       |        |                            | Sacciolepis striata                  |            |       |       |       |       |       |       |       |       |        |                            |
| Fontinalis sp. (Aquatic Moss)                                  |            |       |       |       |       |       |       |       |       |        |                            | Sagittaria kurziana                  |            |       |       |       |       |       |       |       |       |        |                            |
| Fraxinus caroliniana                                           |            |       |       |       |       |       |       |       |       |        |                            | Sagittaria lancifolia                |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Hydrilla verticillata</b>                                   |            |       |       |       |       |       |       |       |       |        |                            | Sagittaria latifolia                 |            |       |       |       |       |       |       |       |       |        |                            |
| Hydrocotyle sp.                                                |            |       |       |       |       |       |       |       |       |        |                            | <b>Salvinia minima</b>               |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Hygrophila polysperma</b>                                   |            |       |       |       |       |       |       |       |       |        |                            | Samolus parviflora                   |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Hymenachne amplexicaulis</b>                                |            |       |       |       |       |       |       |       |       |        |                            | Saururus cernuus                     |            |       |       |       |       |       |       |       |       |        |                            |
| Hymenocallis                                                   |            |       |       |       |       |       |       |       |       |        |                            | Sparganium americanum                |            |       |       |       |       |       |       |       |       |        |                            |
| Lachnanthes caroliniana                                        |            |       |       |       |       |       |       |       |       |        |                            | Schoenoplectus americanus            |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Landoltia punctata</b>                                      |            |       |       |       |       |       |       |       |       |        |                            | Sphagneticola trilobata (Wedelia)    |            |       |       |       |       |       |       |       |       |        |                            |
| Lemna sp.                                                      |            |       |       |       |       |       |       |       |       |        |                            | Typha sp.                            |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Limnophila sessiflora</b>                                   |            |       |       |       |       |       |       |       |       |        |                            | <b>Urochloa mutica (Brachiaria)</b>  |            |       |       |       |       |       |       |       |       |        |                            |
| Ludwigia leptocarpa                                            |            |       |       |       |       |       |       |       |       |        |                            | Vallisneria americana                |            |       |       |       |       |       |       |       |       |        |                            |
| Ludwigia palustris                                             |            |       |       |       |       |       |       |       |       |        |                            | Zizania aquatica                     |            |       |       |       |       |       |       |       |       |        |                            |
| <b>Ludwigia peruviana</b>                                      |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| Ludwigia repens                                                |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| Luziola fluitans                                               |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
|                                                                |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| If no Dominant or Co-Dominant were selected, indicate with "X" |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| Indicate % cover macrophytes per section                       |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| 0-5% Macrophyte Coverage                                       |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| >5 and ≤10% Macrophyte Coverage                                |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| >10 and ≤25% Macrophyte Coverage                               |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| >25 and ≤50% Macrophyte Coverage                               |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |
| > 50% Macrophyte Coverage                                      |            |       |       |       |       |       |       |       |       |        |                            |                                      |            |       |       |       |       |       |       |       |       |        |                            |