

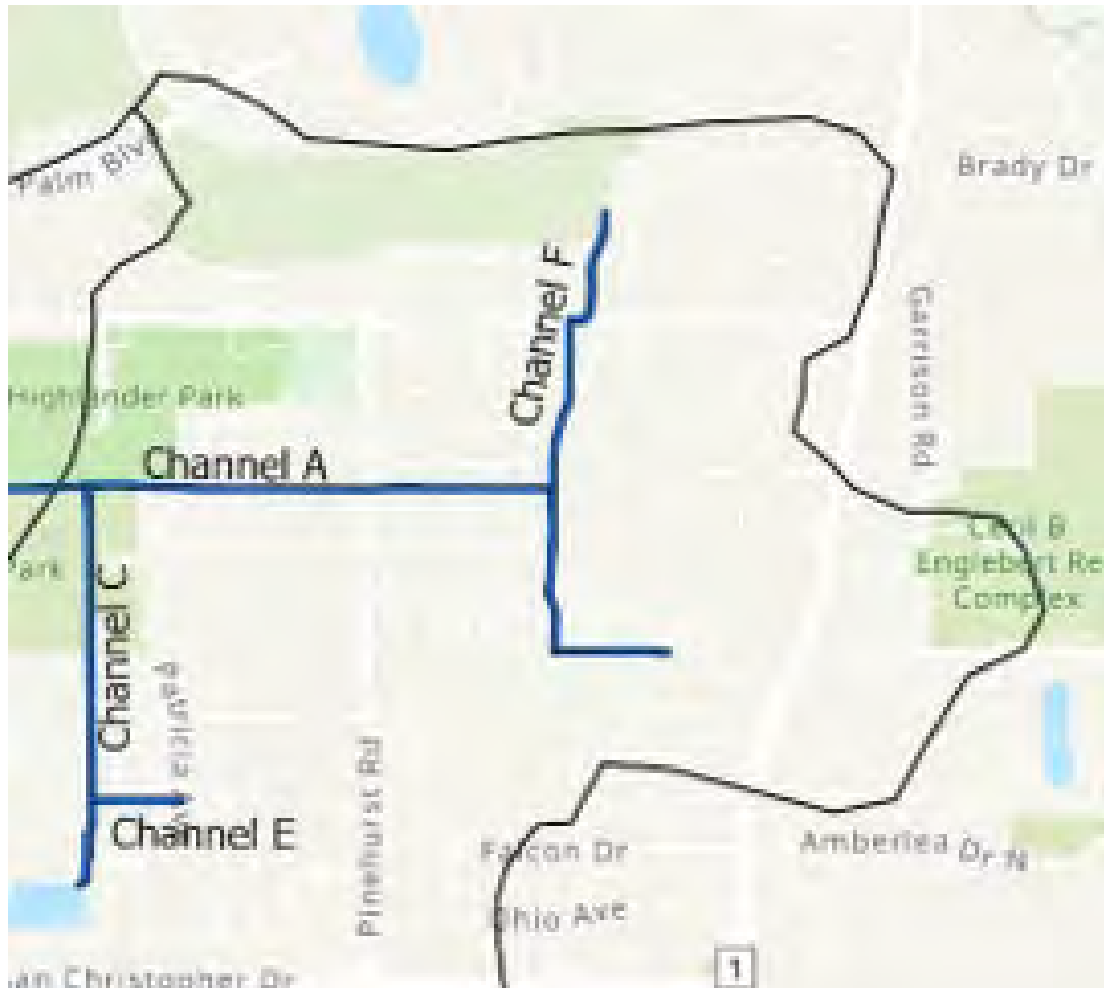
**APPENDIX D**

**HABITAT ASSESSMENT OF CHANNEL A  
2021**

**&**

**HABITAT ASSESSMENT OF CHANNELS C, E, AND F  
2023**

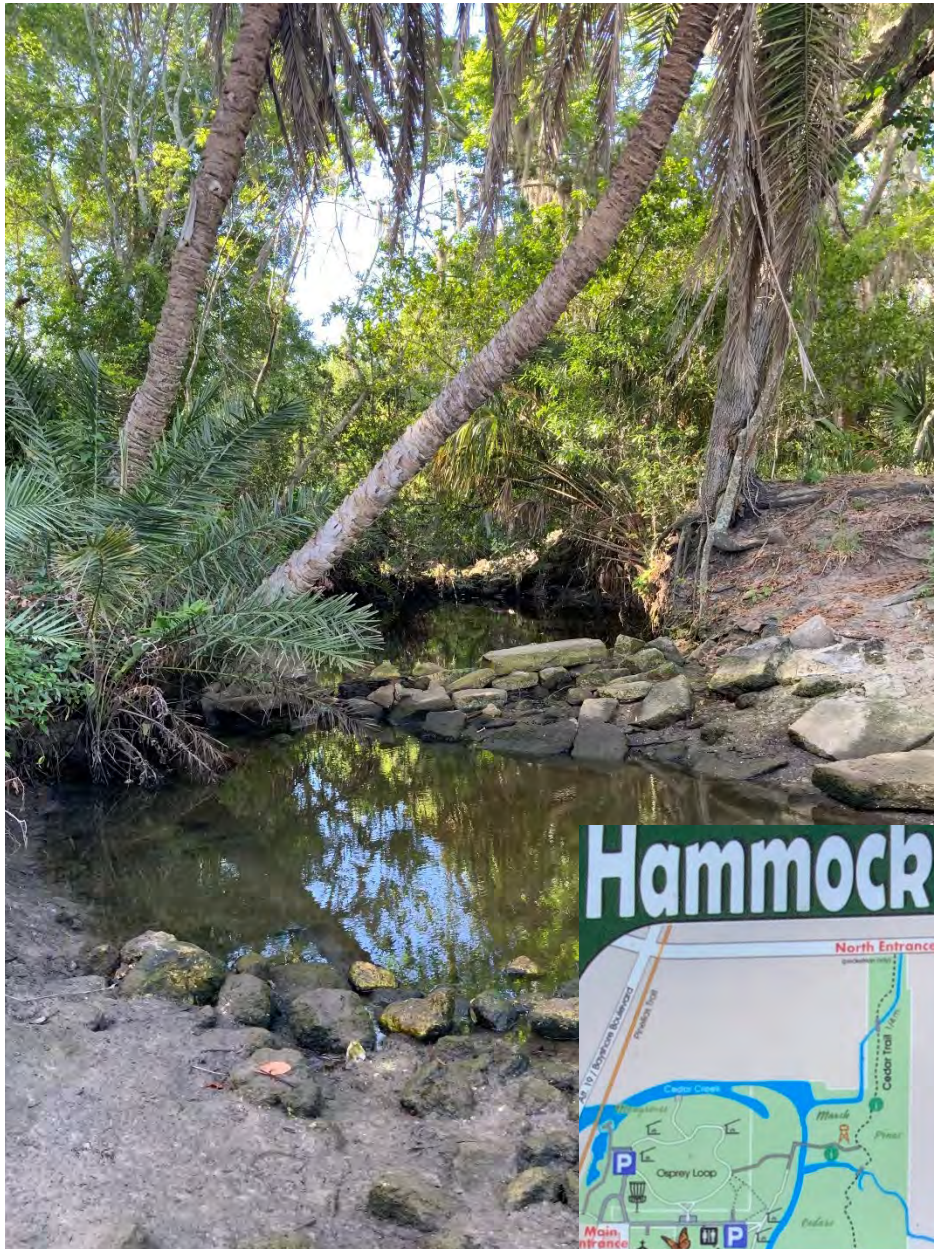
**Cedar Creek Channels Habitat Assessments—Photos and Paperwork, 4/10/2023**



Channel A is the main channel, where sampling occurs and where the SCI and HA was done previously (2021). The sampling crew started from the confluence of Channel A with Channel C, then walked south to Channel E. Channel C goes underground south of Channel E, so the crew was not able to go farther south past Channel E. A habitat assessment (HA) was performed in Channel E, then the crew headed north in Channel C again and performed a HA at the most “natural” stretch. The crew then drove east parallel to Channel A to look for the confluence with Channel F. The crew found a dry channel at Brae-moor Dr, which is unnamed in the above map but runs east-west at the south end of Channel F. A habitat assessment was performed in Channel F, starting at Pinehurst Village and going north. The crew could not find where Channel F meets Channel A. It seems to drain through several stormwater ponds near the confluence with A.

The following photos show the described recon.

Standing in Channel A just north of Lake Suemar, south of ballpark, see Hammock Park Map and Google Earth image (28.034134 N, -82.777408 W)





Same spot as above, but standing in Channel A looking east (upstream)



Standing in Channel C (looking east) at weir from Lake Suemar into channel C (approx. 28.034134 N, -82.777408 W).



Weir in Channel C, looking south (28.033336 N, -82.777870 W).



Channel C looking north (28.028026 N, -82.777812 W).



Channel C looking north (28.029174 N, -82.777859 W).



Channel E looking east, at confluence with Channel C (28.027143 N, -82.777719 W).



Same location as above.



Channel E same location as above, just looking west (confluence of Channel C is at end)



Channel E looking east, under St Catherine Dr W (28.027151 N, -82.777315 W).



Channel E looking east (28.027145 N, -82.777056 W).



Sign at every road crossing over Channel E.



Confluence of Channel C and E (C goes underground to the south (at left of pic)).



Dry channel, at Brae-Moor Dr (28.030478 N, -82.765104 W).



Same dry channel, walked west, pic looking east (28.030454 N, -82.765503 W).



Same channel, walked west, pic looking west (28.030453 N, -82.767477 W).



Same location as above, looking slightly north.



Channel F looking south (28.031929 N, -82.767658 W). Channel goes underground through the pipes to the previous photo.



Channel F, same location as above, looking north (28.031929 N, -82.767658 W).



Channel F looking north (28.032713 N, -82.767545 W).



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

SAMPLE ID \_\_\_\_\_ ORG ID \_\_\_\_\_ LATITUDE \_\_\_\_\_  
 COUNTY Puellas STORET # \_\_\_\_\_ LONGITUDE \_\_\_\_\_  
 DATE 3/29/21 TIME 12:17 SAMPLING AGENCY Puellas Co.  
 SITE NAME Cedar Creek at Jackson (Channel A)  
 FIELD ID/NAME \_\_\_\_\_ RECEIVING BODY OF WATER \_\_\_\_\_

## RIPARIAN ZONE / STREAM FEATURES

**PREDOMINANT LAND-USE IN WATERSHED** (specify relative percent in each category):  
 Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☒ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐  
 Landscape Development Intensity Index (LDI) ☐

Local Watershed Erosion (select one): ☐ None ☐ Slight ☐ Moderate ☐ Heavy  
 Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side  
 Left Bank: ☐ Right Bank: ☐ Hydrologic Modification Score (per FT 3101) ☐

High Water Mark: ☐ + ☐ = ☐  
 (m) (above present water level) (present depth) (above bed) Artificially Impounded ☐ Yes ☐ No

Artificially ☐ No ☐ Mostly recovered, more sinuous ☐ Recent, severe  
 Channelized: ☐ Some recovery ☐ Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%)  
☐ Heavily Shaded ☐ Moderate Shaded (46-80%)

Typical Width (m) Depth (m)/Velocity (m/sec) Transect  
4m m wide  
☐ m/s 0.40 m/s ☐ m/s  
☐ m deep 0.5 m deep ☐ m deep

## SEDIMENT / SUBSTRATE

**Sediment Oils**  
☐ Absent ☐ Slight  
☐ Moderate ☐ Profuse

**Sediment Odors**  
☐ Normal ☐ Sewage ☐ Petroleum  
☐ Chemical ☐ Anaerobic  
☐ Other (Specify): \_\_\_\_\_

**Smothering of Substrates**  
 Sand Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐  
 Silt Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐  
 Algae Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐

**SUBSTRATE TYPE**  
 Assessment Tool: ☐ SCI ☐ RPS ☐ LVS  
☐ LCI ☒ BioRecon  
 % Coverage ☐ INVERT # Times Sampled ☐ PERI # Times Sampled ☐  
 Woody Debris (Snags) ☐ Undercut Banks / Roots ☐  
 Leaf Packs or Mat ..... ☐ Aquatic Vegetation ..... ☐  
 Rock or Shell Rubble.. ☐ Sand..... ☐  
 Mud / Muck / Silt ..... ☐ Other ..... ☐  
 Other ..... ☐

**WATER QUALITY**  
 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M)  
 Top: ☐ ☐ ☐ ☐ ☐ ☐ ☐  
 Mid: 0.213 24.2 6.96 1.63 19.3 749 0.37  
 Bottom: 0.475 ☐ ☐ ☐ ☐ ☐ ☐  
 Meter ID: 451 2 TOTAL DEPTH 0.475

Water Odors Normal ☐ Petroleum ☐  
 Sewage ☐ Chemical ☐ Other ☐  
 Water Sample Taken? ☐ Yes ☐ No  
 Sample Preserved? ☐ Yes ☐ No  
 Lot Number: \_\_\_\_\_ Exp: \_\_\_\_\_

Water Surface Oils Normal ☐ Sheen ☐  
 Globbs ☐ Slick ☐ Other ☐  
 Color Tannic ☐ Green (Algae) ☐  
 Clear ☐ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☐ No  
 Sample Preserved? ☐ Yes ☐ No  
 Lot Number: \_\_\_\_\_ Exp: \_\_\_\_\_

Clarity Clear ☐ Slightly Turbid ☐  
 Turbid ☐ Opaque ☐

**ABUNDANCE**  
 Not Obs. Rare Common Abundant  
 Periphyton: ☒ ☒ ☐ ☐  
 Fish: ☒ ☐ ☐ ☐  
 Aquatic Plants: ☐ ☒ ☐ ☐  
 Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐

System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐

**AMBIENT FIELD CONDITIONS / NOTES:**  
☐ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM P Morgan SIGNATURE P Morgan DATE 3/29/21

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

|                                         |                            |                                        |                                    |                                          |
|-----------------------------------------|----------------------------|----------------------------------------|------------------------------------|------------------------------------------|
| SAMPLING AGENCY:<br><i>Pinellas Co.</i> |                            | STORET STATION NUMBER:<br><i>_____</i> | DATE (MM/DD/YY):<br><i>3/29/21</i> | RECEIVING BODY OF WATER:<br><i>_____</i> |
| REMARKS:<br><i>Gash on walls</i>        | COUNTY:<br><i>Pinellas</i> | LOCATION:<br><i>Cedar Cr @ Jackson</i> | FIELD ID/NAME:<br><i>_____</i>     |                                          |

| 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 <i>3</i>                                                                               | 20 19 18 17 16                                                                                                                                                                                                            | 15 14 13 12 11                                                                                                                                                          | 10 9 8 7 6                                                                                                                                        | 5 4 3 2 1                                                                                                                                  |
| Substrate Availability <i>2</i>                                                                            | Greater than 30% major productive habitat present at site<br>20 19 18 17 16                                                                                                                                               | 16% to 30% major productive habitat, by aerial extent<br>15 14 13 12 11                                                                                                 | 6% to 15% major productive habitat<br>10 9 8 7 6                                                                                                  | Less than 5% major productive habitat<br>5 4 3 2 1                                                                                         |
| Water Velocity <i>3</i>                                                                                    | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec<br>≥0.33 0.31 0.29 0.27 >0.25<br>20 19 18 17 16                                                                                                            | Max. observed at typical transect: >0.1 to 0.25 m/sec<br>0.25 0.21 0.17 0.13 >0.1<br>15 14 13 12 11                                                                     | Max. observed at typical transect: 0.05 to 0.1 m/sec<br>0.1 0.09 0.07 0.06 0.05<br>10 9 8 7 6                                                     | Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec<br><0.05 0.04 0.03 0.01 <0.01<br>5 4 3 2 1                   |
| Habitat Smothering <i>3</i><br>Primary Score <i>PM 13 11</i>                                               | Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.<br>20 19 18 17 16                                                                                         | Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.<br>15 14 13 12 11                                       | Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).<br>10 9 8 7 6                | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br><i>absent bec. hardened</i><br>5 4 3 2 1          |
| Secondary Habitat Components<br>Artificial Channelization <i>PM 3</i>                                      | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.<br>20 19 18 17 16                                                                                         | Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.<br>15 14 13 12 11                         | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.<br>10 9 8 7 6                 | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.<br>5 4 3 2 1 |
| Bank Stability<br>Right Bank <i>10</i><br>Left Bank <i>10</i>                                              | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas.<br>10 9                                                      | Only meets 2 of the 3 requirements for optimal bank stability.<br>8 7 6                                                                                                 | Only meets 1 of the 3 requirements for optimal bank stability.<br>5 4                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.<br>3 2 1                 |
| Riparian Buffer Zone Width<br>Right Bank <i>1</i><br>Left Bank <i>1</i>                                    | Width of vegetation greater than 18 m<br>10 9                                                                                                                                                                             | Width of vegetation >12 to 18m<br>8 7 6                                                                                                                                 | Width of vegetation 6 to 12 m. human activities close to system<br>5 4                                                                            | Less than 6 m of buffer zone due to intensive human activities<br>3 2 1                                                                    |
| Riparian Zone Vegetation Quality<br>Right Bank <i>1</i><br>Left Bank <i>1</i><br>Secondary Score <i>27</i> | Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.<br>10 9 | >50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.<br>8 7 6 | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.<br>5 4 | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).<br>3 2 1         |

*380* TOTAL SCORE

|                         |                            |                               |
|-------------------------|----------------------------|-------------------------------|
| Date:<br><i>3/29/21</i> | Analyst:<br><i>PMorgan</i> | Signature:<br><i>P Morgan</i> |
|-------------------------|----------------------------|-------------------------------|

R

| 100 | SI. | % | Armo |
|-----|-----|---|------|
| 90  | SI. | % | Armo |
| 80  | SI. | % | Armo |
| 70  | SI. | % | Armo |
| 60  | SI. | % | Armo |
| 50  | SI. | % | Armo |
| 40  | SI. | % | Armo |
| 30  | SI. | % | Armo |
| 20  | SI. | % | Armo |
| 10  | SI. | % | Armo |
| 0   | SI. | % | Armo |



Salisbury Crater

no habitat —  
little  
Some fallen gables rock  
not able to see fully

|              |    |   |   |   |   |
|--------------|----|---|---|---|---|
| Prod. hab    | 1  | 2 | 3 | 4 | 5 |
| Sweeps (Maj) | 10 | 7 | 5 | 4 | 3 |
| Sweeps (Min) | 10 | 6 | 5 | 4 | 5 |

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

|                                      |                             |                                           |                                         |                          |
|--------------------------------------|-----------------------------|-------------------------------------------|-----------------------------------------|--------------------------|
| SAMPLING AGENCY:<br><u>Pineallas</u> |                             | STORET STATION NUMBER:                    | DATE (MM/DD/YYYY):<br><u>04/10/2023</u> | RECEIVING BODY OF WATER: |
| REMARKS:                             | COUNTY:<br><u>Pineallas</u> | LOCATION:<br><u>Cedar Creek Channel C</u> |                                         | FIELD ID/NAME:           |

| 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>4</u>                                                                                        | 20 19 18 17 16                                                                                                                                                                                                            | 15 14 13 12 11                                                                                                                                                          | 10 9 8 7 6                                                                                                                                        | 5 4 3 2 1                                                                                                                          |
| Substrate Availability <u>2</u>                                                                                     | Greater than 30% major productive habitat present at site<br>20 19 18 17 16                                                                                                                                               | 16% to 30% major productive habitat, by aerial extent<br>15 14 13 12 11                                                                                                 | 6% to 15% major productive habitat<br>10 9 8 7 6                                                                                                  | Less than 5% major productive habitat<br>5 4 3 2 1                                                                                 |
| Water Velocity <u>5</u>                                                                                             | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec<br>≥0.33 0.31 0.29 0.27 >0.25<br>20 19 18 17 16                                                                                                            | Max. observed at typical transect: >0.1 to 0.25 m/sec<br>0.25 0.21 0.17 0.13 >0.1<br>15 14 13 12 11                                                                     | Max. observed at typical transect: 0.05 to 0.1 m/sec<br>0.1 0.09 0.07 0.06 0.05<br>10 9 8 7 6                                                     | Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec<br><0.05 0.04 0.03 0.01 <0.01<br>5 4 3 2 1           |
| Habitat Smothering <u>7</u><br>-----<br>Primary Score <u>18</u>                                                     | Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.<br>20 19 18 17 16                                                                                         | Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.<br>15 14 13 12 11                                       | Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).<br>10 9 8 7 6                | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br>5 4 3 2 1                                 |
| Secondary Habitat Components                                                                                        | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.                                                                                                           | Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.                                           | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.                               | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.      |
| Artificial Channelization <u>8</u>                                                                                  | 20 19 18 17 16                                                                                                                                                                                                            | 15 14 13 12 11                                                                                                                                                          | 10 9 8 7 6                                                                                                                                        | 5 4 3 2 1                                                                                                                          |
| Bank Stability<br>Right Bank <u>7</u><br>Left Bank <u>5</u>                                                         | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas.<br>10 9                                                      | Only meets 2 of the 3 requirements for optimal bank stability.<br>8 7 6                                                                                                 | Only meets 1 of the 3 requirements for optimal bank stability.<br>5 4                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.<br>3 2 1         |
| Riparian Buffer Zone Width<br>Right Bank <u>9</u><br>Left Bank <u>7</u>                                             | Width of vegetation greater than 18 m<br>10 9                                                                                                                                                                             | Width of vegetation >12 to 18m<br>8 7 6                                                                                                                                 | Width of vegetation 6 to 12 m. human activities close to system<br>5 4                                                                            | Less than 6 m of buffer zone due to intensive human activities<br>3 2 1                                                            |
| Riparian Zone Vegetation Quality<br>Right Bank <u>5</u><br>Left Bank <u>5</u><br>-----<br>Secondary Score <u>46</u> | Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.<br>10 9 | >50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.<br>8 7 6 | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.<br>5 4 | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).<br>3 2 1 |

64

**TOTAL SCORE**

|                         |                                      |                               |
|-------------------------|--------------------------------------|-------------------------------|
| Date: <u>04/10/2023</u> | Analyst: <u>E. DONTIS, C. JOYNER</u> | Signature: <u>[Signature]</u> |
|-------------------------|--------------------------------------|-------------------------------|

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

|                                                   |                   |                            |
|---------------------------------------------------|-------------------|----------------------------|
| SAMPLE ID _____                                   | ORG ID _____      | LATITUDE <u>28.02832</u>   |
| COUNTY <u>Pinellas</u>                            | STORET # _____    | LONGITUDE <u>-82.77781</u> |
| DATE <u>04/10/2023</u>                            | TIME <u>11:00</u> | SAMPLING AGENCY _____      |
| SITE NAME <u>Goar Creek Channel C</u>             |                   |                            |
| FIELD ID/NAME _____ RECEIVING BODY OF WATER _____ |                   |                            |

## RIPARIAN ZONE / STREAM FEATURES

|                                                                                                                                                                                                                                                                                                                                                                    |  |                                                                                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category):<br>Forest/Natural <u>50</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>50</u> Commercial _____ Industry _____ Other (Specify) _____                                                                                                            |  | <b>Landscape Development Intensity Index (LDI)</b><br>_____                                                                                                                                                  |
| 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 checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |  | <b>Typical Width (m) Depth (m)/Velocity (m/sec) Transect</b><br>_____ m wide<br>_____ m/s <u>0.048</u> m/s _____ m/s<br>_____ m deep <u>0.3</u> m deep _____ m deep                                          |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank: <u>10</u> Right Bank: <u>15</u>                                                                                                                                                                                                                                                          |  | <b>Hydrologic Modification Score</b> (per FT 3101) _____                                                                                                                                                     |
| <b>High Water Mark:</b> <u>1.0</u> + <u>0.3</u> = <u>1.3</u><br>(m) (above present water level) (present depth) (above bed)                                                                                                                                                                                                                                        |  | <b>Artificially Impounded</b><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                         |
| <b>Artificially</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Mostly recovered, more sinuous<br><b>Channelized:</b> <input checked="" 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%) |

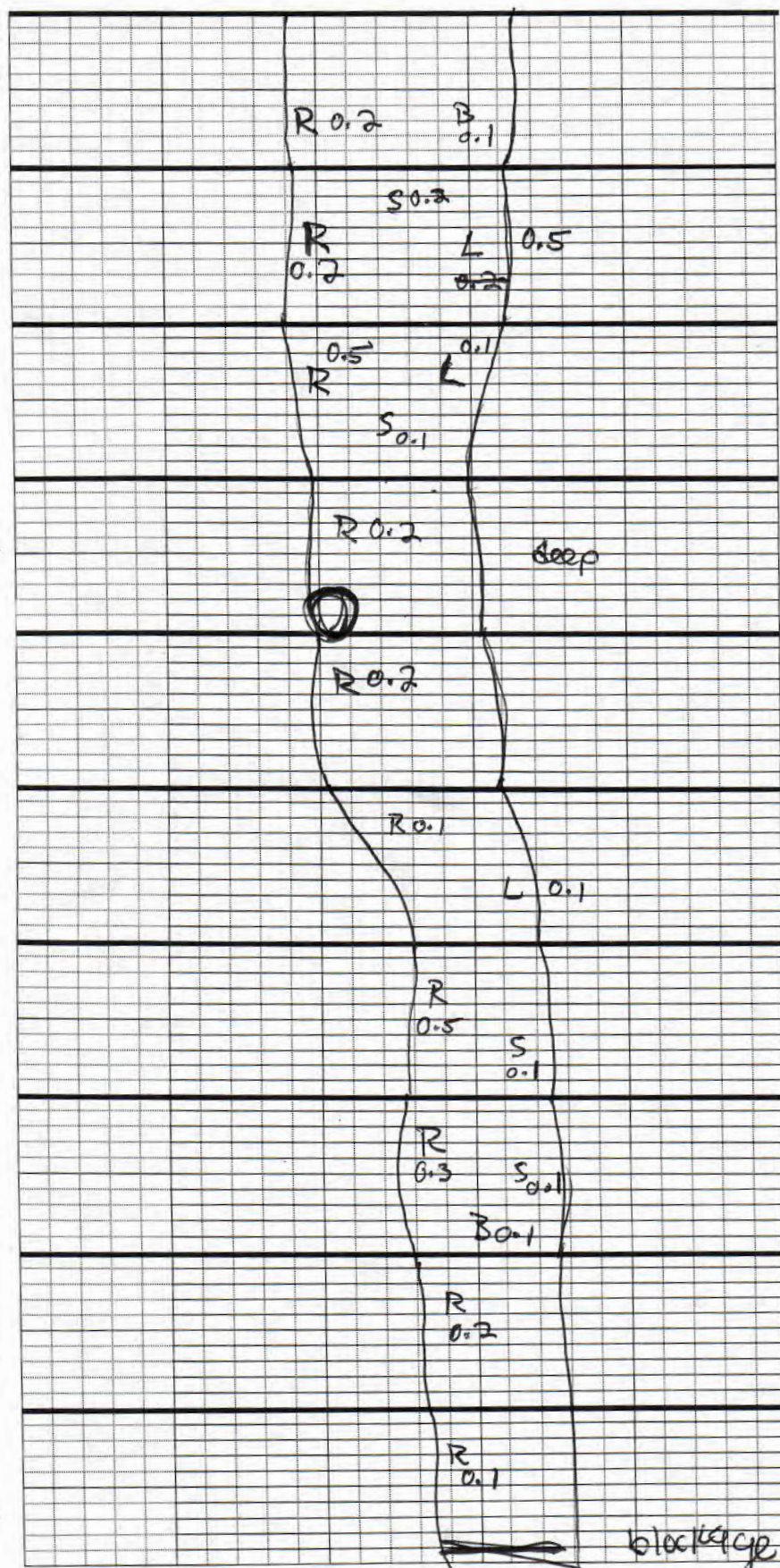
## SEDIMENT / SUBSTRATE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|
| <b>Sediment Oils</b><br><input type="checkbox"/> Absent <input checked="" type="checkbox"/> Slight<br><input type="checkbox"/> Moderate <input type="checkbox"/> Profuse                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | <b>Sediment Odors</b><br><input type="checkbox"/> Normal <input type="checkbox"/> Sewage <input type="checkbox"/> Petroleum<br><input type="checkbox"/> Chemical <input checked="" type="checkbox"/> Anaerobic<br><input type="checkbox"/> Other (Specify): _____ |                                                                                                                                                                                                                   | <b>Smothering of Substrates</b><br>Sand Smothering: None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/><br>Silt Smothering: None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/><br>Algae Smothering: None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> |                                   |
| <b>SUBSTRATE TYPE</b><br>Assessment Tool: <input type="checkbox"/> SCI <input checked="" type="checkbox"/> RPS <input checked="" type="checkbox"/> LVS<br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon<br>INVERT PERI<br>% # Times # Times<br>Coverage Sampled Sampled<br>Woody Debris (Snags) <u>0.025</u> _____<br>Undercut Banks / Roots <u>1.25</u> _____<br>Leaf Packs or Mat ..... <u>0.035</u> _____<br>Aquatic Vegetation ..... _____<br>Rock or Shell Rubble.. <u>0.01</u> _____<br>Sand..... <u>98.06</u> _____<br>Mud / Muck / Silt ..... _____<br>Other ..... _____<br>Other ..... _____ |  |                                                                                                                                                                                                                                                                   | <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: _____<br>Mid: _____<br>Bottom: _____<br>Meter ID: _____<br>TOTAL DEPTH <u>0.3</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
| <b>Water Odors</b> Normal <input type="checkbox"/> Petroleum <input type="checkbox"/><br>Sewage <input type="checkbox"/> Chemical <input type="checkbox"/> Other <input checked="" type="checkbox"/> Anaerobic                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                   | <b>Water Surface Oils</b> Normal <input type="checkbox"/> Sheen <input checked="" type="checkbox"/><br>Globs <input type="checkbox"/> Slick <input type="checkbox"/> Other <input type="checkbox"/>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
| Water Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot Number: _____ Exp: _____                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                   | Color Tannic <input checked="" type="checkbox"/> Green (Algae) <input type="checkbox"/><br>Clear <input type="checkbox"/> Other (Specify) _____                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
| Algae Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot Number: _____ Exp: _____                                                                                                                                                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                                                                   | Clarity Clear <input type="checkbox"/> Slightly Turbid <input type="checkbox"/><br>Turbid <input checked="" type="checkbox"/> Opaque <input type="checkbox"/>                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
| <b>ABUNDANCE</b><br>Not Obs. Rare Common Abundant<br>Periphyton: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Fish: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Aquatic Plants: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Iron/Sulfur Bacteria: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                                      |  |                                                                                                                                                                                                                                                                   | <b>System Type:</b> Stream <input checked="" type="checkbox"/> Lake <input type="checkbox"/> Wetland <input type="checkbox"/> Estuary <input type="checkbox"/> Other (Specify) _____                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
| <b>AMBIENT FIELD CONDITIONS / NOTES:</b><br><u>very low flow, heavily silted</u><br><input type="checkbox"/> The antecedent hydrologic conditions have been met to my best knowledge.                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                   |
| <b>SAMPLING TEAM</b><br><u>E. Dantis C. Joyner</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                   | <b>SIGNATURE:</b><br><u>[Signature]</u>                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>DATE:</b><br><u>04/10/2023</u> |

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

(Horizontal scale is double vertical scale, draw proportionately).

## R

**O**

## Downstream

**Samplers:** \_\_\_\_\_

Plants observed/other notes:

heavily silted, very  
little flow

|              |    |   |   |   |   |
|--------------|----|---|---|---|---|
| Prod. hab    | 1  | 2 | 3 | 4 | 5 |
| Sweeps (Maj) | 10 | 7 | 5 | 4 | 3 |
| Sweeps (Min) | 10 | 6 | 5 | 4 | 5 |

# Rapid Periphyton Survey Calculator

Site: Cedar Creek Channel C County: Pike Date: 04/10/2023 Investigators: E. Dantis, C. Joyner

| Transect (m) | Point 1=right 9=left | Algal Thickness Rank (N-6, X) | Estimated | Canopy Cover | Transect (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Point 1=right 9=left | Algal Thickness Rank (N-6, X) | Estimated | Canopy Cover | STORET/WIN Station Number: |
|--------------|----------------------|-------------------------------|-----------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------------|-----------|--------------|----------------------------|
| 0            | 1                    | N                             |           | 94           | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                    | N                             |           | 90           |                            |
|              | 2                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 3                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 4                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 5                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 6                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 7                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 8                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 9                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
| 10           | 1                    | N                             |           | 89           | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                    | N                             | X         | 70           |                            |
|              | 2                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 3                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 4                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 5                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 6                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 7                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 8                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 9                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
| 20           | 1                    | N                             |           | 94           | 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                    | N                             |           | 53           |                            |
|              | 2                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 3                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 4                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 5                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 6                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 7                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 8                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 9                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
| 30           | 1                    | N                             |           | 94           | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1                    | N                             |           | 92           |                            |
|              | 2                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 3                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 4                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 5                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 6                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 7                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 8                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 9                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
| 40           | 1                    | N                             |           | 52           | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1                    | N                             |           | 96           |                            |
|              | 2                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 3                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 4                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 5                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 6                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 7                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 8                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 9                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
| 50           | 1                    | N                             |           | 92           | <p>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.</p> <p>Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.</p> <p>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.</p> <p>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%.</p> |                      |                               |           |              |                            |
|              | 2                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 3                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 4                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 5                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 6                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 7                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 8                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |
|              | 9                    | N                             |           |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                      |                               |           |              |                            |

|                       |     |
|-----------------------|-----|
| Secchi depth (m)      | 0.3 |
| Estimated?            |     |
| # points ranked 4-6   | 0   |
| total points assessed | 99  |
| % points ranked 4-6   | 0   |

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

| 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                                  |

| Quality Assurance   |  |
|---------------------|--|
| Data Entered By:    |  |
| Date Data Entered:  |  |
| Data Reviewed By:   |  |
| Date Data Reviewed: |  |

|                              |                |                  |                |
|------------------------------|----------------|------------------|----------------|
| Waterbody: Cedar Creek Ch. C | Date: 04/10/23 | County: Pinellas | Storet Number: |
|------------------------------|----------------|------------------|----------------|

|                               |                               |
|-------------------------------|-------------------------------|
| Analyst: E. DONTIS, C. JOYNER | Signature: <i>[Signature]</i> |
|-------------------------------|-------------------------------|

Comments: Had rain 2 days previous, only 0.6-0.7 inches no veg

[illegible]

|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---------------------------|--|--|--|--|--|--|--|--|--|
| Alternanthera philoxeroides                                    |   |   |   |   |   |   |   |   |   |   |   | Micranthemum glomeratum   |  |  |  |  |  |  |  |  |  |
| Bacopa caroliniana                                             |   |   |   |   |   |   |   |   |   |   |   | Micranthemum umbrosum     |  |  |  |  |  |  |  |  |  |
| Bacopa monneri                                                 |   |   |   |   |   |   |   |   |   |   |   | Myriophyllum aquaticum    |  |  |  |  |  |  |  |  |  |
| Bidens mitis                                                   |   |   |   |   |   |   |   |   |   |   |   | Najas guadelupensis       |  |  |  |  |  |  |  |  |  |
| Boehmeria cylindrica                                           |   |   |   |   |   |   |   |   |   |   |   | Nuphar luteum             |  |  |  |  |  |  |  |  |  |
| Centella asiatica                                              |   |   |   |   |   |   |   |   |   |   |   | Orontium aquaticum        |  |  |  |  |  |  |  |  |  |
| Ceratophyllum demersum                                         |   |   |   |   |   |   |   |   |   |   |   | Panicum hemitomon         |  |  |  |  |  |  |  |  |  |
| Chara                                                          |   |   |   |   |   |   |   |   |   |   |   | Panicum repens            |  |  |  |  |  |  |  |  |  |
| Cicuta maculata                                                |   |   |   |   |   |   |   |   |   |   |   | Panicum rigidulum         |  |  |  |  |  |  |  |  |  |
| Cladium jamaicense                                             |   |   |   |   |   |   |   |   |   |   |   | Pistia stratioides        |  |  |  |  |  |  |  |  |  |
| Colocasia esculenta                                            |   |   |   |   |   |   |   |   |   |   |   | Polygonum glabra          |  |  |  |  |  |  |  |  |  |
| Commelina diffusa                                              |   |   |   |   |   |   |   |   |   |   |   | Polygonum hydropiperoides |  |  |  |  |  |  |  |  |  |
| Commelina virginica                                            |   |   |   |   |   |   |   |   |   |   |   | Polygonum punctatum       |  |  |  |  |  |  |  |  |  |
| Crinum americanum                                              |   |   |   |   |   |   |   |   |   |   |   | Pontedaria cordata        |  |  |  |  |  |  |  |  |  |
| Diodia virginiana                                              |   |   |   |   |   |   |   |   |   |   |   | Potamogeton illinoensis   |  |  |  |  |  |  |  |  |  |
| Eichhornia crassipes                                           |   |   |   |   |   |   |   |   |   |   |   | Ruellia simplex           |  |  |  |  |  |  |  |  |  |
| Eleocharis (wispy viviparous)                                  |   |   |   |   |   |   |   |   |   |   |   | Sacciolepis striata       |  |  |  |  |  |  |  |  |  |
| Hydrilla verticillata                                          |   |   |   |   |   |   |   |   |   |   |   | Sagittaria kurziana       |  |  |  |  |  |  |  |  |  |
| Hydrocotle                                                     |   |   |   |   |   |   |   |   |   |   |   | Sagittaria lancifolia     |  |  |  |  |  |  |  |  |  |
| Hygrophila polysperma                                          |   |   |   |   |   |   |   |   |   |   |   | Sagittaria latifolia      |  |  |  |  |  |  |  |  |  |
| Hymenocallis                                                   |   |   |   |   |   |   |   |   |   |   |   | Salvinia minima           |  |  |  |  |  |  |  |  |  |
| Lachnanthes caroliniana                                        |   |   |   |   |   |   |   |   |   |   |   | Samolus parviflora        |  |  |  |  |  |  |  |  |  |
| Landoltia punctata                                             |   |   |   |   |   |   |   |   |   |   |   | Saururus cernuus          |  |  |  |  |  |  |  |  |  |
| Lemna                                                          |   |   |   |   |   |   |   |   |   |   |   | Sparganium americanum     |  |  |  |  |  |  |  |  |  |
| Limnophila sessiflora                                          |   |   |   |   |   |   |   |   |   |   |   | Typha                     |  |  |  |  |  |  |  |  |  |
| Ludwigia leptocarpa                                            |   |   |   |   |   |   |   |   |   |   |   | Vallisneria americana     |  |  |  |  |  |  |  |  |  |
| Ludwigia palustris                                             |   |   |   |   |   |   |   |   |   |   |   | Zizania aquatica          |  |  |  |  |  |  |  |  |  |
| Ludwigia peruviana                                             |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
| Ludwigia repens                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
| Luziola fluitans                                               |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
|                                                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
| If no Dominant or Co-Dominant were selected, indicate with "X" | X | X | X | X | X | X | X | X | X | X | X |                           |  |  |  |  |  |  |  |  |  |
| Indicate % cover macrophytes per section                       |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
| 0-5% Macrophyte Coverage                                       | X | X | X | X | X | X | X | X | X | X | X |                           |  |  |  |  |  |  |  |  |  |
| >5 and ≤10% Macrophyte Coverage                                |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
| >10 and ≤25% Macrophyte Coverage                               |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
| >25 and ≤50% Macrophyte Coverage                               |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |
| > 50% Macrophyte Coverage                                      |   |   |   |   |   |   |   |   |   |   |   |                           |  |  |  |  |  |  |  |  |  |

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

|                                   |                          |                                        |                                    |                          |
|-----------------------------------|--------------------------|----------------------------------------|------------------------------------|--------------------------|
| SAMPLING AGENCY: <u>Pineellas</u> |                          | STORET STATION NUMBER:                 | DATE (MM/DD/YY): <u>04/10/2023</u> | RECEIVING BODY OF WATER: |
| REMARKS:                          | COUNTY: <u>Pineellas</u> | LOCATION: <u>Cedar Creek Channel F</u> |                                    | FIELD ID/NAME:           |

| 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>47</u>                                                   | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                 | 10 9 8 7 6                                                                                                                                 | 5 4 3 2 1                                                                                                                     |
| Substrate Availability <u>4</u>                                                 | Greater than 30% major productive habitat present at site<br>20 19 18 17 16                                                                                                                                       | 16% to 30% major productive habitat, by aerial extent<br>15 14 13 12 11                                                                                        | 6% to 15% major productive habitat<br>10 9 8 7 6                                                                                           | Less than 5% major productive habitat<br>5 4 3 2 1                                                                            |
| Water Velocity <u>4</u>                                                         | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec<br>≥0.33 0.31 0.29 0.27 >0.25<br>20 19 18 17 16                                                                                                    | Max. observed at typical transect: >0.1 to 0.25 m/sec<br>0.25 0.21 0.17 0.13 >0.1<br>15 14 13 12 11                                                            | Max. observed at typical transect: 0.05 to 0.1 m/sec<br>0.1 0.09 0.07 0.06 0.05<br>10 9 8 7 6                                              | Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec<br><0.05 0.04 0.03 0.01 <0.01<br>5 4 3 2 1      |
| Habitat Smothering <u>3</u><br>-----<br>Primary Score <u>18</u>                 | Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.<br>20 19 18 17 16                                                                                 | Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.<br>15 14 13 12 11                              | Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).<br>10 9 8 7 6         | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br>5 4 3 2 1                            |
| Secondary Habitat Components                                                    | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.                                                                                                   | Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered.                                  | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.                        | Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. |
| Artificial Channelization <u>12</u>                                             | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                 | 10 9 8 7 6                                                                                                                                 | 5 4 3 2 1                                                                                                                     |
| Bank Stability                                                                  | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas.                                                      | Only meets 2 of the 3 requirements for optimal bank stability.                                                                                                 | Only meets 1 of the 3 requirements for optimal bank stability.                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas.             |
| Right Bank <u>5</u><br>Left Bank <u>5</u>                                       | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |
| Riparian Buffer Zone Width                                                      | Width of vegetation greater than 18 m                                                                                                                                                                             | Width of vegetation >12 to 18m                                                                                                                                 | Width of vegetation 6 to 12 m. human activities close to system                                                                            | Less than 6 m of buffer zone due to intensive human activities                                                                |
| Right Bank <u>2</u><br>Left Bank <u>10</u>                                      | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |
| Riparian Zone Vegetation Quality                                                | Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance. | >50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).     |
| Right Bank <u>5</u><br>Left Bank <u>5</u><br>-----<br>Secondary Score <u>44</u> | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                          | 5 4                                                                                                                                        | 3 2 1                                                                                                                         |

62 TOTAL SCORE

|                         |                                      |                               |
|-------------------------|--------------------------------------|-------------------------------|
| Date: <u>04/10/2023</u> | Analyst: <u>E. Dennis, C. Joyner</u> | Signature: <u>[Signature]</u> |
|-------------------------|--------------------------------------|-------------------------------|

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

|                                                   |                   |                                 |
|---------------------------------------------------|-------------------|---------------------------------|
| SAMPLE ID _____                                   | ORG ID _____      | LATITUDE <u>28.03233</u>        |
| COUNTY <u>Pineblay</u>                            | STORET # _____    | LONGITUDE <u>-82.76757</u>      |
| DATE <u>04/10/2023</u>                            | TIME <u>12:45</u> | SAMPLING AGENCY <u>Pineblay</u> |
| SITE NAME <u>Cedar Creek channel F</u>            |                   |                                 |
| FIELD ID/NAME _____ RECEIVING BODY OF WATER _____ |                   |                                 |

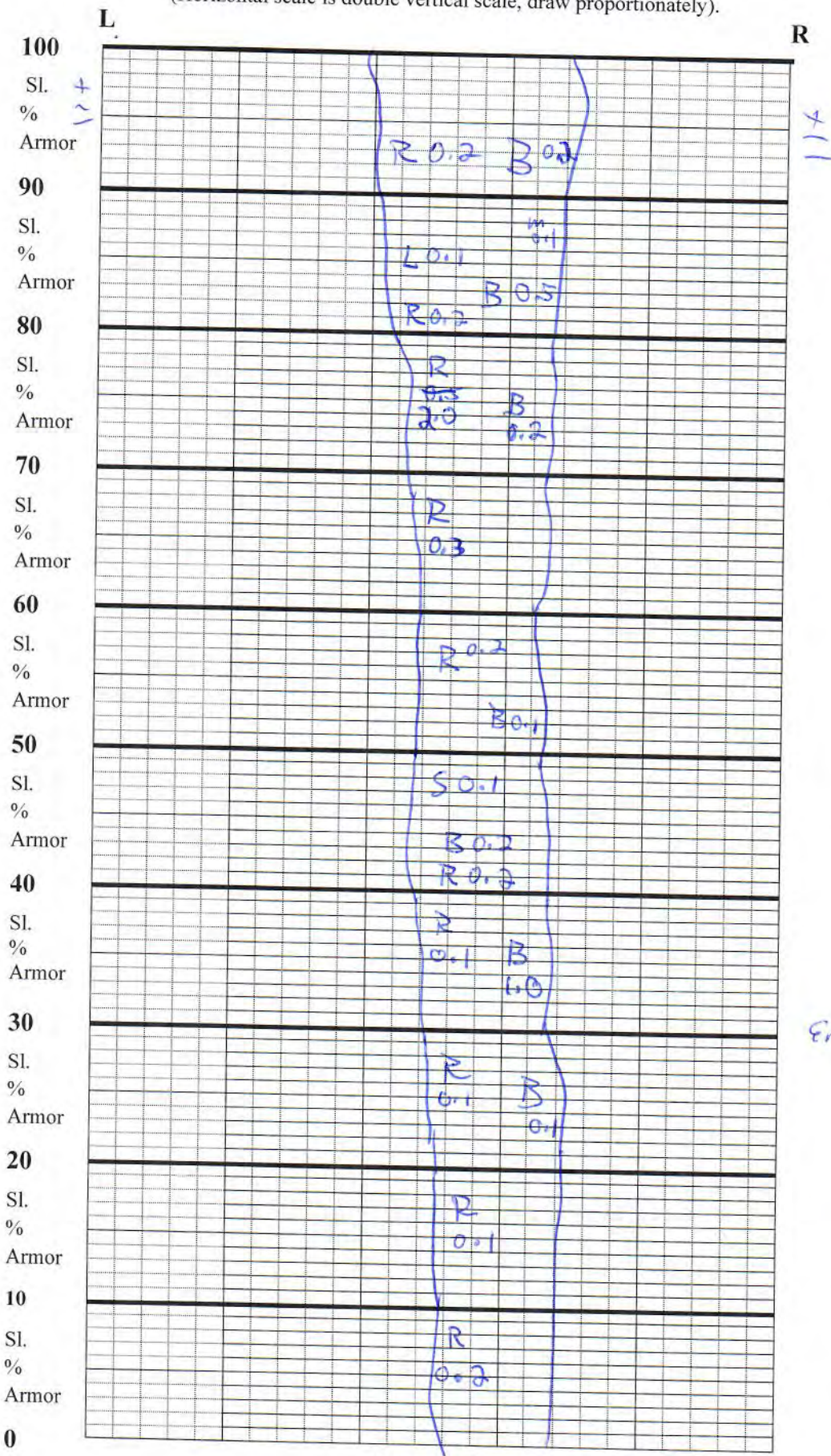
## RIPARIAN ZONE / STREAM FEATURES

|                                                                                                                                                                                                                                                                                                                                                                      |  |  |  |                                                                                                                                                                                                           |  |  |  |                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category) :<br>Forest/Natural <u>30</u> Silviculture _____ Field/Pasture _____ Agricultural _____ Residential <u>70</u> Commercial _____ Industry _____ Other (Specify) _____                                                                                                             |  |  |  |                                                                                                                                                                                                           |  |  |  | <b>Landscape Development Intensity Index (LDI)</b><br>_____                                                                                                         |
| 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 checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy |  |  |  |                                                                                                                                                                                                           |  |  |  | <b>Typical Width (m) Depth (m)/Velocity (m/sec) Transect</b><br>_____ m wide<br>_____ m/s <u>0.043</u> m/s _____ m/s<br>_____ m deep <u>0.3</u> m deep _____ m deep |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank : <u>15+</u> Right Bank : <u>5</u>                                                                                                                                                                                                                                                          |  |  |  | <b>Hydrologic Modification Score</b> (per FT 3101) _____                                                                                                                                                  |  |  |  |                                                                                                                                                                     |
| <b>High Water Mark:</b> <u>0.3</u> + <u>1.0</u> = <u>1.3</u><br>(m) (above present water level) (present depth) (above bed)                                                                                                                                                                                                                                          |  |  |  | <b>Artificially Impounded</b><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                      |  |  |  |                                                                                                                                                                     |
| <b>Artificially Channelized :</b> <input type="checkbox"/> No <input checked="" type="checkbox"/> Some recovery <input type="checkbox"/> Mostly recovered, more sinuous <input type="checkbox"/> Recent, severe                                                                                                                                                      |  |  |  | <b>Canopy Cover %</b> <input type="checkbox"/> Open <input type="checkbox"/> Lightly Shaded (11-45%) <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 <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 <input type="checkbox"/> Chemical <input type="checkbox"/> Anaerobic <input type="checkbox"/> Other (Specify) : _____ |                                                                                                                                                                                                        | <b>Smothering of Substrates</b><br>Sand Smothering: None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/><br>Silt Smothering: None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/><br>Algae Smothering: None <input checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/> |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|----------------------|------------------------------|--------------|--|--|------------------------|------------|--|--|-------------------------|--------------|--|--|--------------------------|--------------|--|--|------------------------|-------------|--|--|-----------|-----------|--|--|-------------------------|--|--|--|-------------|--|--|--|-------------|--|--|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|-----------|------------|---------|-------------|--------------|-----------------|----------------|------------|-------|--|--|--|--|--|--|------------|------|--|--|--|--|--|--|------------------------------|--------|--|--|--|--|--|--|------------|-----------------|--|--|--|--|--|--|-------------|
| <b>SUBSTRATE TYPE</b><br>Assessment Tool: <input type="checkbox"/> SCI <input checked="" type="checkbox"/> RPS <input checked="" type="checkbox"/> LVS<br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                                                                                                                                                                                                                                                              | <b>WATER QUALITY</b>                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| <table border="1"> <thead> <tr> <th></th> <th>% Coverage</th> <th>INVERT # Times Sampled</th> <th>PERI # Times Sampled</th> </tr> </thead> <tbody> <tr> <td>Woody Debris (Snags)</td> <td><u>0.005</u></td> <td></td> <td></td> </tr> <tr> <td>Undercut Banks / Roots</td> <td><u>1.8</u></td> <td></td> <td></td> </tr> <tr> <td>Leaf Packs or Mat .....</td> <td><u>0.005</u></td> <td></td> <td></td> </tr> <tr> <td>Aquatic Vegetation .....</td> <td><u>0.005</u></td> <td></td> <td></td> </tr> <tr> <td>Rock or Shell Rubble..</td> <td><u>1.15</u></td> <td></td> <td></td> </tr> <tr> <td>Sand.....</td> <td><u>97</u></td> <td></td> <td></td> </tr> <tr> <td>Mud / Muck / Silt .....</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other .....</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other .....</td> <td></td> <td></td> <td></td> </tr> </tbody> </table> |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        | % Coverage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | INVERT # Times Sampled         | PERI # Times Sampled | Woody Debris (Snags)         | <u>0.005</u> |  |  | Undercut Banks / Roots | <u>1.8</u> |  |  | Leaf Packs or Mat ..... | <u>0.005</u> |  |  | Aquatic Vegetation ..... | <u>0.005</u> |  |  | Rock or Shell Rubble.. | <u>1.15</u> |  |  | Sand..... | <u>97</u> |  |  | Mud / Muck / Silt ..... |  |  |  | Other ..... |  |  |  | Other ..... |  |  |  | <table border="1"> <thead> <tr> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top :</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>0.3</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/> VOB</td> </tr> <tr> <td>Bottom</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>0.3</u></td> </tr> <tr> <td colspan="7">Meter ID: _____</td> <td>TOTAL DEPTH</td> </tr> </tbody> </table> |  |  | Depth (M) | Temp. (°C) | pH (SU) | D.O. (MG/L) | D.O. Sat (%) | Cond. (UMHO/CM) | Salinity (PPT) | SECCHI (M) | Top : |  |  |  |  |  |  | <u>0.3</u> | Mid: |  |  |  |  |  |  | <input type="checkbox"/> VOB | Bottom |  |  |  |  |  |  | <u>0.3</u> | Meter ID: _____ |  |  |  |  |  |  | TOTAL DEPTH |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | % Coverage   | INVERT # Times Sampled                                                                                                                                                                                                                                       | PERI # Times Sampled                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Woody Debris (Snags)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>0.005</u> |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Undercut Banks / Roots                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <u>1.8</u>   |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Leaf Packs or Mat .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <u>0.005</u> |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Aquatic Vegetation .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <u>0.005</u> |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Rock or Shell Rubble..                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <u>1.15</u>  |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Sand.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <u>97</u>    |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Mud / Muck / Silt .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Other .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Other .....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Depth (M)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Temp. (°C)   | pH (SU)                                                                                                                                                                                                                                                      | D.O. (MG/L)                                                                                                                                                                                            | D.O. Sat (%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Cond. (UMHO/CM)                | Salinity (PPT)       | SECCHI (M)                   |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Top :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      | <u>0.3</u>                   |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Mid:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      | <input type="checkbox"/> VOB |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Bottom                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      | <u>0.3</u>                   |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Meter ID: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      | TOTAL DEPTH                  |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| <b>Water Odors</b> Normal <input checked="" type="checkbox"/> Petroleum <input type="checkbox"/> Sewage <input type="checkbox"/> Chemical <input type="checkbox"/> Other <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                                                                                                                                                                                                                                                              | <b>Water Surface Oils</b> Normal <input type="checkbox"/> Sheen <input checked="" type="checkbox"/> Globbs <input type="checkbox"/> Slick <input type="checkbox"/> Other <input type="checkbox"/>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Water Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot Number: _____ Exp: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                                                                                                                                                                                                                                                              | <b>Color</b> Tannic <input checked="" type="checkbox"/> Green (Algae) <input type="checkbox"/> Clear <input type="checkbox"/> Other (Specify) <input type="checkbox"/>                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| Algae Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot Number: _____ Exp: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                                                                                                                                                                                                                                                              | <b>Clarity</b> Clear <input type="checkbox"/> Slightly Turbid <input checked="" type="checkbox"/> Turbid <input checked="" type="checkbox"/> Opaque <input type="checkbox"/>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| <b>ABUNDANCE</b> Not Obs. Rare Common Abundant<br>Periphyton: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Fish: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Aquatic Plants: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Iron/Sulfur Bacteria: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                                                                                                                                                                                                                                                                                                         |              |                                                                                                                                                                                                                                                              | <b>System Type:</b> Stream <input checked="" type="checkbox"/> Lake <input type="checkbox"/> Wetland <input type="checkbox"/> Estuary <input type="checkbox"/> Other(Specify) <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| <b>AMBIENT FIELD CONDITIONS / NOTES:</b><br><u>low + low level, heavily silted</u><br><input type="checkbox"/> The antecedent hydrologic conditions have been met to my best knowledge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |              |                                                                                                                                                                                                                                                              |                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |
| <b>SAMPLING TEAM</b> <u>E. Pontis, C. Toyner</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |                                                                                                                                                                                                                                                              | <b>SIGNATURE:</b> <u>[Signature]</u>                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>DATE:</b> <u>04/10/2023</u> |                      |                              |              |  |  |                        |            |  |  |                         |              |  |  |                          |              |  |  |                        |             |  |  |           |           |  |  |                         |  |  |  |             |  |  |  |             |  |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |           |            |         |             |              |                 |                |            |       |  |  |  |  |  |  |            |      |  |  |  |  |  |  |                              |        |  |  |  |  |  |  |            |                 |  |  |  |  |  |  |             |

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (March 07, 2013)  
 Length of grid represents 100 m of stream (not linear meters).  
 (Horizontal scale is double vertical scale, draw proportionately).



Location: Goar Cr ch. F

Date: 04/10/2023

Samplers: A. Dentis  
C. Joyner

Substrates: Code key, draw proportionate habitat abundance. %

☐ S Snags 0.1 | 0.005

☐ R Roots/undercut banks 3.6 | 1.8

☐ L Leaf Packs (or mats) 0.1 | 0.005

☐ M Macrophytes 0.1 | 0.005

☐ B rock 23 | 1.15

☐ Total observed 0

☐ Pools Range expected 4-6

Velocity measured at 60 meter mark.

WQ & chemistry taken at 23.5 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:

End: 28.03233  
 -82.76757

low flow level,  
 heavily silted

|              |    |   |   |   |   |
|--------------|----|---|---|---|---|
| Prod. hab    | 1  | 2 | 3 | 4 | 5 |
| Sweeps (Maj) | 10 | 7 | 5 | 4 | 3 |
| Sweeps (Min) | 10 | 6 | 5 | 4 | 5 |

2.96590

2 m width

# Rapid Periphyton Survey Calculator

Site: Cedar Creek channel F County: Pinellas Date: 04/10/2003 Investigators: E. DONTIS, C. JAYNEZ

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

|   |   |   |  |  |    |   |   |  |  |    |
|---|---|---|--|--|----|---|---|--|--|----|
| 0 | 1 | N |  |  | 60 | 1 | N |  |  | 84 |
|   | 2 | N |  |  |    | 2 | N |  |  |    |
|   | 3 | N |  |  |    | 3 | N |  |  |    |
|   | 4 | N |  |  |    | 4 | N |  |  |    |
|   | 5 | N |  |  |    | 5 | N |  |  |    |
|   | 6 | N |  |  |    | 6 | N |  |  |    |
|   | 7 | N |  |  |    | 7 | N |  |  |    |
|   | 8 | N |  |  |    | 8 | N |  |  |    |
|   | 9 | N |  |  |    | 9 | N |  |  |    |

|    |   |   |  |  |    |   |   |  |  |    |
|----|---|---|--|--|----|---|---|--|--|----|
| 10 | 1 | N |  |  | 70 | 1 | N |  |  | 96 |
|    | 2 | N |  |  |    | 2 | N |  |  |    |
|    | 3 | N |  |  |    | 3 | N |  |  |    |
|    | 4 | N |  |  |    | 4 | N |  |  |    |
|    | 5 | N |  |  |    | 5 | N |  |  |    |
|    | 6 | N |  |  |    | 6 | N |  |  |    |
|    | 7 | N |  |  |    | 7 | N |  |  |    |
|    | 8 | N |  |  |    | 8 | N |  |  |    |
|    | 9 | N |  |  |    | 9 | N |  |  |    |

|    |   |   |  |  |    |   |   |  |  |    |
|----|---|---|--|--|----|---|---|--|--|----|
| 20 | 1 | N |  |  | 80 | 1 | N |  |  | 91 |
|    | 2 | N |  |  |    | 2 | N |  |  |    |
|    | 3 | N |  |  |    | 3 | N |  |  |    |
|    | 4 | N |  |  |    | 4 | N |  |  |    |
|    | 5 | N |  |  |    | 5 | N |  |  |    |
|    | 6 | N |  |  |    | 6 | N |  |  |    |
|    | 7 | N |  |  |    | 7 | N |  |  |    |
|    | 8 | N |  |  |    | 8 | N |  |  |    |
|    | 9 | N |  |  |    | 9 | N |  |  |    |

|    |   |   |  |  |    |   |   |  |  |    |
|----|---|---|--|--|----|---|---|--|--|----|
| 30 | 1 | N |  |  | 90 | 1 | N |  |  | 92 |
|    | 2 | N |  |  |    | 2 | N |  |  |    |
|    | 3 | N |  |  |    | 3 | N |  |  |    |
|    | 4 | N |  |  |    | 4 | N |  |  |    |
|    | 5 | N |  |  |    | 5 | N |  |  |    |
|    | 6 | N |  |  |    | 6 | N |  |  |    |
|    | 7 | N |  |  |    | 7 | N |  |  |    |
|    | 8 | N |  |  |    | 8 | N |  |  |    |
|    | 9 | N |  |  |    | 9 | N |  |  |    |

|    |   |   |  |  |     |   |   |  |  |    |
|----|---|---|--|--|-----|---|---|--|--|----|
| 40 | 1 | N |  |  | 100 | 1 | N |  |  | 96 |
|    | 2 | N |  |  |     | 2 | N |  |  |    |
|    | 3 | N |  |  |     | 3 | N |  |  |    |
|    | 4 | N |  |  |     | 4 | N |  |  |    |
|    | 5 | N |  |  |     | 5 | N |  |  |    |
|    | 6 | N |  |  |     | 6 | N |  |  |    |
|    | 7 | N |  |  |     | 7 | N |  |  |    |
|    | 8 | N |  |  |     | 8 | N |  |  |    |
|    | 9 | N |  |  |     | 9 | N |  |  |    |

|    |   |   |  |  |    |   |   |  |  |    |
|----|---|---|--|--|----|---|---|--|--|----|
| 50 | 1 | N |  |  | 94 | 1 | N |  |  | 96 |
|    | 2 | N |  |  |    | 2 | N |  |  |    |
|    | 3 | N |  |  |    | 3 | N |  |  |    |
|    | 4 | N |  |  |    | 4 | N |  |  |    |
|    | 5 | N |  |  |    | 5 | N |  |  |    |
|    | 6 | N |  |  |    | 6 | N |  |  |    |
|    | 7 | N |  |  |    | 7 | N |  |  |    |
|    | 8 | N |  |  |    | 8 | N |  |  |    |
|    | 9 | N |  |  |    | 9 | N |  |  |    |

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

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

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

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

Secchi depth (m) \_\_\_\_\_  
Estimated? \_\_\_\_\_

# points ranked 4-6 0  
total points assessed 99  
% points ranked 4-6 0

Check accompanying data collected at same site/date.

Algal mat sample \_\_\_\_\_  
Linear Veg Survey \_\_\_\_\_  
Habitat Assessment \_\_\_\_\_  
SCI/Biorecon \_\_\_\_\_  
Water sample \_\_\_\_\_  
RQ- \_\_\_\_\_

| 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                                  |

Quality Assurance

Data Entered By: \_\_\_\_\_  
Date Data Entered: \_\_\_\_\_  
Data Reviewed By: \_\_\_\_\_  
Date Data Reviewed: \_\_\_\_\_

|                                                         |                        |                  |                |
|---------------------------------------------------------|------------------------|------------------|----------------|
| Waterbody: Cedar Creek Channel                          | Date: 4/10/23          | County: Pinellas | Storet Number: |
| Analyst: E. Dantis, C. Joyner                           | Signature: [Signature] |                  |                |
| Comments: Had rain 2 days previous, only 0.6-0.7 inches |                        |                  |                |

|                                                         |                        |                  |                |
|---------------------------------------------------------|------------------------|------------------|----------------|
| Waterbody: Cedar Creek Channel                          | Date: 4/10/23          | County: Pinellas | Storet Number: |
| Analyst: E. Dantis, C. Joyner                           | Signature: [Signature] |                  |                |
| Comments: Had rain 2 days previous, only 0.6-0.7 inches |                        |                  |                |

Comments: Had rain 2 days previous, only 0.6-0.7 inches

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.

62-160,800, F.A.C.

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

|                                     |                            |                                           |                                     |                          |
|-------------------------------------|----------------------------|-------------------------------------------|-------------------------------------|--------------------------|
| SAMPLING AGENCY:<br><u>PINELLAS</u> |                            | STORET STATION NUMBER:                    | DATE (MM/DD/YY):<br><u>04/10/23</u> | RECEIVING BODY OF WATER: |
| REMARKS:                            | COUNTY:<br><u>PINELLAS</u> | LOCATION:<br><u>CEDAR CREEK CHANNEL E</u> |                                     | FIELD ID/NAME:           |

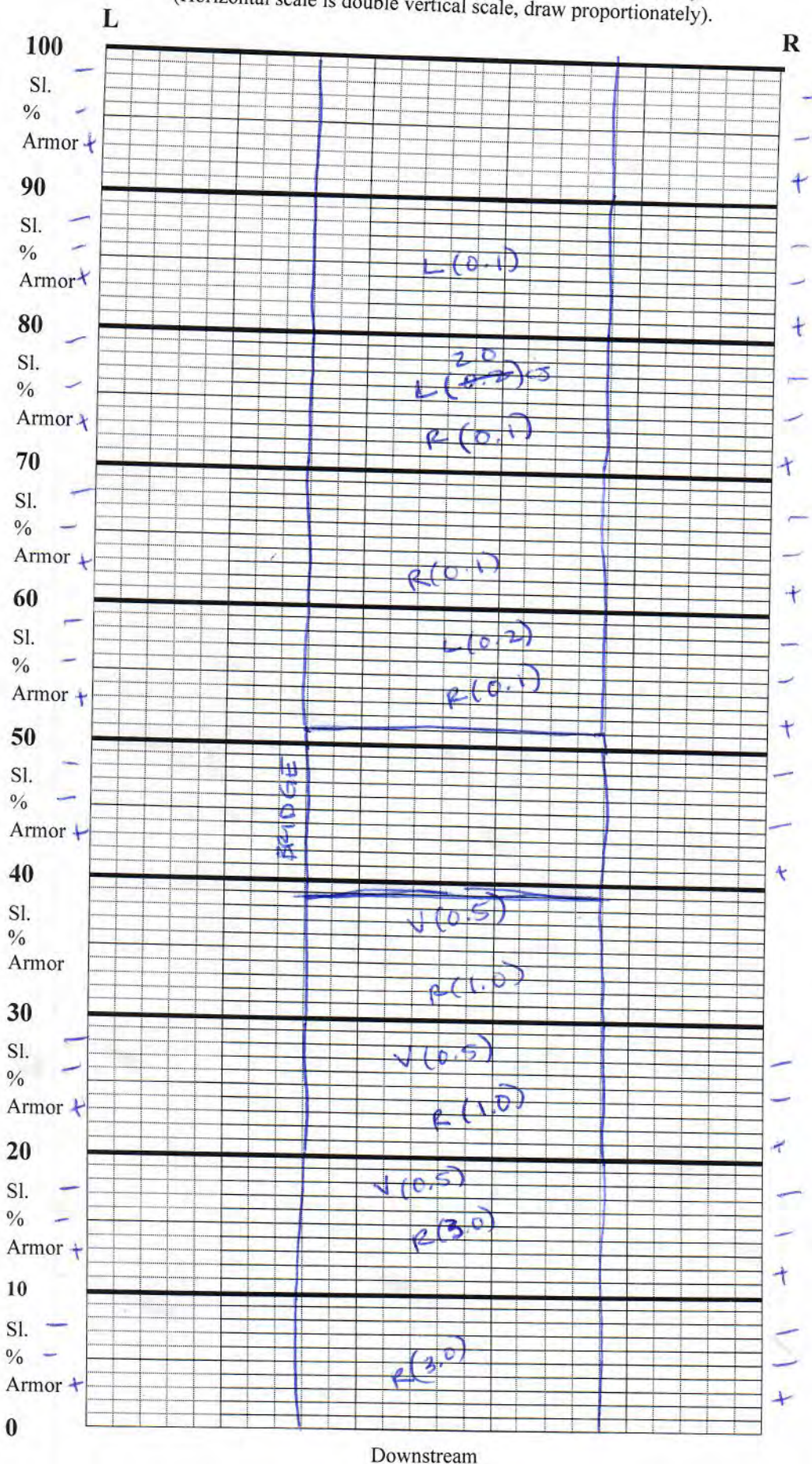
| Habitat Parameter                                                                                                   | Optimal                                                                                                                                                                             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

35

**TOTAL SCORE**

|                       |                                   |                                   |
|-----------------------|-----------------------------------|-----------------------------------|
| Date: <u>04/10/23</u> | Analyst: <u>CJOHNER, E.DONTIS</u> | Signature: <u>Christine Jayne</u> |
|-----------------------|-----------------------------------|-----------------------------------|

Stream/River Habitat Sketch Sheet, Form FD 9000-4 (March07, 2013)  
 Length of grid represents 100 m of stream (not linear meters).  
 (Horizontal scale is double vertical scale, draw proportionately).



Location: CEDAR CREEK CHANNEL  
28.02721, -82.77777  
 Date: 04/10/23  
 Samplers: CS, ED

Substrates: Code key, draw proportionate habitat abundance. %

- ☐ Snags \_\_\_\_\_
- ☒ T Roots/undercut banks \_\_\_\_\_
- ☒ L Leaf Packs (or mats) <sup>2.3</sup> 0.09
- ☒ V Macrophytes <sup>1.5</sup> 0.6
- ☒ R ROCKS <sup>8.3</sup> 3.3
- ☐ \_\_\_\_\_
- Total observed 4.8
- ☒ P Pools Range expected <sup>CS</sup> 4-6

Velocity measured at 80 meter mark.

WQ & 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:

velocity @ 80 m 10

|              |    |   |   |   |   |
|--------------|----|---|---|---|---|
| Prod. hab    | 1  | 2 | 3 | 4 | 5 |
| Sweeps (Maj) | 10 | 7 | 5 | 4 | 3 |
| Sweeps (Min) | 10 | 6 | 5 | 4 | 5 |

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

SAMPLE ID \_\_\_\_\_ ORG ID \_\_\_\_\_ LATITUDE 28.02721  
 COUNTY PINELLAS STORET # \_\_\_\_\_ LONGITUDE -82.77777  
 DATE 04/10/23 TIME 10:17 SAMPLING AGENCY PINELLAS  
 SITE NAME CEDAR CREEK CHANNEL E  
 FIELD ID/NAME \_\_\_\_\_ RECEIVING BODY OF WATER \_\_\_\_\_

## RIPARIAN ZONE / STREAM FEATURES

|                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |  |  |                                                                                                                                                                                                              |  |  |                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--------------------------------------------------------------------------------|
| <b>PREDOMINANT LAND-USE IN WATERSHED</b> (specify relative percent in each category) :<br>Forest/Natural <input type="checkbox"/> Silviculture <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Industry <input type="checkbox"/> Other (Specify) <input type="checkbox"/><br><u>100</u> |  |  |  |                                                                                                                                                                                                              |  |  | <b>Landscape Development Intensity Index (LDI)</b><br><input type="checkbox"/> |
| 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 checked="" type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy                                                              |  |  |  | <b>Typical Width (m) Depth (m)/Velocity (m/sec) Transect</b><br><u>2.5</u> m wide<br>_____ m/s <u>0.1</u> m/s _____ m/s<br>_____ m deep <u>0.1</u> m deep _____ m deep                                       |  |  |                                                                                |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank : <u>0</u> Right Bank : <u>0</u>                                                                                                                                                                                                                                                                                                                         |  |  |  | <b>Hydrologic Modification Score</b> (per FT 3101) <input type="checkbox"/>                                                                                                                                  |  |  |                                                                                |
| <b>High Water Mark:</b> <u>1.0</u> + <u>0.1</u> = <u>1.1</u><br>(m) (above present water level) (present depth) (above bed)                                                                                                                                                                                                                                                                                                       |  |  |  | <b>Artificially Impounded</b><br><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No                                                                                                         |  |  |                                                                                |
| <b>Artificially</b> <input type="checkbox"/> No <input type="checkbox"/> Mostly recovered, more sinuous<br><b>Channelized :</b> <input type="checkbox"/> Some recovery <input checked="" type="checkbox"/> Recent, severe                                                                                                                                                                                                         |  |  |  | <b>Canopy Cover %</b> <input type="checkbox"/> Open <input checked="" type="checkbox"/> Lightly Shaded (11-45%)<br><input 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 checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe <input type="checkbox"/><br>Algae Smothering: None <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Severe <input checked="" type="checkbox"/> |  |
| <b>SUBSTRATE TYPE</b><br>Assessment Tool: <input type="checkbox"/> SCI <input checked="" type="checkbox"/> RPS <input checked="" type="checkbox"/> LVS<br><input type="checkbox"/> LCI <input type="checkbox"/> BioRecon<br>INVERT PERI<br>% # Times # Times<br>Coverage Sampled Sampled<br>Woody Debris (Snags) <u>0</u> _____<br>Undercut Banks / Roots <u>0</u> _____<br>Leaf Packs or Mat ..... <u>0.07</u> _____<br>Aquatic Vegetation ..... <u>0.6</u> _____<br>Rock or Shell Rubble.. <u>3.3</u> _____<br>Sand..... <u>4.6</u> _____<br>Mud / Muck / Silt ..... _____<br>Other <u>ROCK OUT CEMENT 50</u> _____<br>Other ..... _____ |  |                                                                                                                                                                                                                                                                    | <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 : _____<br>Mid: _____<br>Bottom _____<br>Meter ID: _____<br><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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot Number: _____ Exp: _____<br>Algae Sample Taken? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Sample Preserved? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No<br>Lot Number: _____ Exp: _____ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| <b>ABUNDANCE</b><br>Not Obs. Rare Common Abundant<br>Periphyton: <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Fish: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Aquatic Plants: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Iron/Sulfur Bacteria: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                                                          |  |                                                                                                                                                                                                                                                                    | <b>Water Surface Oils</b> Normal <input checked="" type="checkbox"/> Sheen <input type="checkbox"/><br>Globbs <input type="checkbox"/> Slick <input type="checkbox"/> Other <input type="checkbox"/><br><b>Color</b> Tannic <input type="checkbox"/> Green (Algae) <input type="checkbox"/><br>Clear <input checked="" type="checkbox"/> Other (Specify) <input type="checkbox"/><br><b>Clarity</b> Clear <input checked="" type="checkbox"/> Slightly Turbid <input type="checkbox"/><br>Turbid <input type="checkbox"/> Opaque <input type="checkbox"/>                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| <b>System Type:</b> Stream <input type="checkbox"/> Lake <input type="checkbox"/> Wetland <input type="checkbox"/> Estuary <input checked="" type="checkbox"/> Other(Specify) <u>DRAINAGE CHANNEL</u>                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                    | <b>AMBIENT FIELD CONDITIONS / NOTES:</b><br><u>VERY LOW WATER LEVEL</u><br><input type="checkbox"/> The antecedent hydrologic conditions have been met to my best knowledge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| <b>SAMPLING TEAM</b><br><u>C. JOINER, E. DONTIS</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  |                                                                                                                                                                                                                                                                    | <b>SIGNATURE:</b> <u>Christina Joiner</u> <b>DATE:</b> <u>04/10/23</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |

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

|                                  |               |                  |                |
|----------------------------------|---------------|------------------|----------------|
| Waterbody: CEDAR CREEK CHANNEL E | Date 04/10/23 | County: Pinellas | Storet Number: |
|----------------------------------|---------------|------------------|----------------|

|                                  |               |                  |                |
|----------------------------------|---------------|------------------|----------------|
| Waterbody: CEDAR CREEK CHANNEL E | Date 04/10/23 | County: Pinellas | Storet Number: |
|----------------------------------|---------------|------------------|----------------|

|                                  |               |                  |                |
|----------------------------------|---------------|------------------|----------------|
| Waterbody: CEDAR CREEK CHANNEL E | Date 04/10/23 | County: Pinellas | Storet Number: |
|----------------------------------|---------------|------------------|----------------|

|                    |           |                               |
|--------------------|-----------|-------------------------------|
| Analyst: C. JOYNER | E. DONTIS | Signature: <i>[Signature]</i> |
|--------------------|-----------|-------------------------------|

|                    |           |                               |
|--------------------|-----------|-------------------------------|
| Analyst: C. JOYNER | E. DONTIS | Signature: <i>[Signature]</i> |
|--------------------|-----------|-------------------------------|

Comments: ~~Had rain 2 days previous, only 0.6-0.7 inches~~

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.

[illegible]

# Rapid Periphyton Survey Calculator

|                             |                            |                                        |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                            |                                        |           |                       |                                                                                                                                                            |
|-----------------------------|----------------------------|----------------------------------------|-----------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|----------------------------------------|-----------|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site: CEDAR CREEK CHANNEL E |                            |                                        |           |                 | County: PINELLAS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                            | Date: 04/10/23                         |           | Investigators: CJ, ED |                                                                                                                                                            |
| Transect (m)                | Point<br>1=right<br>9=left | Algal<br>Thickness<br>Rank<br>(N-6, X) | Estimated | Canopy<br>Cover | Transect (m)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Point<br>1=right<br>9=left | Algal<br>Thickness<br>Rank<br>(N-6, X) | Estimated | Canopy<br>Cover       | STORET/WIN Station Number:                                                                                                                                 |
| 0                           | 1                          | Z                                      |           |                 | 60                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1                          | S                                      |           |                       | Secchi depth (m) 0.1<br>Estimated?                                                                                                                         |
|                             | 2                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 3                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 4                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 5                          | Z                                      |           | 93              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5                          | Z                                      |           | 16                    |                                                                                                                                                            |
|                             | 6                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 7                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7                          | S                                      |           |                       |                                                                                                                                                            |
|                             | 8                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 9                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                          | Z                                      |           |                       |                                                                                                                                                            |
| 10                          | 1                          | 3                                      |           |                 | 70                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1                          | Z                                      |           |                       | # points ranked 4-6 22<br>total points assessed 99<br>% points ranked 4-6 22.2%                                                                            |
|                             | 2                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 3                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 4                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 5                          | 3                                      |           | 0               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5                          | Z                                      |           | 5                     |                                                                                                                                                            |
|                             | 6                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 7                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 8                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 9                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                          | Z                                      |           |                       |                                                                                                                                                            |
| 20                          | 1                          | 3                                      |           |                 | 80                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1                          | Z                                      |           |                       | Check accompanying data collected at same site/date.<br>Algal mat sample<br>Linear Veg Survey<br>Habitat Assessment<br>SCI/Biorecon<br>Water sample<br>RQ- |
|                             | 2                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 3                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 4                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 5                          | 3                                      |           | 0               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5                          | Z                                      |           | 41                    |                                                                                                                                                            |
|                             | 6                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 7                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 8                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 9                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                          | Z                                      |           |                       |                                                                                                                                                            |
| 30                          | 1                          | 3                                      |           |                 | 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1                          | Z                                      |           |                       | Algal Thickness Rank<br>N rough, no algae, slimy, algae up to 1mm<br>3 >1mm - 6mm<br>4 >6mm - 20mm<br>5 >20mm - 10 cm<br>6 >10 cm                          |
|                             | 2                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 3                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 4                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 5                          | 3                                      |           | 0               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5                          | Z                                      |           | 17                    |                                                                                                                                                            |
|                             | 6                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 7                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 8                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 9                          | 3                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                          | Z                                      |           |                       |                                                                                                                                                            |
| 40                          | 1                          | Z                                      |           |                 | 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1                          | S                                      |           |                       | Quality Assurance<br>Data Entered By:<br>Date Data Entered:<br>Data Reviewed By:<br>Date Data Reviewed:                                                    |
|                             | 2                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 3                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 4                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 5                          | Z                                      |           | 100             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5                          | Z                                      |           | 0                     |                                                                                                                                                            |
|                             | 6                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 7                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 8                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 9                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                          | Z                                      |           |                       |                                                                                                                                                            |
| 50                          | 1                          | Z                                      |           |                 | 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.<br>Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.<br>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.<br>Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%. | 1                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 2                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 3                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 4                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 4                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 5                          | Z                                      |           | 100             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 6                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 6                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 7                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 7                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 8                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8                          | Z                                      |           |                       |                                                                                                                                                            |
|                             | 9                          | Z                                      |           |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 9                          | Z                                      |           |                       |                                                                                                                                                            |