



**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STRATEGIC MONITORING PROGRAM FIELD SHEET**

PAGE \_\_\_\_ OF \_\_\_\_

February 2016

Data Qualified?  
Yes / No

STORET Station Name: Blanket Bay slough @ .9 mi US of Kissimmee Riv. Date: 6/20/16  
(mm/dd/yyyy)

STORET Station ID: 26011350 Latitude: 27.763316  
(Decimal Degrees)

WBID: 31866 RQ - 2016-06-20-31 ORG ID: 21FLCEW Longitude: -81.171724  
(Decimal Degrees)

Receiving Body of Water: Kissimmee River Field ID: 26011350 County: Osceola

| Sampling Team Members                                              |  |  |  |  | WQ Measurements | Sample Collection | Documentation | Preservation | Preservation Check |
|--------------------------------------------------------------------|--|--|--|--|-----------------|-------------------|---------------|--------------|--------------------|
| <u>Terry Riorda</u><br><u>Mike Drennon</u><br><u>Natalie Agala</u> |  |  |  |  | X               | X                 | X             | X            | X                  |

| Sampling Equipment                                   |                                                    |                               |
|------------------------------------------------------|----------------------------------------------------|-------------------------------|
| <input checked="" type="checkbox"/> Sample Container | <input type="checkbox"/> Van Dorn                  | <input type="checkbox"/> Pole |
| <input type="checkbox"/> Carboy                      | <input checked="" type="checkbox"/> Syringe        |                               |
| <input type="checkbox"/> Dipper                      | <input type="checkbox"/> Other                     |                               |
| Equipment ID _____                                   |                                                    |                               |
| Collection Method                                    |                                                    |                               |
| <input type="checkbox"/> Wading                      | <input type="checkbox"/> Via Boat                  |                               |
| <input type="checkbox"/> From Shore                  | <input type="checkbox"/> Canoe/Kayak               |                               |
| <input type="checkbox"/> Other (note below)          | <input type="checkbox"/> Electric Motor            |                               |
|                                                      | <input checked="" type="checkbox"/> Gasoline Motor |                               |

Water Level: Dry / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# Betty/67 Photos: Yes / No Tide Falling: Yes / No / NA

| Time Zone  | Time        | Sample Depth (m) | Total Depth (m) | DO (mg/L)  | DO (%SAT) | pH         | Salinity (ppt) | Secchi Disk (m) | Sp COND (umhos/cm) | Temp. (C°)  |
|------------|-------------|------------------|-----------------|------------|-----------|------------|----------------|-----------------|--------------------|-------------|
| <u>EST</u> | <u>1330</u> | <u>0.3</u>       | <u>1.1</u>      | <u>3.8</u> | <u>48</u> | <u>6.6</u> | <u>0.04</u>    | <u>0.4</u>      | <u>79</u>          | <u>27.1</u> |
| CEN        |             |                  |                 |            |           |            |                |                 |                    |             |

Biological Samples Collected: None HA SCI LVS RPS LVI Other \_\_\_\_\_

| Parameter Suite             | Parameter Methods                                                                                                                                                                                                      | Preservation                                                                      | Acid Lot#         | Expiration  | pH Check                               |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------|-------------|----------------------------------------|
| Preserved Nutrients         | <input checked="" type="checkbox"/> W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP                                                                                                                                        | <input checked="" type="checkbox"/> Ice <input checked="" type="checkbox"/> H2SO4 | <u>SA-5259070</u> | <u>9/16</u> | <input checked="" type="checkbox"/> <2 |
| Metals                      | <input type="checkbox"/> W-ICPMS <input type="checkbox"/> W-ICP                                                                                                                                                        | <input type="checkbox"/> Ice <input type="checkbox"/> HNO3                        |                   |             | <input type="checkbox"/> <2            |
| Filtered Nutrients          | <input checked="" type="checkbox"/> W-PO4-F <input checked="" type="checkbox"/> Field Filtered 0.45 um Filter                                                                                                          | <input checked="" type="checkbox"/> Ice                                           |                   |             |                                        |
| Chlorophyll                 | <input checked="" type="checkbox"/> CHLSUITE-W                                                                                                                                                                         | <input checked="" type="checkbox"/> Ice                                           |                   |             |                                        |
| BOD                         | <input type="checkbox"/> BOD-UNIN                                                                                                                                                                                      | <input type="checkbox"/> Ice                                                      |                   |             |                                        |
| Physical/Aggregate (Fresh)  | <input checked="" type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY / W-CHC / W-COLOR / W-SO4-IC / W-TDS                                                                                                          | <input checked="" type="checkbox"/> Ice                                           |                   |             |                                        |
| Physical/Aggregate (Marine) | <input type="checkbox"/> Alkalinity / W-F / W-TSS / TURBIDITY                                                                                                                                                          | <input type="checkbox"/> Ice                                                      |                   |             |                                        |
| Macroinvertebrates          | <input type="checkbox"/> ME-FW-QLDC                                                                                                                                                                                    | <input type="checkbox"/> Formalin                                                 |                   |             |                                        |
| Microbiology                | <input type="checkbox"/> E Coli <input type="checkbox"/> F Coli <input type="checkbox"/> Enteroc <input type="checkbox"/> QPCR                                                                                         | <input type="checkbox"/> Ice                                                      |                   |             |                                        |
| Periphyton                  | <input type="checkbox"/> ALGAE-ID                                                                                                                                                                                      | <input type="checkbox"/> Ice                                                      |                   |             |                                        |
| Pesticides                  | <input type="checkbox"/> W-PSNP-TQ <input type="checkbox"/> W-AHERB-AA <input type="checkbox"/> W-PYR-AA-R<br><input type="checkbox"/> W-PC-AA-SF <input type="checkbox"/> W-UHERB-AA <input type="checkbox"/> W-GLYPH | <input type="checkbox"/> Ice <input type="checkbox"/> Other                       |                   |             |                                        |

**Contains 1:1 Sulfuric Acid**  
**SA-5259070**  
**EXP: 09/16/16**  
**Warning! See MSDS**

Notes: Temp 27.1 Cond 79 Sal 0.04 pH 6.6 DO 3.8 DO% 48 Eureka  
 \* KST pH stabilizing very slowly

Blanket Bay Slough @ .9 mi upstream of Kissimmee River  
**26011350**  
 Field ID 26011350  
 STORET 26011350  
 Date: 06/20/16  
 RQ-2016-06-20-31

Signature: [Signature] Date: 6/20/16

Field Parameters Entered into LIMS: 6/30/16 LMD (Initials/Date)  
 Date Migrated to STORET: 7-21-16 Tishert (Initials/Date)  
 Field Parameters QC in LIMS: KMW 7/19/16 (Initials/Date)  
 Field Sheets Scanned/Saved: LMD 8/2/16 (Initials/Date)

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

SAMPLE ID 26011350 ORG ID 21FLCEN LATITUDE 27.263316  
 COUNTY Osceola STORET # 26011350 LONGITUDE -81.171724  
 DATE 6/20/16 TIME \_\_\_\_\_ SAMPLING AGENCY CEN ROC  
 SITE NAME Blanket Bay Slough @ 9mi US of Kissimmee River  
 FIELD ID/NAME 26011350 RECEIVING BODY OF WATER Kissimmee River

## 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 type="checkbox"/> Commercial <input type="checkbox"/> Industry <input type="checkbox"/> Other (Specify) <input type="checkbox"/><br><u>80</u> <u>20</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 checked="" type="checkbox"/> No evidence <input type="checkbox"/> Slight <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy                                                             |  |  |  |                                                                                                                                                                                                                                                |  | <b>Typical Width (m) Depth (m)/Velocity (m/sec) Transect</b><br><u>10</u> m wide<br><input checked="" type="checkbox"/> m/s <u>1.33</u> m/s <input checked="" type="checkbox"/> m/s<br><input type="checkbox"/> m deep <u>1.1</u> m deep <input type="checkbox"/> m deep |  |                                                                                |  |
| <b>Width of Riparian Vegetation (m) on Each Buffer Side</b><br>Left Bank: <u>100+</u> Right Bank: <u>100+</u>                                                                                                                                                                                                                                                                                                                  |  |  |  | <b>Hydrologic Modification Score</b> (per FT 3101) <input checked="" type="checkbox"/>                                                                                                                                                         |  |                                                                                                                                                                                                                                                                          |  |                                                                                |  |
| <b>High Water Mark:</b> <u>1.4</u> + <u>1.1</u> = <u>2.5</u> <b>Artificially Impounded</b><br>(m) (above present water level) (present depth) (above bed) <input type="checkbox"/> Yes <input checked="" 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 checked="" type="checkbox"/> Recent, severe |  |                                                                                                                                                                                                                                                                          |  |                                                                                |  |
| <b>Canopy Cover %</b> <input checked="" type="checkbox"/> Open <input 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 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>% Coverage <input type="checkbox"/> INVERT <input type="checkbox"/> PERI<br># Times Sampled <input type="checkbox"/> # Times Sampled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  | <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: <u>3</u> <u>27.1</u> <u>6.6</u> <u>3.8</u> <u>48</u> <u>79</u> <u>.04</u> <u>.4</u><br>Mid: _____<br>Bottom: _____<br>Meter ID: <u>Betty 167</u><br>TOTAL DEPTH <u>1.1</u> |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |
| Woody Debris (Snags) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Undercut Banks / Roots <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Leaf Packs or Mat <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Aquatic Vegetation <u>2</u> <input type="checkbox"/> <input type="checkbox"/><br>Rock or Shell Rubble <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Sand <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Mud / Muck / Silt <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Other <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Other <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> |  |  | <b>Water Odors</b> Normal <input checked="" type="checkbox"/> Petroleum <input type="checkbox"/><br>Sewage <input type="checkbox"/> Chemical <input type="checkbox"/> Other <input type="checkbox"/>                                                                                                       |  |  | <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"/>                                                                                                                                                                                                                                                                                                                          |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |  | Water Sample Taken? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Sample Preserved? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No<br>Lot Number: <u>5259020</u> Exp: <u>9/16/16</u>                                                                         |  |  | <b>Color</b> Tannic <input checked="" type="checkbox"/> Green (Algae) <input type="checkbox"/><br>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 type="checkbox"/> No<br>Lot Number: _____ Exp: _____                                                                                                      |  |  | <b>Clarity</b> Clear <input type="checkbox"/> Slightly Turbid <input checked="" type="checkbox"/><br>Turbid <input type="checkbox"/> Opaque <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                          |  |  |
| <b>ABUNDANCE</b><br>Not Obs. Rare Common Abundant<br>Periphyton: <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/><br>Fish: <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Aquatic Plants: <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/><br>Iron/Sulfur Bacteria: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                                                                                                                                                                                                                                                                   |  |  | <b>System Type:</b> Stream <input checked="" type="checkbox"/> Lake <input type="checkbox"/> Wetland <input type="checkbox"/> Estuary <input type="checkbox"/> Other (Specify) <input type="checkbox"/>                                                                                                    |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |
| <b>AMBIENT FIELD CONDITIONS / NOTES:</b><br><u>Part of Kissimmee River restoration effort</u><br><input checked="" type="checkbox"/> The antecedent hydrologic conditions have been met to my best knowledge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |  |                                                                                                                                                                                                                                                                                                            |  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |

## SAMPLING TEAM

Mike Drennan, Natalie Ayala, Terry Ewerton

SIGNATURE: \_\_\_\_\_

DATE: 6/20/16

|                               |               |                 |                         |
|-------------------------------|---------------|-----------------|-------------------------|
| Waterbody: Blanket Bay Slough | Date: 6/20/16 | County: Osceola | Storet Number: 26011350 |
|-------------------------------|---------------|-----------------|-------------------------|

Signature: M. H. S.

Storet Number: 26011350

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.

Revision Date: March 1, 2014

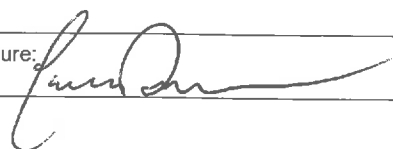
# DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

|                                     |                           |                                                                             |                                    |                                                    |
|-------------------------------------|---------------------------|-----------------------------------------------------------------------------|------------------------------------|----------------------------------------------------|
| SAMPLING AGENCY:<br><u>21 FLCEN</u> |                           | STORET STATION NUMBER:<br><u>2601350</u>                                    | DATE (MM/DD/YY):<br><u>6/20/16</u> | RECEIVING BODY OF WATER:<br><u>Kissimmee River</u> |
| REMARKS:                            | COUNTY:<br><u>Osceola</u> | LOCATION: <u>Blanket Bay Slough</u><br><u>@ 9 Mi. US of Kissimmee River</u> |                                    | FIELD ID/NAME:<br><u>2601350</u>                   |

| Habitat Parameter                                                                                                       | Optimal                                                                                                                                                                                                                       | Suboptimal                                                                                                                                                                  | Marginal                                                                                                                                              | Poor                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Primary Habitat Components<br><br>Substrate Diversity <u>3</u>                                                          | Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]<br><br>20 19 18 17 16                                                                            | Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)<br><br>15 14 13 12 11                                    | Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed<br><br>10 9 8 7 6                                 | One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered<br><br>5 4 <u>3</u> 2 1                     |
| Substrate Availability <u>1</u>                                                                                         | Greater than 30% major productive habitat present at site<br><br>20 19 18 17 16                                                                                                                                               | 16% to 30% major productive habitat, by aerial extent<br><br>15 14 13 12 11                                                                                                 | 6% to 15% major productive habitat<br><br>10 9 8 7 6                                                                                                  | Less than 5% major productive habitat<br><br>5 4 3 2 <u>1</u>                                                                                  |
| Water Velocity <u>20</u>                                                                                                | Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec<br>≥0.33 0.31 0.29 0.27 >0.25<br>20 19 18 17 16                                                                                                                | Max. observed at typical transect: >0.1 to 0.25 m/sec<br>0.25 0.21 0.17 0.13 >0.1<br>15 14 13 12 11                                                                         | Max. observed at typical transect: 0.05 to 0.1 m/sec<br>0.1 0.09 0.07 0.06 0.05<br>10 9 8 7 6                                                         | Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec<br><0.05 0.04 0.03 0.01 <0.01<br>5 4 3 2 1                       |
| Habitat Smothering <u>16</u><br>-----<br>Primary Score <u>40</u>                                                        | Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.<br><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><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><br>10 9 8 7 6                | Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.<br><br>5 4 3 2 1                                         |
| Secondary Habitat Components<br><br>Artificial Channelization <u>10</u><br><del>10</del>                                | Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.<br><br>20 19 18 17 16                                                                                         | Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.<br><br>15 14 13 12 11                                          | Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.<br><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><br>5 4 3 2 1 |
| Bank Stability<br><br>Right Bank <u>10</u><br>Left Bank <u>20</u>                                                       | Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas.<br><br>10 9                                                            | Only meets 2 of the 3 requirements for optimal bank stability.<br><br>8 7 6                                                                                                 | Only meets 1 of the 3 requirements for optimal bank stability.<br><br>5 4                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.<br><br>3 2 1                       |
| Riparian Buffer Zone Width<br><br>Right Bank <u>10</u><br>Left Bank <u>20</u>                                           | Width of vegetation greater than 18 m<br><br>10 9                                                                                                                                                                             | Width of vegetation >12 to 18m<br><br>8 7 6                                                                                                                                 | Width of vegetation 6 to 12 m. human activities close to system<br><br>5 4                                                                            | Less than 6 m of buffer zone due to intensive human activities<br><br>3 2 1                                                                    |
| Riparian Zone Vegetation Quality<br><br>Right Bank <u>5</u><br>Left Bank <u>5</u><br>-----<br>Secondary Score <u>48</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><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><br>8 7 6 | 25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.<br><br>5 4 | Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).<br><br>3 2 1         |

88

TOTAL SCORE

|                      |                              |                                                                                                  |
|----------------------|------------------------------|--------------------------------------------------------------------------------------------------|
| Date: <u>6/20/16</u> | Analyst: <u>Mike Diennen</u> | Signature:  |
|----------------------|------------------------------|--------------------------------------------------------------------------------------------------|

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

|                                      |                           |                                                             |                                      |                                                   |
|--------------------------------------|---------------------------|-------------------------------------------------------------|--------------------------------------|---------------------------------------------------|
| SAMPLING AGENCY:<br><u>21 FALCON</u> |                           | STORET STATION NUMBER:<br><u>26011350</u>                   | DATE (MM/DD/YYYY):<br><u>6/20/16</u> | RECEIVING BODY OF WATER:<br><u>Kissimmee Riv.</u> |
| REMARKS:                             | COUNTY:<br><u>Osceola</u> | LOCATION:<br><u>Blanket Bay Slough @ 0.9 mi US of Kiss.</u> |                                      | FIELD ID/NAME:<br><u>26011350</u>                 |

| Habitat Parameter                                                               | Optimal                                                                                                                                                                                                           | Suboptimal                                                                                                                                                      | Marginal                                                                                                                                   | Poor                                                                                                                          |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Primary Habitat Components                                                      | Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)                                                                                      | Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)                                              | Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed                                        | One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered                            |
| Substrate Diversity <u>3</u>                                                    | 20 19 18 17 16                                                                                                                                                                                                    | 15 14 13 12 11                                                                                                                                                  | 10 9 8 7 6                                                                                                                                 | 5 4 3 2 1                                                                                                                     |
| Substrate Availability <u>1</u>                                                 | Greater than 30% major productive habitat present at site<br>20 19 18 17 16                                                                                                                                       | 16% to 30% major productive habitat, by aerial extent<br>15 14 13 12 11                                                                                         | 6% to 15% major productive habitat<br>10 9 8 7 6                                                                                           | Less than 5% major productive habitat<br>5 4 3 2 (1)                                                                          |
| Water Velocity <u>20</u><br><u>3 sec</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><u>20</u> 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>18</u><br>.....<br>Primary Score <u>40</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 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>10</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 root zone with few raw, eroded areas.                                                            | Only meets 2 of the 3 requirements for optimal bank stability.                                                                                                  | Only meets 1 of the 3 requirements for optimal bank stability.                                                                             | Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.                   |
| Right Bank <u>4</u><br>Left Bank <u>4</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 18 m                                                                                                                                | Width of vegetation 6 to 12 m. human activities close to system                                                                            | Less than 6 m of buffer zone due to intensive human activities                                                                |
| Right Bank <u>10</u><br>Left Bank <u>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>48</u> | 10 9                                                                                                                                                                                                              | 8 7 6                                                                                                                                                           | (5) 4                                                                                                                                      | 3 2 1                                                                                                                         |

88 LMD

TOTAL SCORE \*

|                         |                               |            |
|-------------------------|-------------------------------|------------|
| Date:<br><u>6/20/16</u> | Analyst:<br><u>Tony White</u> | Signature: |
|-------------------------|-------------------------------|------------|

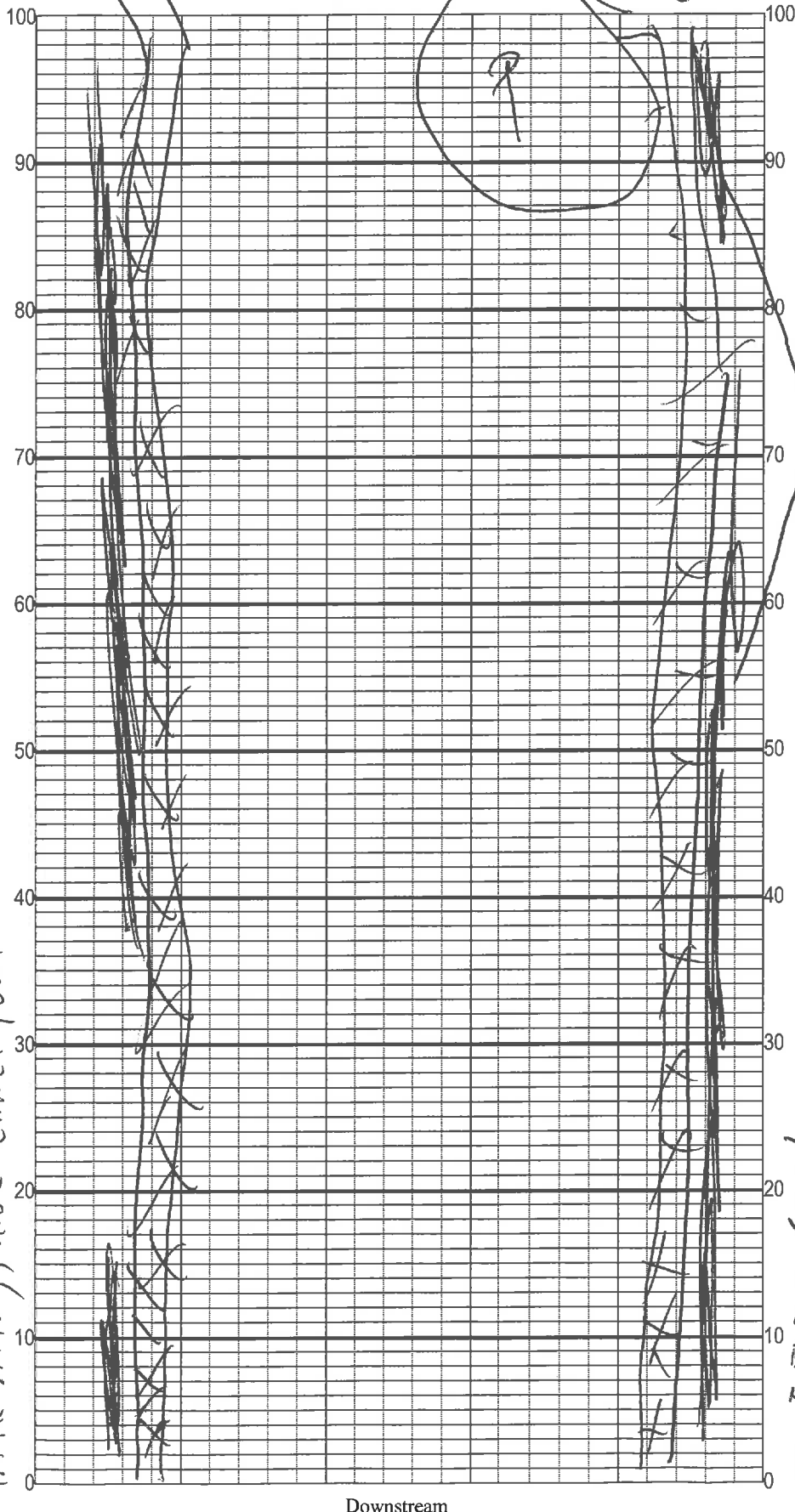


# DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

Sandy deposit banks, little silting, hard-dark clay bottom

Left Bank

H<sub>2</sub>O Velocity Fluctuations



Downstream

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

62-160.800, F.A.C

Area = 1000 m<sup>2</sup>  
Macrophyte A = 20 m<sup>2</sup> or 2% max

unstable banks: 90° minimal herbaceous growing

Location: Blanket Bay Slough @ 9 mi US of Kissimmee River  
Date: 6/20/16  
Sampler: M. Drennan

100 m: Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_  
0 m: Latitude \_\_\_\_\_  
Longitude \_\_\_\_\_

Substrates: Code key, draw proportionate habitat abundance. %

☐ Snags \_\_\_\_\_  
☐ Roots/undercut banks \_\_\_\_\_  
☐ Leaf Packs (or mats) \_\_\_\_\_  
☐ Aquatic Macrophytes \_\_\_\_\_  
☐ \_\_\_\_\_  
☐ \_\_\_\_\_  
☒ Pools total # observed = 1  
# range expected = 1

Average width 10 m  
Average depth 1.0 m

Velocity measured at 50 meter mark.

WQ & chemistry taken at 50 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:

Alternanthera philoxeroides,  
Ludwigia p. & leptocarpa, panicum repens,  
Baccharis, Hydrocotyl, Centella,  
Myrica  
P = pool

Revision Date: March 1, 2014

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

Site: Blanket Bay Slough

County: Osceola

Date: 6/20/16

Investigators: Terry Kiorlan  
M. Drennan, W. Agala

STORET Station Number:  
26011350

| Transect (m) | Point<br>1=right<br>9=left | Algal Thickness Rank<br>(N-6, X) | Estimated | Canopy Cover | Transect (m) | Point<br>1=right<br>9=left | Algal Thickness Rank<br>(N-6, X) | Estimated | Canopy Cover |
|--------------|----------------------------|----------------------------------|-----------|--------------|--------------|----------------------------|----------------------------------|-----------|--------------|
| 0            | 1                          | N                                |           |              | 60           | 1                          | N                                |           |              |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |
|              | 5                          |                                  |           | 0            |              | 5                          |                                  |           | 0            |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |
| 10           | 1                          | N                                |           |              | 70           | 1                          | N                                |           |              |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |
|              | 4                          |                                  |           | 0            |              | 4                          |                                  |           |              |
|              | 5                          |                                  |           |              |              | 5                          |                                  |           | 0            |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |
| 20           | 1                          | N                                |           |              | 80           | 1                          | N                                |           |              |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |
|              | 4                          |                                  |           | 0            |              | 4                          |                                  |           |              |
|              | 5                          |                                  |           |              |              | 5                          |                                  |           | 0            |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |
| 30           | 1                          | N                                |           |              | 90           | 1                          | N                                |           |              |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |
|              | 4                          |                                  |           | 0            |              | 4                          |                                  |           |              |
|              | 5                          |                                  |           |              |              | 5                          |                                  |           | 0            |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |
| 40           | 1                          | N                                |           |              | 100          | 1                          | N                                |           |              |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |
|              | 4                          |                                  |           | 0            |              | 4                          |                                  |           |              |
|              | 5                          |                                  |           |              |              | 5                          |                                  |           | 0            |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |
| 50           | 1                          | N                                |           |              |              | 1                          | N                                |           |              |
|              | 2                          |                                  |           |              |              | 2                          |                                  |           |              |
|              | 3                          |                                  |           |              |              | 3                          |                                  |           |              |
|              | 4                          |                                  |           |              |              | 4                          |                                  |           |              |
|              | 5                          |                                  |           | 0            |              | 5                          |                                  |           | 0            |
|              | 6                          |                                  |           |              |              | 6                          |                                  |           |              |
|              | 7                          |                                  |           |              |              | 7                          |                                  |           |              |
|              | 8                          |                                  |           |              |              | 8                          |                                  |           |              |
|              | 9                          |                                  |           |              |              | 9                          |                                  |           |              |

Secchi depth 0.4  
Estimated? 75 *4k*

# 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 N  
Linear Veg Survey Y  
Habitat Assessment Y  
SCI/Biorecon N  
Water sample Y  
RQ- 2016

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

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.  
Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.  
Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.  
Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.