



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

Site Name:

McMullen Creek @ CR 683

STORET STATION
NUMBER: see stickerDATE (MM/DD/YY):
see bottom of pageSAMPLING AGENCY:
FDEP SWROC

FIELD ID/NAME: see sticker ^

LOCATION:
see sticker ^COUNTY:
ManateeRECEIVING BODY OF WATER:
Terra Ceia Bay

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 <u>8</u> 7 6	5 4 3 2 1
Substrate Availability <u>8</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 <u>8</u> 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>3</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 <u>3</u> 2 1
Habitat Smothering <u>3</u> ----- Primary Score <u>22</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 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. 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). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 <u>3</u> 2 1
Secondary Habitat Components Artificial Channelization <u>4</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 <u>4</u> 3 2 1
Bank Stability Right Bank <u>5</u> 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 root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. LR <u>5</u> 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>2</u> Left Bank <u>2</u>	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m 8 7 6	Width of vegetation 6 to 12 m. human activities close to system 5 4	Less than 6 m of buffer zone due to intensive human activities LR 3 <u>2</u> 1
Riparian Zone Vegetation Quality Right Bank <u>2</u> Left Bank <u>2</u> ----- Secondary Score <u>22</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. 10 9	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed. 8 7 6	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious. 5 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 <u>2</u> 1

44 TOTAL SCORE

Date: <u>11/2/2022</u>	Analyst: <u>Ben Paswater, Devin Mathias</u>	Signature: <u>[Signature]</u>
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Site Name:

McMullen Creek @ CR 683

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

Location:

Date:

Sampler:

100 m: Latitude

27.57350

Longitude

-82.52681

0 m: Latitude

27.57366

Longitude

-82.52784

Substrates: Code key, draw proportionate habitat abundance.

%



Snags



Roots/undercut banks



Leaf Packs (or mats)



Aquatic Macrophytes



ROCKS



Pools

total # observed = 1

range expected = 9-18

Average width _____ m

Average depth _____ m

Velocity measured at _____ 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:

$$R = \frac{48}{2500} = 1.9\%$$

$$V = \frac{142}{2500} = 5.6$$

LS

Left flow

Left Bank

Weir

Flow n.04

Om

Downstream

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

G1SW0122



Site Name:

McMullen Creek @ CR 683

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD

County:

Date:

Waterbody: See Sticker

Signature: _____

Analyst:

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names. **BOLD is exotic invasive**

[illegible]

Site Name:

McMullen Creek @ CR 683

21FLTPA

LATITUDE

LONGITUDE

SAMPLING AGENCY FDEP SW ROC

RECEIVING BODY OF WATER

Terra Ceia Bay

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):								Landscape Development Intensity Index (LDI)	
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)		
		5		95					
Local Watershed Erosion (select one): ☐ None ☒ Slight ☐ Moderate ☐ Heavy								Typical Width (m) Depth (m)/Velocity (m/sec) Transect	
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy								1 m wide	
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)					
Left Bank: 1		Right Bank: 1		5					
High Water Mark: 1 + 0.5 = 1.5 (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☒ Yes ☐ No					
Artificially ☐ No ☒ Some recovery				Mostly recovered, more sinuous ☐ Recent, severe ☐				Canopy Cover % ☒ Open ☐ Heavily Shaded	
								Lightly Shaded (11-45%) ☐ Moderate Shaded (46-80%) ☐	

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			WATER QUALITY								
			Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	
Woody Debris (Snags)			Top: 0.25	24.6	7.15	4.62	55.5	542	0.26	5	
Undercut Banks / Roots			Mid:							☒ VOB	
Leaf Packs or Mat			Bottom:							TOTAL DEPTH	
Aquatic Vegetation			Meter ID: Leia								
Rock or Shell Rubble			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☐ Sheen ☐ Globs ☐ Slick ☐ Other ☐					
Sand			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☐ Yes ☐ No Lot Number: see Water Datasheet			Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐					
Mud / Muck / Silt			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: Exp:			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐					
Other			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ Canal								
Other			ABUNDANCE								
			Not Obs.	Rare	Common	Abundant					
Periphyton:			☐	☐	☒	☐					
Fish:			☐	☐	☒	☐					
Aquatic Plants:			☐	☐	☒	☐					
Iron/Sulfur Bacteria:			☒	☐	☐	☐					
SAMPLING TEAM			SIGNATURE			DATE					
Ben Paswater, Devin Mathias			Ben Paswater			11/2/2022					

AMBIENT FIELD CONDITIONS / NOTES:

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



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P FORM FD 9000-25 Rapid Periphyton Survey Field Sh

Investigators: Bp DM

County:

Marquette

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	
0	1	N			60	1	N			
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				8
	7					7				
	8					8				
	9					9				
10	1	N			70	1				
	2					2				
	3					3				
	4					4				
	5					5				82
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1				
	2					2				
	3					3				
	4	4				4				
	5	4				5				65
	6	6				6				
	7	4				7				
	8	N				8				
	9	N				9				
30	1	4			90	1				
	2	2				2				
	3	3				3				
	4	6				4				
	5	6				5				
	6	6				6				
	7	N				7				
	8	N				8				
	9	N				9				
40	1	N			100	1				
	2					2				
	3	3				3				
	4	2				4				
	5	4				5				
	6	5				6				
	7					7				
	8	N				8				
	9	N				9				
50	1	N				1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

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

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

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

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

STORET Station Number: see label

Secchi depth	
Estimated?	No

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

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