

OF ENVIRONMENTAL PROTECTION ORING PROGRAM FIELD SHEET

PAGE 1 OF 1

Field ID:



20030580 STORET: C2NE0587 09202017

March 2017

Butcher Pen Creek

@ Weonnet
Blawie



Slater 20030580

WBID: 2322

Latitude: N 30° 26' 46" 30.2595

County: Duval RQ - 2017 - 07-18-33

ORG ID: 21FLA

Longitude: 81° 17' 55" 81.7414

Receiving Body of Water: Cedar River

Field ID: See Label

Sampling Team Members Nicole Medin Jenny Parrish		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment	
							☐ Sample Container ☐ Carboy ☐ Dipper Equipment ID OrthoKit # 3	☒ Van Dorn Pole ☐ Syringe ☐ Other
							Collection Method	
							☐ Wading ☒ From Shore ☐ Other (note below)	☐ Via Boat ☐ Canoe/Kayak ☐ Electric Motor ☐ Gasoline Motor

Water Level: Dry / Pooled / Low / Normal / High / Flooded						Matrix: Fresh / Marine / DI					
Meter ID# 13451			Photos: Yes / No / NF			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°)	
EST	1040	0.30	0.40	2.79	34.4	7.04	0.17	0.45	355	24.56	
CEN								VOB			

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

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☐ H2SO4			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci ☐ qPCR	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes: STORET: C2NE0587
Field ID: 20030580

Place Label Here (If Available)

Signature: [Signature] Date: 9/20/17

Field Parameters Entered into LIMS: [Signature] 9/20/17 (Initials/Date)

Field Parameters QC in LIMS: (Initials/Date)

Date Migrated to STORET: (Initials/Date)

Field Sheets Scanned/Saved: (Initials/Date)



Field ID:

20030580  NE0768 09202017

Butcher Pen Creek

@ Wesonett

G2NE0587

STORET

NE RUL

J. Parrish

N. Friedman

REMARKS:

COUNTY:

Duval

Stream/River Habitat Assessment Field Sheet

STORET STATION NUMBER:

20030580

DATE (MM/DD/YY):

9/20/17

RECEIVING BODY OF WATER:

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>6</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 <u>6</u>	5 4 3 2 1
Substrate Availability <u>2</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 8 7 6	Less than 5% major productive habitat 5 4 3 <u>2</u>
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 space occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 <u>3</u> 2 1
Habitat Smothering <u>6</u> Primary Score <u>17</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 <u>6</u>	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 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>12</u>	20 19 18 17 16	15 14 13 <u>12</u> 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>4</u> Left Bank <u>3</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. 5 <u>4</u>	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. <u>3</u> 2 1
Riparian Buffer Zone Width Right Bank <u>4</u> Left Bank <u>3</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 <u>4</u>	Less than 6 m of buffer zone due to intensive human activities <u>3</u> 2 1
Riparian Zone Vegetation Quality Right Bank <u>5</u> Left Bank <u>5</u> Secondary Score <u>36</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. <u>5</u> 4	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

53

TOTAL SCORE

Date:

9/20/17

Analyst:

Jeremy Parrish / N. Friedman

Signature:

Jeremy Parrish

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

Butcher Pen

20030580

02NE0587

Location: _____

Date: 9/20/17

Sampler: N. G. Caldwell

100 m: Latitude J. Parrish

Longitude _____

0 m: Latitude _____

Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ Snags 2m 1%

☒ Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☒ Aquatic Macrophytes 2m 1%

☐ _____

☐ _____

☐ Pools total # observed = 1
range expected = _____

Average width 2-3 m 2m

Average depth 0.1-0.3 m

Velocity measured at _____ meter mark.

WQ & chemistry taken at 0 meter mark.

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

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

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

Plants observed / other notes:

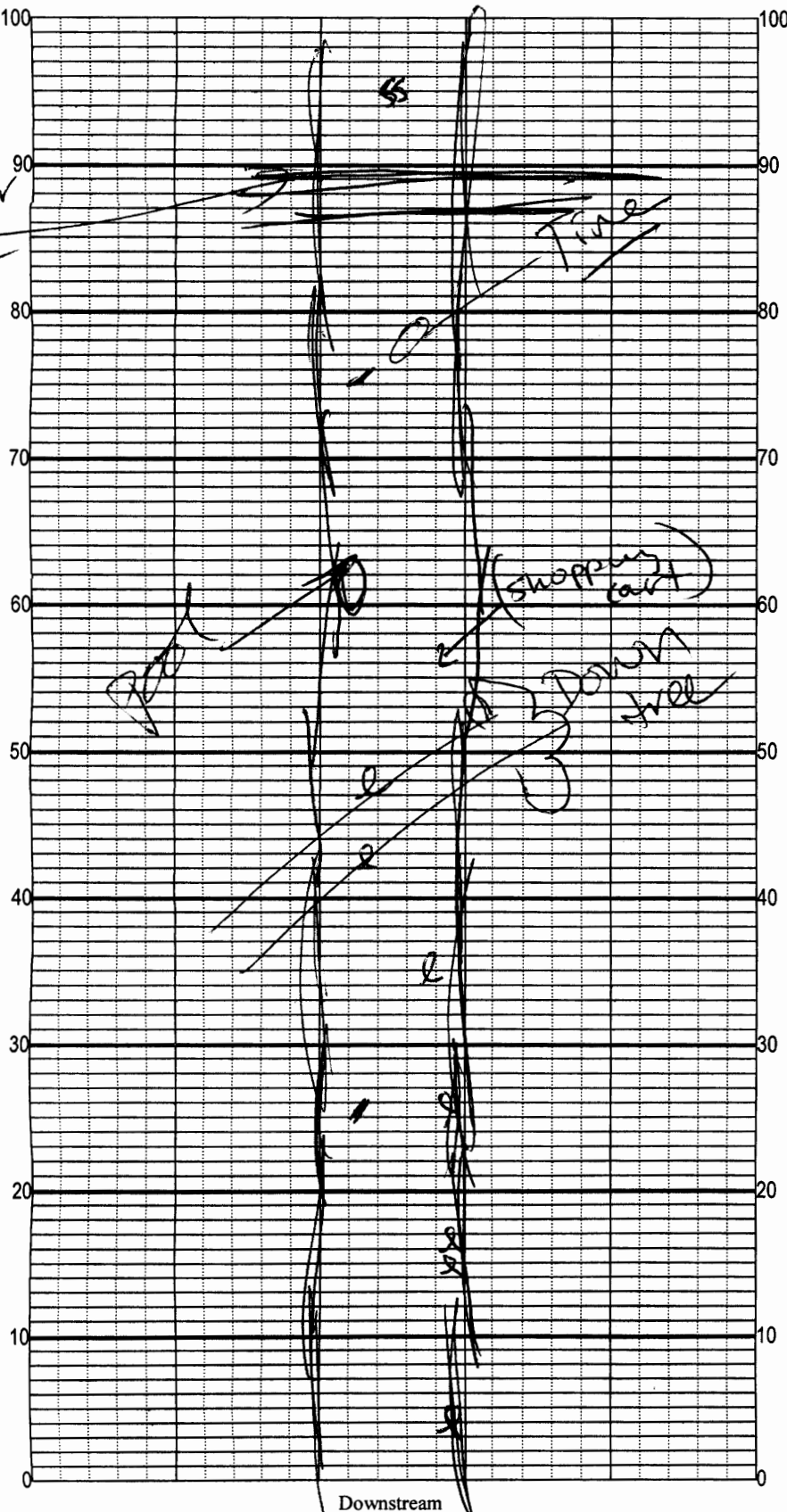
<2 M of Macrophytes was observed while doing the LVS? YES or NO

2% habitat

2m wide
200 total

Sewer
Pipe

Left
Bank



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

Field ID:



20030580 09202017

Batcher Pen Creek

@ W. W. W.

STORET



20030760

Rapid Periphyton Survey Field Sheet

Date:

9/20/17

Investigators:

N. Fredrickson / J. Rasmussen

STORET Station Number:

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	N		60	1	N	N		
	2					2				
	3					3				
	4					4				
	5			96		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2					2				
	3					3				
	4					4				
	5			94		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5			92		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			
	2					2				
	3					3				
	4					4				
	5			92		5			92	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2					2				
	3					3				
	4					4				
	5			94		5			94	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N				1	N			
	2					2				
	3					3				
	4					4				
	5			85		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%.

Secchi depth 103
Estimated?

points ranked 4-6 0
total points assessed 29
% 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- 2017-09-18-33

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

Field ID: 20030580 02 NE0768 09202017

Butcher Pen Creek

@ Wasonett

STORET

20030760

Physical/Chemical Characterization Field Sheet

LATITUDE 30.2595

LONGITUDE 81.7414

SAMPLING AGENCY NE ROC

SITE NAME

FIELD ID/NAME

RECEIVING BODY OF WATER

RIPARIAN ZONE / STREAM FEATURES

Meter ID: YSI #3

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 ☐ HeavyLocal Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank: >3m Right Bank: >10m

Hydrologic Modification Score (per FT 3101)

High Water Mark: 0.4 + 0.4 = 0.8
(m) (above present water level) (present depth) (above bed)

Artificially Impounded

☐ Yes ☒ NoArtificially ☐ No ☐ Mostly recovered, more sinuousChannelized: ☒ Some recovery ☐ Recent, severe

Canopy Cover %

☐ Open☐ Lightly Shaded (11-45%)☐ Heavily Shaded☒ 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 ☐ BioReconINVERT PERI
% # Times # Times
Coverage Sampled 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:							VoB
Mid:	0.30	24.8	7.06	2.79	34.4	355	0.17
Bottom:							0.40

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐Water Odors Normal ☒ Petroleum ☐
Sewage ☐ Chemical ☐ Other ☐Water Surface Oils Normal ☐ Sheen ☒
Globs ☐ Slick ☐ Other ☐Water Sample Taken? ☒ Yes ☐ NoSample Preserved? ☒ Yes ☐ No

Lot Number: Exp:

Color Tannic ☐ Green (Algae) ☐
Clear ☒ Other (Specify) ☐Algae Sample Taken? ☐ Yes ☐ NoSample Preserved? ☐ Yes ☐ No

Lot Number: 5A7163030 Exp: 6/18

Clarity Clear ☒ Slightly Turbid ☐
Turbid ☐ Opaque ☐

ABUNDANCE

Not Obs. Rare Common Abundant

Periphyton:

Fish:

Aquatic Plants:

Iron/Sulfur Bacteria:

AMBIENT FIELD CONDITIONS / NOTES:

Hydrologic Disturbance Scoring ☐ 1-2 ☐ 3-4 ☒ 5-6 ☐ 7-8 ☐ 9-10☐ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

SIGNATURE:

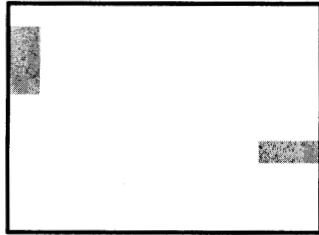
N. Cole Frederick

9/29/17

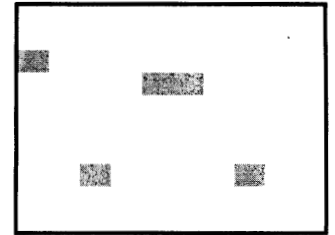
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

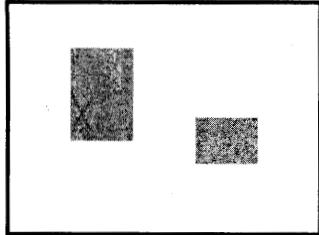
5% Macrophyte Coverage



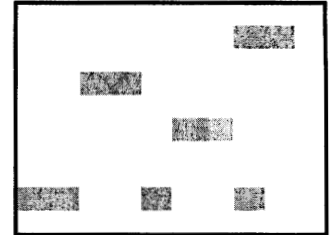
5% Macrophyte Coverage



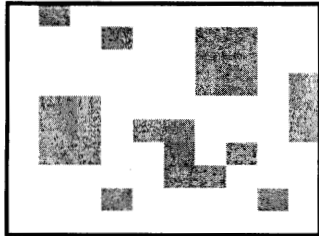
10% Macrophyte Coverage



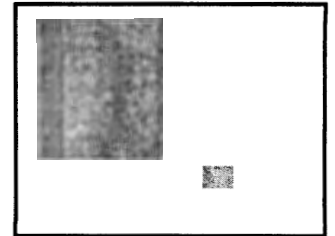
10% Macrophyte Coverage



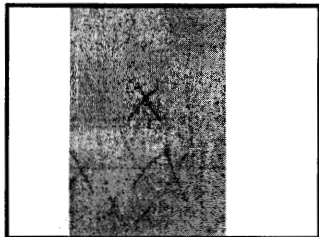
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

