FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

PAGE 1 OF 1

Data Qualified? Yes / No

STORET Station Name: Stroud Creek @ SR 78

STORET Station ID:

WBID: RQ -

Receiving Body of Water: Caloosahatchee

RQ-2016-10-31-75
10/31/2016
WBID 3240M

SD103116-2
Field ID

STORET 28020039 *

Date: (mm/dd/yyyy)

(Decimal Degrees)

(Decimal Degrees)

County: Lee

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Ben Paswater		✓			
Corey Anderson			✓	✓	✓
Kaitlin D'Arth	✓				
Veronica Runge		✓			

Sampling Equipment

- [x] Sample Container
- [ ] Carboy
- [ ] Dipper
- [ ] Van Dorn
- [x] Syringe
- [ ] Other
- [ ] Pole

Equipment ID

Collection Method

- [x] Wading
- [ ] From Shore
- [ ] Other (note below)

Via Boat
- [ ] Canoe/Kayak
- [ ] Electric Motor
- [ ] Gasoline Motor

Water Level: Dry / Low / (Normal) / High / Flooded

Matrix: (Fresh) / Marine / DI

Meter ID# YSI 5

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 (µmhos/cm)	Temp. (C°)
(EST)	900	0.3	0.4	4.7	55	7.1	–	0.4	428	23.2
CEN	eureka			4.0	47	7.1			440	23.2

Biological Samples Collected: None / (HA) / (SCI) / (LVS) / (RPS) / LVI / Other

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	[x] TKN / TP / Nox / NH3 / TOC ___ Other	[x] Ice [x] H_2SO_4	0209128	7/17	[x] <2
Metals	[ ] W-ICPMS [ ] W-ICP	[ ] Ice [ ] HNO_2			[ ] <2
Filtered Nutrients	[x] oP [x] Field Filtered 0.45 µm Filter	[x] Ice			
Chlorophyll	[x] CHLSUITE-W	[x] Ice			
BOD	BOD-INHB [ ] BOD-UNIN	[ ] Ice			
Physical/Aggregate	[x] TSS / Turbidity / Alkalinity / Color [ ] Other	[x] Ice			
Macroinvertebrates	[ ] MI-FW-QLDC	[ ] Formalin			
Microbiology	[ ] E Coli [ ] F Coli [ ] Entero [ ] QPCR	[ ] Ice			
Periphyton	[ ] ALGAE-ID	[ ] Ice			
Pesticides	[ ] W-PSNP-TQ [ ] W-AHERB-AA [ ] W-PYR-AA-R ___ W-PC-AA-SF [ ] W-UHERB-AA [ ] W-GLYPH	[ ] Ice [ ] Other			

Place Preservative Sticker(s) Here (If Available)

Notes: Blue crab in stream

Place Label Here (If Available)

Signature:

Date: 10-31-16

Field Parameters Entered into LIMS: (Initials/Date)

Field Parameters QC in LIMS: (Initials/Date)

Date Migrated to STORET: (Initials/Date)

Field Sheets Scanned/Saved: (Initials/Date)

RQ-2016-10-31-75
10/31/2016
WBID 3240M
Stroud Creek @ SR 78

SD103116-2
Field ID
STORET
28020039 *

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

STORET STATION NUMBER:	DATE (MM/DD/YY):	SAMPLING AGENCY: FDEP South ROC
FIELD ID/NAME:	COUNTY: Lee	LOCATION:
		RECEIVING BODY OF WATER: Caloosahatchee

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 14	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 (14) 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 8	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 2 1
Water Velocity 13	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 3 2 1
Habitat Smothering 8 Primary Score 43	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 3 2 1
Secondary Habitat Components **Artificial Channelization** 19	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 4 3 2 1
Bank Stability Right Bank 9 Left Bank 9	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. 10 (9) RL	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 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 10 Left Bank 10	Width of vegetation greater than 18 m RL (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 3 2 1
Riparian Zone Vegetation Quality Right Bank 7 Left Bank 7 Secondary Score 71	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. RL 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 2 1

114 **TOTAL SCORE**

Date:	Analyst:	Signature:
10/31/16	Ben Pruitter	Ben Pruitter

62-160.800, F.A.C.

Revision Date: March 1, 2014

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

RQ-2016-10-31-75
10/31/2016
WBID 3240M
Stroud Creek @ SR 78

SD103116-2
Field ID
STORET
28020039 *

Waterbody: Stroud Creek | Date: | County: Lee
Analyst: Corey Anderson | Signature:
Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m^2 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.

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata	✓		✓	✓				✓	✓		
Hydrocotle sp.							✓	✓	✓		
Hygrophila polysperma											
Hymenachne amplexicaulis											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens	✓					✓	✓				
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage	✓	✓	✓	✓	✓	✓	✓		✓	✓	
>5 and ≤10% Macrophyte Coverage								✓			
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum	✓							✓		✓	
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria ~~kurziana~~ isoetiformis							✓				
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Sphagneticola trilobata (Wedelia)							✓			✓	
Typha											
Urochloa mutica (Brachiaria)											
Vallisneria americana											
Zizania aquatica											

RQ-2016-10-31-75
10/31/2016
WBID 3240M
Stroud Creek @ SR 78

SD103116-2
Field ID
STORET
28020039 *

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

County: Lee

Investigators: Murphy, Conley, Anderson, Foscarter, Runge, DeHeth,

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				60	1			
	2					2			
	3					3			
	4					4			
	5	N	N	82		5	N	N	42
	6					6			
	7					7			
	8					8			
	9					9			
10	1				70	1			
	2					2			
	3					3			
	4					4			
	5	N	N	90		5	N	N	58
	6					6			
	7					7			
	8					8			
	9					9			
20	1				80	1			
	2					2			
	3					3			
	4					4			
	5	N	N	89		5	N	N	85
	6					6			
	7					7			
	8					8			
	9					9			
30	1				90	1			
	2					2			
	3					3			
	4					4			
	5	N	N	89		5	N	N	46
	6					6			
	7					7			
	8					8			
	9					9			
40	1				100	1			
	2					2			
	3					3			
	4					4			
	5	N	N	87		5	N	N	70
	6					6			
	7					7			
	8					8			
	9					9			
50	1								
	2								
	3								
	4								
	5	N	N	72					
	6								
	7								
	8								
	9								

Secchi depth	0.4 VOB
Estimated?	

# points ranked 4-6	0
total points assessed	90
% points ranked 4-6	0

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/~~Bioreco~~n	✓
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

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%.

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

RQ-2016-10-31-75
10/31/2016
WBID 3240M
Stroud Creek @ SR 78

SD103116-2 Field ID
STORET 28020039 *

SAMPLE ID see sticker upper right ORG ID 21FLFTM L
STORET # see sticker upper right COUNTY Lee L
DATE see sticker upper right TIME 900 S
SITE NAME
FIELD ID/NAME see sticker upper right RECEIVING BODY OF WATER Caloosahatchee

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) :

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
20		60		20			

Landscape Development Intensity Index (LDI)

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

Typical Width (m) Depth (m)/Velocity (m/sec) Transect

3 m wide

.17 m/s	.17 m/s	.17 m/s
.4 m deep	.4 m deep	.4 m deep

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : 18 Right Bank : 18

Hydrologic Modification Score (per FT 3101)

High Water Mark: .5 (m) + .4 (above present water level) = .9 (present depth) (above bed)

Artificially Impounded ☐ Yes ☑ No

Artificially Channelized : ☑ NO ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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 ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	2.7	5	
Undercut Banks / Roots	3.5	5	
Leaf Packs or Mat			
Aquatic Vegetation	few		
Rock or Shell Rubble..	1.5	5	
Sand.....			
Mud / Muck / Silt			
Other		5	
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)
Top :	0.3	23.2	7.1	4.7	55	428	/
Mid:							
Bottom							

SECCHI (M) 0.4 ☑ VOB
TOTAL DEPTH 0.4
Meter ID: 5

Water Odors Normal ☑ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☑ Sheen ☐ Globs ☐ Slick ☐ Other ☐

Water Sample Taken? ☑ Yes ☐ No
Sample Preserved? ☑ Yes ☐ No
Lot Number:_____ Exp:_____

Color Tannic ☐ Green (Algae) ☐ Clear ☑ Other (Specify) ☐

Algae Sample Taken? ☐ Yes ☑ No
Sample Preserved? ☐ Yes ☐ No
Lot Number:_____ Exp:_____

Clarity Clear ☑ Slightly Turbid ☐ Turbid ☐ Opaque ☐

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

ABUNDANCE

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

AMBIENT FIELD CONDITIONS / NOTES:

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

SAMPLING TEAM Ben Penswater, Corey Anderson

SIGNATURE : Ben Pens

DATE : 10/31/16

62-160.800, F.A.C.

Revision Date: March 1, 2014

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

RQ-2016-10-31-75
10/31/2016
WBID 3240M
Stroud Creek @ SR 78

SD103116-2 Field ID
STORET 28020039 *

Sampler: Ben Passwater

100 m: Latitude	26.72690
Longitude	-81.79815
0 m: Latitude	26.72623
Longitude	-81.79789

Substrates: Code key proportionate habitat

S	Snags	2.7
R	Roots/undercut banks	3.5
	Leaf Packs (or mats)	few
V	Aquatic Macrophytes	
O	Rocks	1.5
Pool	Pools	total # observed = 3; # range expected = 3-6

Average width 3 m
Average depth .4 m

Velocity measured at 0 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:

S = 41 = 2.7
R = 53 = 3.5
O = 30 = 1.5
V = 3 = .2%

Shallow pools all of the

Left Bank

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

Revision Date: March 1, 2014