



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 1

Data Qualified?
Yes / No

January 2017

STORET Station Name: Unnamed Drain @ 350 m E. of S. Econ. Trail Date: 1/30/2017
(mm/dd/yyyy)
STORET Station ID: 20011186 WBID: 3046 Latitude: 28.4917
(Decimal Degrees)
County: Orange RQ - 2017-01-30-55 ORG ID: 21FLCEN Longitude: -81.25113
(Decimal Degrees)
Receiving Body of Water: Econlockhatchee Field ID: 20011186

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
Terry Riordan		☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole	
Mike Drennan		☒	☒	☒	☒	☒	☐ Carboy	☒ Syringe	☐ Other	
		☐	☐	☐	☐	☐	☐ Dipper	☐ Other		
							Equipment ID			
							Collection Method			
							☒ Wading	☐ Via Boat		
							☐ From Shore	☐ Canoe/Kayak		
							☐ Other (note below)	☐ Electric Motor		
								☐ Gasoline Motor		

Water Level:	Dry / Pooled / Low / <u>Normal</u> / High / Flooded	Matrix:	Fresh / Marine / DI
Meter ID# <u>Boop 25 on 11c/AB</u>	Photos: <u>Yes</u> / No	Tide Falling:	Yes / No / <u>NA</u>

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	<u>1135</u>	<u>0.1</u>	<u>0.2</u>	<u>9.7</u>	<u>96</u>	<u>7.3</u>	<u>0.1</u>	<u>0.2(s)</u>	<u>205</u>	<u>15.0</u>
CEN										

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other
SBIO ID Numbers: SBIO-ID: 77360 RPS-ID: 8581 Macrophyte-ID: 10349 LIMS#: 1868191

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 ☐ HNO2			☐ <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-CH-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 ☐ Enteroc ☐ PCR-FILTER	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Notes:

Unnamed Drain @ 350 m
E. of S. Econ Trail

Date: 01/30/2017
RQ-2017-01-30-55

20011186
Field ID ↑
STORET ↓
20011186

Signature: [Signature]

Date: 1/30/17

Field Parameters Entered into LIMS: LMD 3/3/17
(Initials/Date)

Field Parameters QC in LIMS: LMD 3/3/17
(Initials/Date)

Date Migrated to STORET: LMD 3/3/17
(Initials/Date)

Field Sheets Scanned/Saved: LMD 3/3/17
(Initials/Date)

* 2m depth is @ water quality measure location
22m depth is average of 100m stretch (3 soundings)

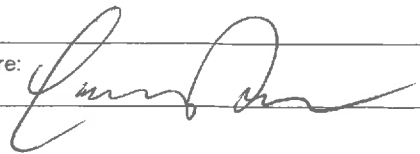
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>FDEP - CERP</u>		STORET STATION NUMBER: <u>20011186</u>	DATE (MM/DD/YY): <u>1/30/2017</u>	RECEIVING BODY OF WATER: <u>Little Econlockhatchee R.</u>
REMARKS:	COUNTY: <u>Orange</u>	LOCATION: <u>Unnamed Drain @ 350m E. of S. Econ Trail</u>		FIELD ID/NAME: <u>20011186</u>

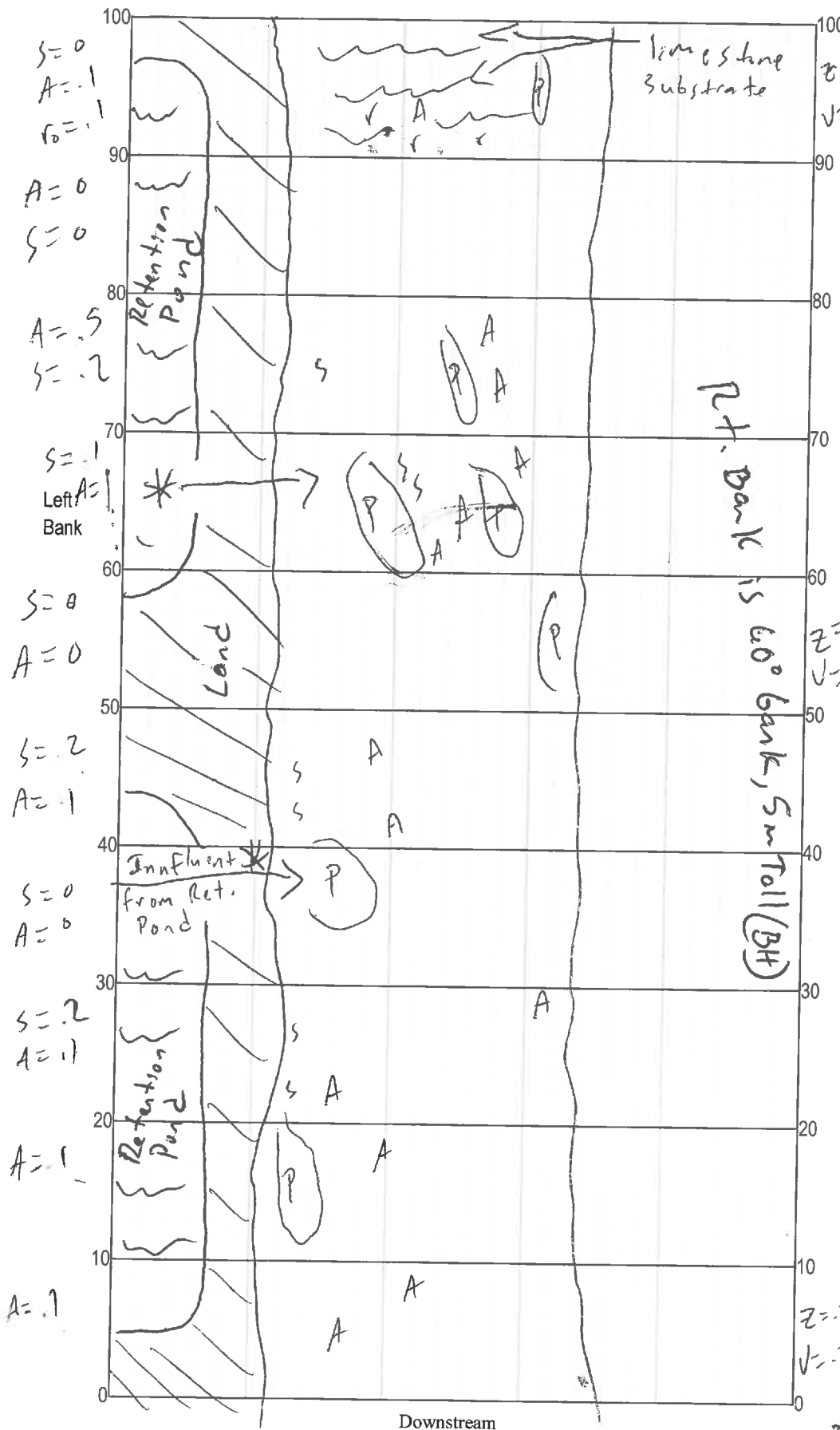
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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 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 <u>14</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 3 2 1
Habitat Smothering <u>16</u> ----- Primary Score <u>34</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 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>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>6</u> Left Bank <u>12</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 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>1</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 3 2 1
Riparian Zone Vegetation Quality Right Bank <u>2</u> Left Bank <u>4</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 2 1

56

TOTAL SCORE

Date: <u>1/30/2017</u>	Analyst: <u>Mike Drennan</u>	Signature: 
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Unnamed Drain @ 350m E. of S. Econ Trail
 Date: 1/30/2017
 Sampler: Terry Gordon
Mike Drennon

100 m: Latitude 28.4917
 Longitude -81.2516
 0 m: Latitude 28.4917
 Longitude -81.2506

Substrates: Code key, draw proportionate habitat abundance.	%
☐ S Snags	<u>.25</u>
☐ R Roots/undercut banks	<u>0</u>
☐ L Leaf Packs (or mats)	<u>0</u>
☐ A Aquatic Macrophytes	<u>.5</u>
☐ P Pool	<u>—</u>
☐ V rock	<u>.05</u>
☐ P Pools	total # observed = <u>6</u> # range expected = <u>2-4</u>

Average width 4 m
 Average depth .22 m

Velocity measured at — 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:
 - Ditch receiving ret. pond effluent
 - Clear H₂O
 - Lt. bank undercut
 - Rt. BH = 5m (above water)
 - Lt. BH = 1m

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. $S=1.0$
 $A=2.0$
 $V=.1$
 $3.1/400 = .8\%$

$\bar{Z} = .22$
 $\bar{V} = .2$

Revision Date: March 1, 2014

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Unnamed Drain
off S. Fern Trail

County: Orange

Date: 1/30/17

Investigators: Terry R. Jordan
M. K. O'Brien

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

STORET Station Number:

Secchi depth 0.2
Estimated? N

points ranked 4-6 3
total points assessed 44
% points ranked 4-6 3

Check accompanying data collected at same site/date.

Algal mat sample ☐
Linear Veg Survey ☒
Habitat Assessment ☒
SCI/Biorecon ☐
Water sample ☒

RQ- 2017-01-30-55

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%.

Waterbody: Unnamed Drain

Date: 12/2/2012

County: Orange

Store Number: 20011204

Analyst: Terry Burdick

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 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.

HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
<i>Alternanthera philoxeroides</i>	✓	✓			✓	✓	✓	✓	✓	✓		<i>Micranthemum glomeratum</i>					✓						
<i>Bacopa caroliniana</i>	✓	✓		✓	✓	✓	✓		✓			<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>				✓					✓		
<i>Bidens mitis</i>												<i>Najas guadelupensis</i>											
<i>Boehmeria cylindrica</i>							✓	✓				<i>Nuphar luteum</i>											
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>											
<i>Cephalanthus occidentalis</i>												<i>Panicum hemitomon</i>											
<i>Ceratophyllum demersum</i>												<i>Panicum repens</i>	✓	✓	✓	✓	✓			✓	✓		
<i>Chara</i>												<i>Panicum rigidulum</i>											
<i>Cicuta maculata</i>												<i>Pistia stratioides</i>											
<i>Cladium jamaicense</i>												<i>Polygonum glabra</i>											
<i>Colocasia esculenta</i>												<i>Polygonum hydropiperoides</i>											
<i>Crinum americanum</i>												<i>Polygonum punctatum</i>											
<i>Diodia virginiana</i>												<i>Pontederia cordata</i>					✓						
<i>Eichhornia crassipes</i>												<i>Potamogeton illinoensis</i>											
<i>Eleocharis (wispy viviparous)</i>									✓			<i>Ruellia simplex</i>											
<i>Hydrilla verticillata</i>												<i>Sacciolepis striata</i>											
<i>Hydrocotyle</i>			✓	✓	✓		✓	✓	✓			<i>Sagittaria kurziana</i>											
<i>Hygrophila polysperma</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		<i>Sagittaria lancifolia</i>											
<i>Hymenocallis</i>												<i>Sagittaria latifolia</i>											
<i>Itea virginica</i>												<i>Salix caroliniana</i>											
<i>Lachnanthes caroliniana</i>												<i>Salvinia minima</i>											
<i>Landoltia punctata</i>												<i>Samolus parviflora</i>											
<i>Lemna</i>			✓									<i>Saururus cernuus</i>											
<i>Limnophila sessiflora</i>												<i>Typha</i>											
<i>Ludwigia leptocarpa</i>												<i>Vallisneria americana</i>				</							