Benchmark EnviroAnalytical,Inc
1711 12th Street East
Palmetto, Fl 34221
941-723-9986
941-723-6061 Fax

PO#__B77880_____

Client Information: **FDEP**

Address: 13051 N. Telecom Parkway
Tampa FL 33604

Phone # 815-470-5878

Report to: benjamin.paswater@dep.state.fl.us
DEP-Overflomicro@dep.state.fl.us

Invoice to: FDEP Micro Overflow

Project Name: RQ-2021- 12-13-47

Laboratory Submission # 21120977

Sample Name	Sample Type[1] / Sample Matrix[2]	Collection		Container			Preservative[4]	Parameters for Analysis	Laboratory Sample #
		Date	Time	Qty	Capacity	Type[3]			
G25W0015	SW	12/14/21	1240	1	250mL	P	Plain (on Ice)	E. Coli	1
	SW				250mL	P	Plain (on Ice)		
	SW				250mL	P	Plain (on Ice)		
	SW				250mL	P	Plain (on Ice)		
	SW				250mL	P	Plain (on Ice)		
	SW				250mL	P	Plain (on Ice)		
	SW				250mL	P	Plain (on Ice)		

1 "Sample Type" is used to indicate whether the sample was a grab (G) or whether it was a composite (C).
2 "Sample Matrix" is used to indicate whether the sample is being discharged to drinking water (DW), groundwater (GW), surface water (SW), fresh surface water (FSW), saline surface water (SSW), soil, sediment (SD&NT), or sludge (SLDG).
3 "Container Type" is used to indicate whether the container is plastic (P) or glass (G).
4 **Sample must be refrigerated or stored in wet ice after collection. The temperature during storage should be less than or equal to 6°C (42.8°F).**
Under "Preservative," list any preservatives that were added to the sample container.

Instructions:
1. Each bottle has a label identifying sample ID, premeasured preservative contained in the bottle, sample type, client ID, and parameters for analysis.
2. The following information should be added to each bottle label after collection with permanent black ink: date and time of collection, sampler's name or initials, and any field number or ID.
3. All bottles not containing preservative may be rinsed with appropriate sample prior to collection.
4. The client is responsible for documentation of the sampling event. Please note special sampling events on the sample custody form.

Laboratory Sample Acceptability:
Temperature:

1	Collected / Relinquished By:	Date 12/14/2021	Time 1405	Received By: Annah Jensen	Date 12/14/21	Time 1407
2	Relinquished By:	Date	Time	Received By:	Date	Time

Field ID/WIN G2SW0015

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

Site Name: Nonsense @ Tara Preserve

STORET STATION NUMBER: see sticker	DATE (MM/DD/YY): see bottom of page	SAMPLING AGENCY: FDEP SWROC
COUNTY: Sarasota		RECEIVING BODY OF WATER: GOM

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 7	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 6	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 7	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 13 Primary Score 36	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** 16	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)	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 7 Left Bank 7	Width of vegetation greater than 18 m 10 9	Width of vegetation >12 to 18m LR 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 6 Left Bank 6 Secondary Score 60	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. LR 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

96 **TOTAL SCORE**

Date: 12/14/2021	Analyst: Ben Paschkewitz	Signature: Ben Paschkewitz

Field ID/WIN G2SW0015

Site Name: Nonsense @ Tara Preserve

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD

	County: Sarasota	Waterbody: **See Sticker**
	Date: 12/17/202	Signature:
		Analyst:

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. **BOLD is exotic invasive**

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 (Lemon)											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara sp.											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Cyperus _____											
Diodia virginiana											
Eichhornia crassipes	✓									✓	
Eleocharis (wispy viviparous)											
Fontinalis sp. (Aquatic Moss)											
Fraxinus caroliniana											
Hydrilla verticillata											
Hydrocotle sp.											
Hygrophila polysperma											
Hymenachne amplexicaulis											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna sp.											
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											
Nitella sp.											
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata											
Potamogeton illinoensis											
Ruellia simplex (Mex Petunia)											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Schoenoplectus americanus											
Sphagneticola trilobata(Wedelia)											
Typha sp.											
Urochloa mutica (Brachiaria)											
Vallisneria americana											
Zizania aquatica											

> 2sq/m

Field ID/WIN G2SW0015

Site Name: Nonsense @ Tara Preserve

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sh

Investigators: BP JY MH

County: Sarasota

STORET Station Number: **see label**

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2			
	3			
	4			95
	5			
	6			
	7			
	8			
	9			
10	1			
	2			
	3			
	4			95
	5			
	6			
	7			
	8			
	9			
20	1			
	2			
	3			
	4			96
	5			
	6			
	7			
	8			
	9			
30	1			
	2			
	3			
	4			96
	5			
	6			
	7			
	8			
	9			
40	1			
	2			
	3			
	4			95
	5			
	6			
	7			
	8			
	9			
50	1			
	2			
	3			
	4			92
	5			
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N		
	2			
	3			
	4			96
	5			
	6			
	7			
	8			
	9			
70	1			
	2			
	3			
	4			95
	5			
	6			
	7			
	8			
	9			
80	1			
	2			
	3			
	4			94
	5			
	6			
	7			
	8			
	9			
90	1			
	2			
	3			
	4			92
	5			
	6			
	7			
	8			
	9			
100	1			
	2			
	3			
	4			93
	5			
	6			
	7			
	8			
	9			

Secchi depth	✓
Estimated?	No

# points ranked 4-6	0
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- 2021-12-13-49

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.

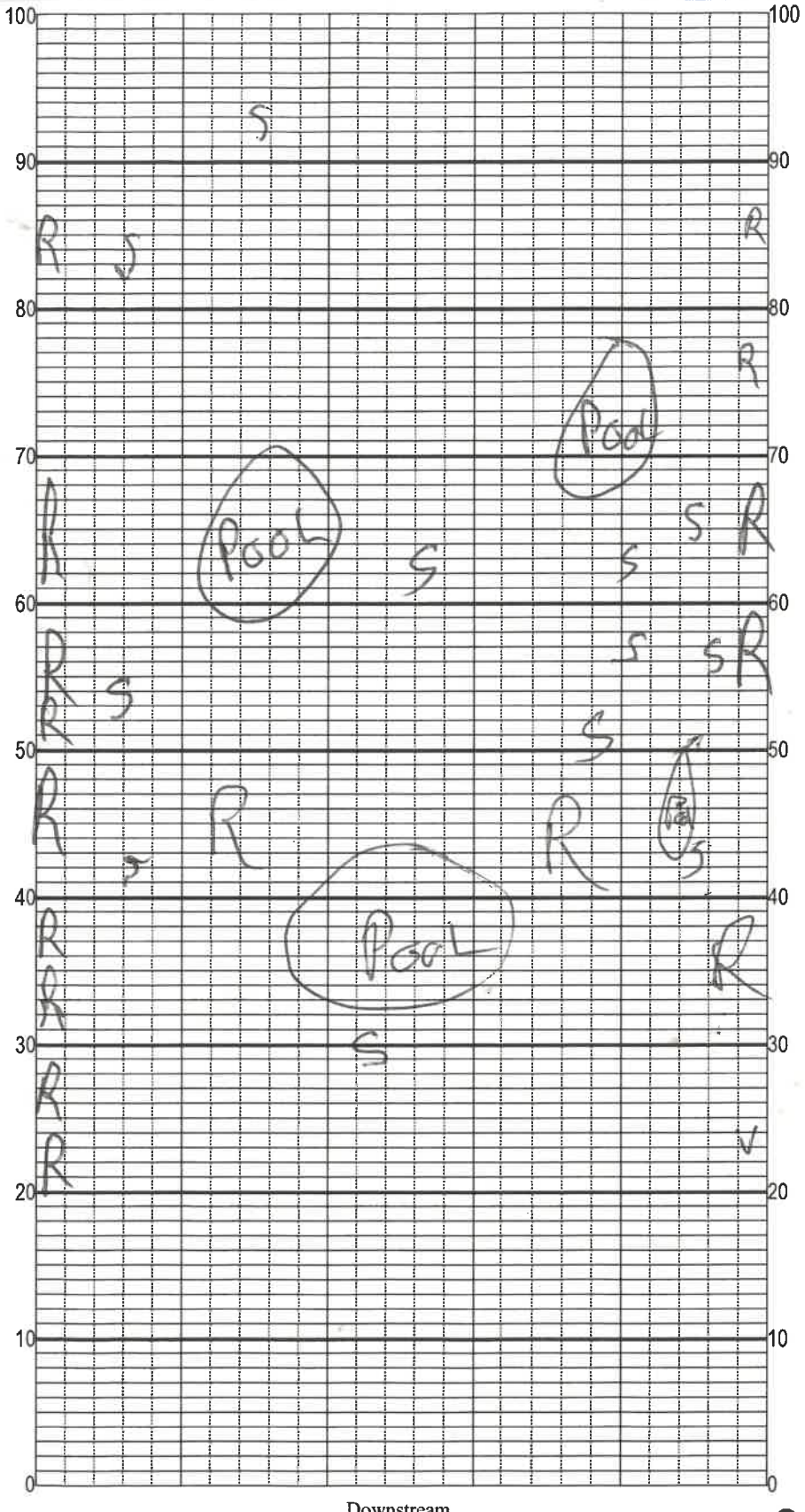
Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

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%.**

Field ID/WIN G2SW0015

Site Name: Nonsense @ Tara Preserve

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



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

Location: _____

Date: 12/14/2021

Sampler: Ben Passante

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

S	Snags	2.3
R	Roots/undercut banks	3.5
	Leaf Packs (or mats)	
V	Aquatic Macrophytes	
	ROCKS	
	Pools	total # observed = 4
		# range expected =

Average width 2 m
Average depth .5 m

Velocity measured at 100 50 0 meter mark.

WQ & chemistry taken at 100 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 = 88
S = 59

2 m

Revision Date: March 1, 2014

Field ID/WIN G2SW0015

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

21FLTPA

LATITUDE

LONGITUDE

SAMPLING AGENCY FDEP SW ROC

Site Name: Nonsense @ Tara Preserve

RECEIVING BODY OF WATER ~~GOM~~ GOM

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)
70		20		10			

Landscape Development Intensity Index (LDI)

Local Watershed Erosion (select one) : ☐ None ☑ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution : ☐ No evidence ☑ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : 12 Right Bank : 12

Hydrologic Modification Score (per FT 3101)

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

.14 m/s	.14 m/s	.14 m/s
.3 m deep	.5 m deep	.3 m deep

High Water Mark: .3 (m) + .5 (above present water level) = .8 (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	
Undercut Banks / Roots	3	7	
Leaf Packs or Mat			
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....			
Mud / Muck / Silt			
Other		6	
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	.3							.5
Mid:								☑ VOB
Bottom								TOTAL DEPTH
								.5

Meter ID: SWD

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: see Water Datasheet

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 ☐

ABUNDANCE

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

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

AMBIENT FIELD CONDITIONS / NOTES:

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

SAMPLING TEAM PasWater, Yodzis, Mahoney

SIGNATURE :

DATE : 12/14/2021

62-160.800, F.A.C.

Revision Date: March 1, 2014