



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

March 2017

PAGE 1 OF 1

Data Qualified?

Yes / No

Location/STORET Station Name:

Miller Ck @ Beach Blvd

Date:

9/20/17

(mm/dd/yyyy)

STORET #

20030828

WBID:

2287

Latitude:

30.5027

(Decimal Degrees)

County:

Duval

RQ - 2017 - 09-25-17

ORG ID: 21FLA

Longitude:

81-6280

(Decimal Degrees)

Receiving Body of Water:

St. Johns River

Field ID: See Label

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
B. Davis					X				
A. Kalmbacher						X	X	X	X

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☐ Syringe	
☐ Dipper	☐ Other	
Equipment ID OrthoKit #		

Collection Method		
☒ Wading	☐ Via Boat	
☐ From Shore	☐ Canoe/Kayak	
☐ Other (note below)	☐ Electric Motor	
	☐ Gasoline Motor	

Water Level: Dry / Pooled / Low / Normal / High / Flooded

Matrix: Fresh / Marine / DI

Meter ID#

YSI#4

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 (umhos/cm)	Temp. (C)
EST	1050	0.3	0.4	6.30	76.5	7.24	0.18	VOB	378	25.14
DST								0.45		
CEN										

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-G-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:

Field ID:



G2NE0836 09202017

Miller Creek @
Beach Blvd

STORET



20030828

Signature:

A. Kalmbacher
2009/22/17

Date:

9-20-2017

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)

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

Left Bank

Downstream

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

Significant silt smothering

No frequent trash like metals & plastics present

Substrates: Code key, draw proportionate habitat abundance.

Snags 1.6

Roots/undercut banks <0.2

Leaf Packs (or mats) 1.0

Aquatic Macrophytes 0.3

Pools total # observed = 3
range expected = 6

Average width 3.0 m

Average depth 0.6 m

Velocity measured at 100 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:
< 2 M of Macrophytes was observed while doing the LVS? YES or NO

S = 5.0 / 300 = 1.6
R = 0.5 / 300 = 0.16
L = 3.0 / 300 = 1.0
V = 1.0 / 300 = 0.3

3.1%

77929 DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 20030828	DATE (MM/DD/YY): 9/20/17	RECEIVING BODY OF WATER: St. Johns R
REMARKS:	COUNTY: Dukes	LOCATION: Miller Creek @ Ben Ben		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>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>4</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 <u>4</u> 3 2 1
Water Velocity <u>12</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 <u>12</u> 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>14</u> Primary Score <u>38</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 <u>14</u> 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>7</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 <u>7</u> 6	5 4 3 2 1
Bank Stability Right Bank <u>7</u> Left Bank <u>7</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>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 3 2 1
Riparian Zone Vegetation Quality Right Bank <u>4</u> Left Bank <u>4</u> Secondary Score <u>43</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 <u>4</u>	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

81

TOTAL SCORE

Date: 9/20/17	Analyst: Brian Davis	Signature: <i>B. Davis</i>
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21FLA LATITUDE 30.3027
 COUNTY Duval STORET # 20030828 LONGITUDE 81.6280
 DATE 9-20-2017 TIME 1050 SAMPLING AGENCY FDEP
 SITE NAME Miller Creek @ Beach Blvd
 FIELD ID/NAME _____ RECEIVING BODY OF WATER St. Johns River

RIPARIAN ZONE / STREAM FEATURES

Meter ID: YSI #4

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

Forest/Natural 10 Silviculture _____ Field/Pasture _____ Agricultural 40 Residential 50 Commercial _____ Industry _____ Other (Specify) _____

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: ~14m Right Bank: ~15m

Hydrologic Modification Score (per FT 3101) _____

High Water Mark: 1 + 0.4 = 1.4
 (m) (above present water level) (present depth) (above bed)

Artificially Impounded

☐ Yes ☒ No

Artificially ☐ No

☐ Mostly recovered, more sinuous

Channelized: ☒ Some recovery ☐ Recent, severe

Canopy Cover %

☐ Open

☒ Heavily Shaded

☐ Lightly Shaded (11-45%)

☐ Moderate Shaded (46-80%)

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

3 m wide

0.2 m/s 0.6 m/s

0.6 m deep 0.6 m deep 0.6 m deep

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

INVERT PERI
 % # Times # Times
 Coverage Sampled Sampled

Woody Debris (Snags) 1.6 _____

Undercut Banks / Roots 0.2 _____

Leaf Packs or Mat 1.0 _____

Aquatic Vegetation 0.3 _____

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:								<u>0.65</u>
Mid:								
Bottom	<u>0.3</u>	<u>25.1</u>	<u>7.24</u>	<u>6.3</u>	<u>76.5</u>	<u>378</u>	<u>26.5</u>	<u>0.6</u>

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

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

Water Sample Taken? ☒ Yes ☐ No

Sample Preserved? ☒ Yes ☐ No

Lot Number: 7093010 Exp: 4/18

Algae Sample Taken? ☐ Yes ☒ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: _____ Exp: _____

Water Surface Oils Normal ☐ Sheen ☐
 Globs ☐ Slick ☐ Other ☒ Occasional

Color Tannic ☒ Green (Algae) ☐
 Clear ☐ Other (Specify) Cloudy yellowish

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:

(AK)

77438

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

 Site: Miller Crk @ Beach Blvd County: Duval Date: 9-20-2017 Investigators: B. Davis / A. Kalmbacher

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	N				2	N		
	3	X				3	N		
	4					4	X		
	5			96		5	X		94
	6					6	X		
	7					7	X		
	8					8	X		
	9					9	X		
10	1	N			70	1	N		
	2	X				2			
	3					3			
	4					4			
	5			96		5			90
	6					6			
	7					7			
	8	X				8			
	9	N				9			
20	1	N			80	1	N		
	2	N				2			
	3	X				3			
	4					4			
	5			92		5			95
	6					6	N		
	7					7	X		
	8	N				8	X		
	9	N				9	N		
30	1	N			90	1	N		
	2	N				2	N		
	3					3	N		
	4					4	N		
	5			95		5	N		94
	6					6	X		
	7					7	X		
	8					8	X		
	9	N				9	N		
40	1	N			100	1	N		
	2	N				2	N		
	3	X				3	N		
	4					4	N		
	5			95		5	N		96
	6					6	N		
	7					7	N		
	8					8	N		
	9	N				9	N		
50	1	N				1	N		
	2	X				2			
	3					3			
	4					4			
	5			92		5			
	6					6			
	7					7			
	8					8			
	9	N				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: 20030828
 Secchi depth 0.45
 Estimated?

 # 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 N/A
 Habitat Assessment ✓
 SCI/Biorecon
 Water sample ✓
 RQ-2017-09-25-17

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

77938
FIELD SHEET

Waterbody: Miller Creek @ Beach Blvd

Date: 9-20-17 County:

Duval

Storet Number.	20030828
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Analyst: B. Davis / A. Kalmbacher

Signature: Kal-hach her

Comments: Post Hurricane Irma - lots of debris and trash

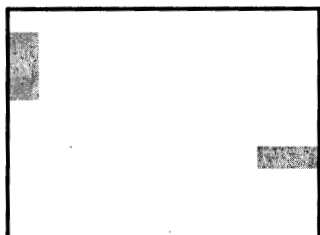
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, 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	
Alternanthera philoxeroides												Micranthemum glomeratum											
Bacopa caroliniana												Micranthemum umbrosum											
Bacopa monnieri												Myriophyllum aquaticum											
Bidens mitis												Najas guadelupensis											
Boehmeria cylindrica												Nuphar luteum											
Centella asiatica												Orontium aquaticum											
Ceratophyllum demersum												Panicum hemitomon											
Chara												Panicum repens											
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides											
Colocasia esculenta												Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides											
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontederia cordata											
Diodia virginiana												Potamogeton illinoensis											
Eichhornia crassipes												Ruellia simplex											
Eleocharis (wispy viviparous)												Sacciolepis striata											
Hydrilla verticillata												Sagittaria kurziana											
Hydrocotyle												Sagittaria lancifolia											
Hygrophila polysperma												Sagittaria latifolia											
Hymenocallis												Salvinia minima											
Lachnanthes caroliniana												Samolus parviflora											
Landoltia punctata												Saururus cernuus											
Lemna												Sparganium americanum											
Limnophila sessiflora												Typha											
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
Ludwigia peruviana																							
Ludwigia repens																							
Luziola fluitans																							

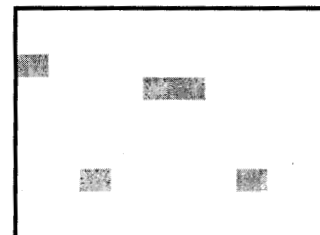
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

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

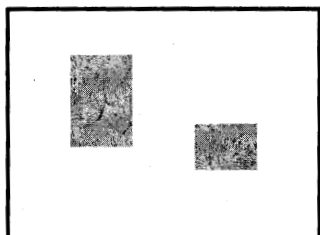
5% Macrophyte Coverage



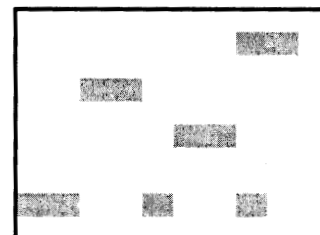
5% Macrophyte Coverage



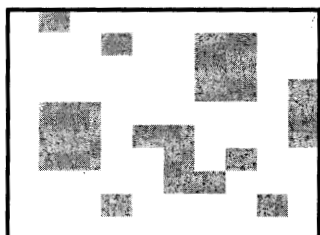
10% Macrophyte Coverage



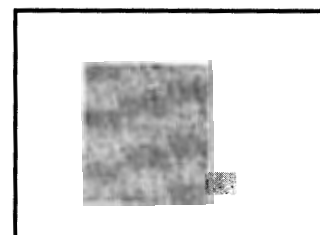
10% Macrophyte Coverage



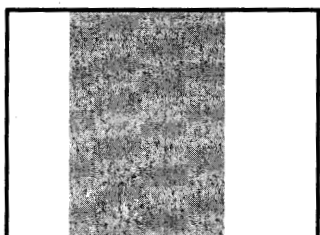
25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage

