Field ID: G2NE0836 04272017

Miller Creek @ Beach Blvd STORET 20030828

F ENVIRONMENTAL PROTECTION
RING PROGRAM FIELD SHEET

March 2017

Data Qualified? Yes / No

Date: 4/27/17 (mm/dd/yyyy)

WBID: 2287 Latitude: 30.30304 (Decimal Degrees)

County: Duval RQ - 2017-04-24-28 ORG ID: 21FLA Longitude: 81.62812 (Decimal Degrees)

Receiving Body of Water: _____ Field ID: See Label

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
B. Vi	✓		✓		
Pat O'Connor		✓		✓	✓

Sampling Equipment

☑ Sample Container ☐ Van Dorn ☐ Pole
☐ Carboy ☐ Syringe
☐ Dipper ☐ Other _____
Equipment ID OrthoKit # 2

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# Quanta

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	910	0.1	0.2	5.85	66.6	7.22	0.18	VOB (S)	372	21.37
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 ☐ H_2SO_4			☑ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO_3			☐ <2
Filtered Nutrients	☑ W-PO4-F ☑ Field Filtered 0.45 µm 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			

Place Preservation Checker(s) Here

Contains 1:1 Sulfuric Acid SA-6302030 EXP: 10/28/17 Warning! See SDS

Notes:

Place Label Here (If Available)

Signature: B. Vi Date: 4/27/17

Field Parameters Entered into LIMS: JH 4/28/17 (Initials/Date) Field Parameters QC in LIMS: _____ (Initials/Date)

Date Migrated to STORET: _____ (Initials/Date) Field Sheets Scanned/Saved: _____ (Initials/Date)

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

Waterbody: Miller Cr @ Beech Blvd | Date: 4/27/17 | County: Duval | Storet Number: 20030826

Analyst: Brian Davis | Signature: Brian Davis

Comments: < 2m Vegetation in 100m Stretch.

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.

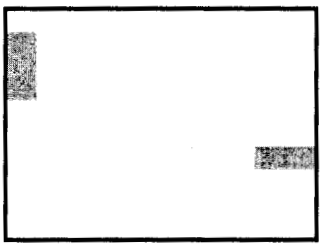
HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
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											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											

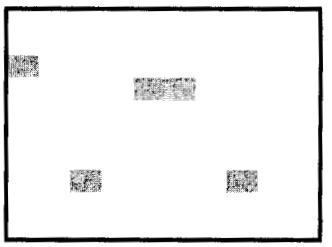
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

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

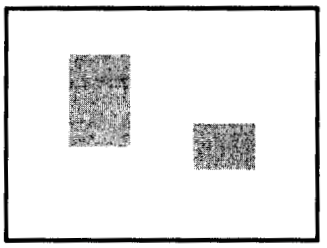
5% Macrophyte Coverage



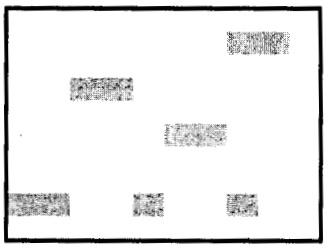
5% Macrophyte Coverage



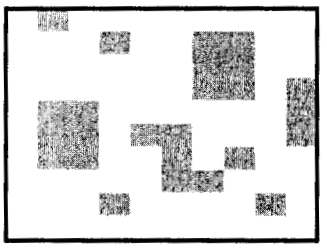
10% Macrophyte Coverage



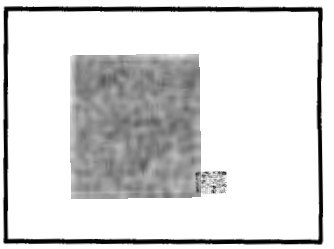
10% Macrophyte Coverage



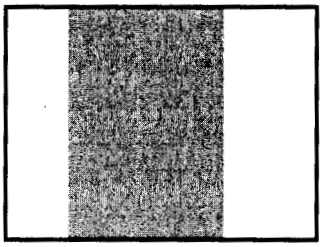
25% Macrophyte Coverage



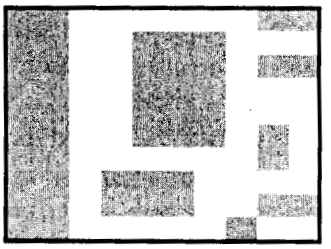
25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



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

77561 77561

SAMPLE ID _____ ORG ID 21 FLA _____ LATITUDE 30 18 09.7

COUNTY DUVAL STORET # 20030828 LONGITUDE 81 37 41.037

DATE 04-27-17 TIME 0910 SAMPLING AGENCY NE ROC DEAR

SITE NAME Muller ck @ Beach BLVD

FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

Meter ID: QUANTA #1

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

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
15				60	25		

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): _____

High Water Mark: 0.6 (m) + 0.2 (above present water level) = 0.8 (above bed)

Artificially Impounded ☐ Yes ☒ No

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

m wide

	m/s	0.1	m/s	m/s
	m deep	0.2	m deep	m deep

Artificially Channelized : ☐ No ☐ Mostly recovered, more sinuous ☒ 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

	None	Slight	Moderate	Severe
Sand Smothering:	☐	☐	☒	☐
Silt Smothering:	☐	☐	☒	☐
Algae Smothering:	☐	☒	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☑ RPS ☑ LVS ☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	3		
Undercut Banks / Roots			
Leaf Packs or Mat	1		
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 :								0.25
Mid:	0.1	21.57	7.22	5.85	66.6	372	0.18	TOTAL DEPTH
Bottom								0.2

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 ☐ No

Sample Preserved? ☐ Yes ☐ No

Lot Number: 630230 Exp: 10-2811

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:	☐	☐	☐	☐

AMBIENT FIELD CONDITIONS / NOTES:

TIDAL

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 : _____

0 77561

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site:	County:	Date:	Investigators:
Miller @ Beach	Duval	4/27/17	B Davis P O'Connor

STORET Station Number: 20010828

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2			
	3			
	4			
	5			93
	6			
	7			
	8			
	9			
10	1	N		
	2			
	3			
	4	X		
	5	X		87
	6	X		
	7	N		
	8			
	9			
20	1	N		
	2			
	3			
	4			
	5			87
	6			
	7			
	8			
	9			
30	1	N		
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
40	1	N		
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
50	1	N		
	2			
	3			
	4			
	5			62
	6			
	7			
	8			
	9			

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

Secchi depth	0.8
Estimated?	

# points ranked 4-6	1
total points assessed	99
% points ranked 4-6	1

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

RQ-2017-04-24-28

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%.

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there is qualified data on this page.

Meter Quanta #1 RQ- 2017-04-24-28 Project LSJR S.S.D.

Notes: (1) Numbers ≤4, are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
(2) Always wait for meter to stabilize before recording any readings.
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site Lab

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 02-09-2017

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	PO Com	04-27-17	0738	23.0	8.57	8.57	100.0	—	—	Pass	LAB
ICV	V	V	0740	23.1	8.56	8.54	98.1	—	—	Pass	LAB
CCV	PO Com	04-27-17	1550	25.4	8.20	8.44	102.8	—	—	Pass	LAB
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.
DO Acceptance criteria from Table ±0.3 mg/L. **Rapid-Pulse Sensors:** DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.
Optical: DO gain range 0.85 to 1.15; DO charge N/A. **Steady-state & Galvanic Sensors:** DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	PO Com	04-27-17	0725	161101A	11/2017	1000	1000	Pass	LAB
ICV	V	V	0727	161101B	05/2017	100	99	PASS	LAB
CCV	PO Com	04-27-17		16401B	05/2017	100	100	Pass	LAB
CCV									

Report specific conductance as a whole number with no decimal figure. Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	PO Com	04-27-17	0705	2702547	02-2019	7.0	7.00	—	Pass	LAB
Calibr.	V	V	0710	2610F42	10-2018	4.0	4.00	—	Pass	LAB
Calibr.			0720	2611998	05-2018	10.0	9.93	—	Pass	LAB
ICV	PO Com	04-27-17	1600	2702547	02-2019	7.00	7.1	—	Pass	LAB
CCV										
CCV										

Report pH with one decimal place; pH Acceptance criteria ±0.2 SU; mV pH7 Range 0±50; mV pH 4 Range +180±50;
mV pH 10 Range -180±50; Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly) Date of Last Depth Verification N/A

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air				0.000			

ICV acceptance criteria ±5 % or ±0.05m, whichever is greater

Scanned 5/2/17

77561

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

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
DEAR NE ROC		20030828	04-27-17	Arlington River
REMARKS:	COUNTY:	LOCATION:		FIELD ID/NAME:
TIDAL	DUVAL	Miller Cr @ Beach Blvd		

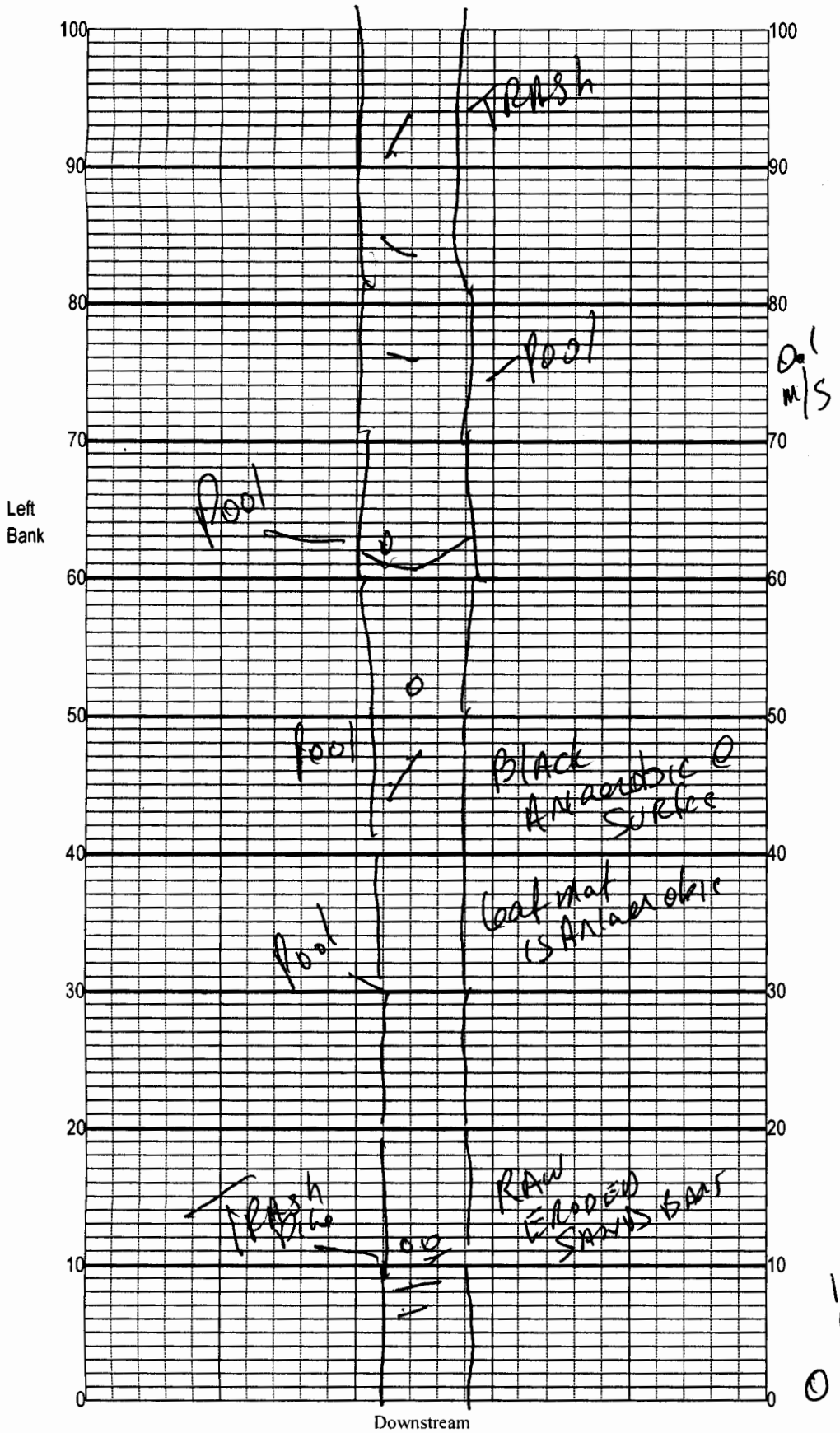
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 6	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. 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 4	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 10	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 11 Primary Score 31	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** 11	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 4 Left Bank 4	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 8 Left Bank 8	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 5 Left Bank 5 Secondary Score 45	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

76 **TOTAL SCORE**

Date:	Analyst:	Signature:
04-27-17	P O'Connor	Patricia O'Connor

3m wide

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).

Location: Miller Beach

Date: 04-27-17

Sampler: B DAVIS, POEA

100 m: Latitude		
Longitude		
0 m: Latitude		
Longitude		

Substrates: Code key, draw proportionate habitat abundance.		%
/	Snags	4
Y	Roots/undercut banks	0
O	Leaf Packs (or mats)	1
V	Aquatic Macrophytes	0
Pool	Pools	total # observed = 3
		# range expected = 3

Average width 3 m

Average depth 0.2 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

$1 m^2$ SNAG = ~4% SNAG

$4 m^2$ LEAF = ~1% Leaf

0.1 m/s