



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

Data Qualified?

Yes / No

April 2018

WIN Station Name:

Pirate Canal Middle

Date:

04/16/2018

WIN/ Field ID:

G2SD0030

WBID:

2082A

Latitude:

26.81497

County:

Charlotte

ORG ID:

Longitude:

-81.99251

Receiving Body of Water:

Charlotte Harbor

RQ-2018-

04-16-54

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Nicole Reistad						
Maryann Dugan						
Chase Conley						

Sampling Equipment	
☒ Sample Container	☐ Van Dorn ☐ Pole
☐ Carboy	☒ Syringe
☐ Dipper	☐ Other
Depth Measured with <u>Secchi disk</u>	
Equipment ID <u>33128</u>	

Collection Method	
☒ Wading	☐ Canoe/Kayak
☒ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Water Level: Dry/ Pooled/ Low/ Normal/ High/ Flooded Meter ID# 9 Matrix: Fresh/ Marine/ DI

Photos: Yes/ No Flow: No Flow/ Intestinal/ Flowing/ NA Tide: Rising/ Falling/ Slack/ NA Tide Times: High/ Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTH)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1025	0.2	0.1	0.25	4.6	52	6.9	/	585	21.5
CEN										

Biological Samples Collected: None HA NR RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: HA-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	SA7341020	12/07/18	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHL SUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHIC / 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	☐ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☐ Ice ☐ Other			

Notes: SBIO visit 78751 - no obsepar

Field ID/WIN ID



G2SD0030

Location



Pirate Canal Middle

Signature:

Nicole Reistad

Date:

04/16/2018

Enter Field Parameters, Verify Station ID in LIMS DMT:

QC Station ID, Field Parameters in LIMS DMT:

Scan/Save Field Sheets

Migrate Data to WIN:

Verify Data in WIN:

HA ID: 15339

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

Field ID/WIN ID

Location



G2SD0030



Pirate Canal Middle

STORET STATION NUMBER:

DATE (MM/DD/YY):

RECEIVING BODY OF WATER:

G2SD0030

04/16/2018

Charlotte Harbor

LOCATION:

PIRATE Canal

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>1</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 <u>1</u>
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 <u>1</u>
Water Velocity <u>1</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 <u>1</u>
Habitat Smothering <u>1</u> ----- Primary Score <u>4</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 <u>1</u>
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>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 <u>2</u> 1
Bank Stability Right Bank <u>6</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. <u>RB 2B 3B</u> 8 <u>7</u> <u>6</u> <u>RB</u>	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>8</u> Left Bank <u>10</u>	Width of vegetation greater than 18 m <u>LB</u> <u>10</u> 9	Width of vegetation >12 to 18m <u>RB</u> <u>8</u> 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>9</u> Left Bank <u>9</u> ----- Secondary Score <u>51</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 <u>9</u> <u>LB</u> <u>RB</u>	>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

55

TOTAL SCORE

Date:

04/16/2018

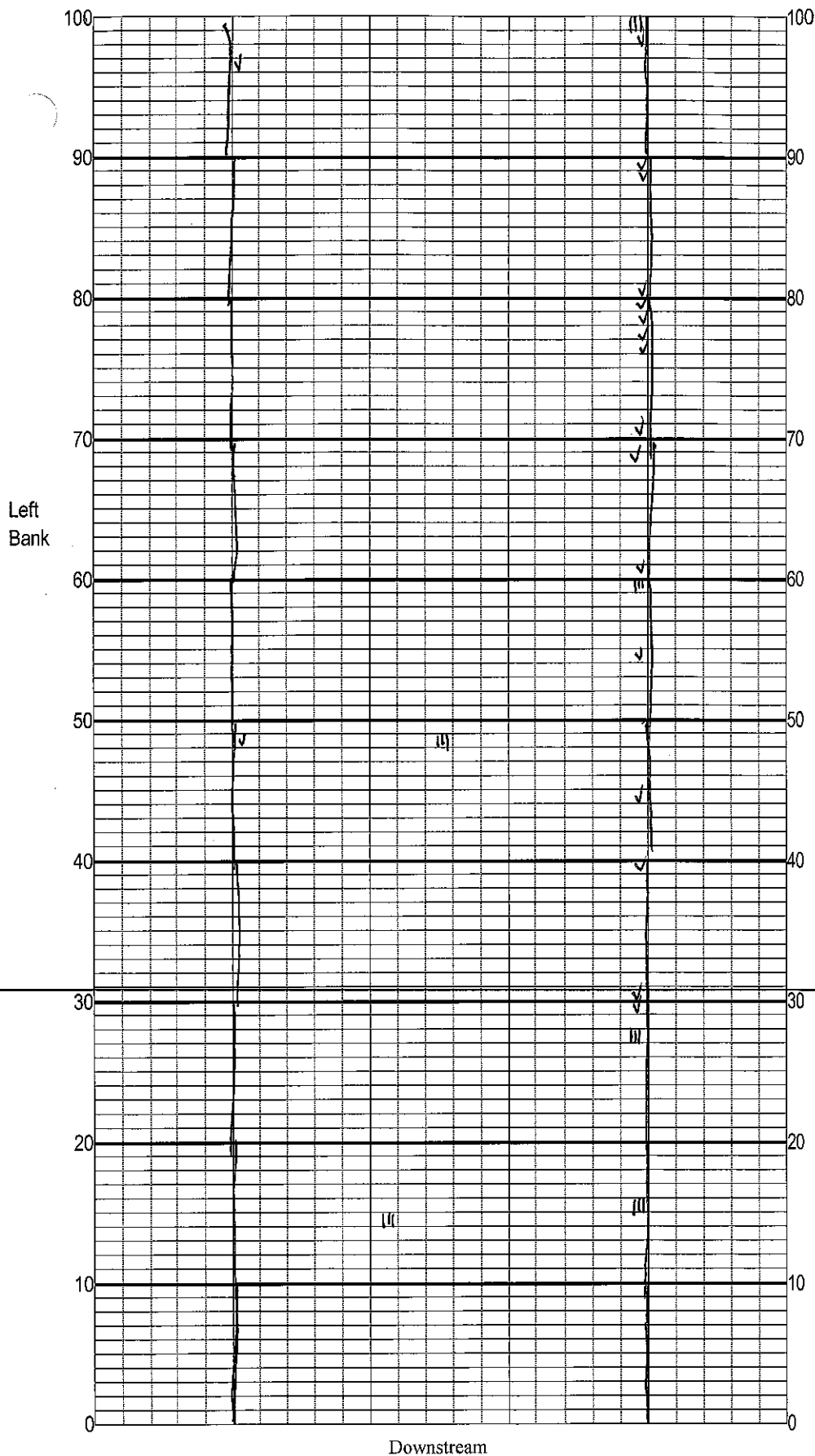
Analyst:

MD, NR, LC

Signature:

Maryann Bogn

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: PIRATE CANAL

Date: 04/16/2018

Sampler: MD, NR, CC

100 m: Latitude ~~26.8150780~~ 26.8150780
Longitude -81.9917909

0 m: Latitude 26.8148045
Longitude -81.9927850

Substrates: Code key, draw proportionate habitat abundance. %

☒ Snags 0.17 1/2 M

☐ Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☒ Aquatic Macrophytes 0.22 1/3 M

☐ _____

☐ _____

☐ Pools total # observed = _____
range expected = _____

Average width 3 m
Average depth 0.3 m

Velocity measured at 100 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:

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

SAMPLE ID _____ ORG ID _____ LATITUDE 26.814.97
 COUNTY Charlotte STORET # _____ LONGITUDE -81.99251
 DATE 04/16/2018 TIME 1025 SAMPLING AGENCY S ROL
 NAME Pierre Land Middle
 FIELD ID/NAME 6250036 RECEIVING BODY OF WATER Charlotte Harbor

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) ☐ <u>90</u> <u>10</u>							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 <u>3</u> m wide <u>0.01</u> m/s <u>0.01</u> m/s <u>0.01</u> m/s <u>0.2</u> m deep <u>0.4</u> m deep <u>0.02</u> m deep	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank : <u>18+M</u> Right Bank : <u>18+M</u> Hydrologic Modification Score (per FT 3101) ☒								
High Water Mark: <u>1</u> + <u>0.3</u> = <u>1.3</u> (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 ☒ 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 ☒		
IBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon % Coverage INVERT # Times Sampled PERI # Times Sampled Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ 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 : <u>0.1</u> <u>21.5</u> <u>6.9</u> <u>4.6</u> <u>52</u> <u>585</u> <u>0.2</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☒ VOB Bottom ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: <u>9</u> TOTAL DEPTH <u>0.2</u>					
			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☒ Globbs ☐ 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 ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ n/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>Canal</u>					
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.								

SAMPLING TEAM

SIGNATURE :

DATE :

MD, NR, CC

[Signature]

04/16/2018

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Pirate Canal</u>					County: <u>Charles</u>		Date: <u>04/16/2018</u>		Investigators: <u>MD, NR, CC</u>	
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	0			60	1	0			
	2					2				
	3					3				
	4					4				
	5					5				15
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				
	2					2				
	3					3				
	4					4				
	5					5				20
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5					5				12
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5					5				0
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5					5				0
	6					6				
	7					7				
	8					8				
	9					9				
50	1					1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					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:
6280030

Secchi depth 0.55
Estimated?

points ranked 4-6
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 2018-04-16-54

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

Waterbody: <u>PIRATE Canal</u>	Date: <u>27/10/18</u>	County: <u>Charlotte</u>	Store Number: <u>52500030</u>
Analyst: <u>MD, NR, CC</u>	Signature: <u>[Signature]</u>		
Comments:			

[illegible]

Lvs < 2sq.M veg

Revision Date: March 1, 2014