



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?

Yes / No

WIN Station Name: Drain to Hudson Bayou @ Shade Ave

Date: 09/20/2018

WIN/ Field ID: G3SD0134

WBID: 1953A

Latitude: 27.326389

(mm/dd/yyyy)

County: Sarasota

ORG ID:

Longitude: -82.521825

(Decimal Degrees)

Receiving Body of Water: Sarasota Bay

RQ-2018- 09-17-66

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
Maryann Dugan						X	X	X	X	X	☒ Sample Container	☐ Van Dorn	☐ Pole		
Nicole Reistad						X	X	X	X	X	☐ Carboy	☒ Syringe			
											☐ Dipper	☐ Other			
											Depth Measured with <u>Secchi</u>				
											Equipment ID <u>3312 A</u>				
											Collection Method				
											☒ Wading	☐ Canoe/Kayak			
											☐ From Shore	☐ Electric Motor			
											☐ Other	☐ Gasoline Motor			
Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded						Meter ID# <u>7</u>			Matrix: Fresh / Marine / DI						
Photos: Yes/ No		Flow: No Flow / Intestinal / <u>Flowing</u> / NA		Tide: Rising/ Falling/ Slack/ <u>NA</u>		Tide Times: High <u>NA</u> Low <u>NA</u>									
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (umhos/cm)	Temp. (C°)					
EST	1120	0.2	0.1	0.2	5.53	70.0	7.16	0.26	534	27.47					
CEN															
Biological Samples Collected: None <u>HA</u> SCI <u>RPS</u> Algae ID <u>LVS</u> LVI Other:															
SBIO ID Numbers: SBIO-ID: <u>78917</u> HA-ID: <u>15409</u> RPS-ID: <u>9103</u> Macrophyte-ID: <u>11089</u> 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		<u>SAB1020</u>		<u>04/1/19</u>	☒ <2				
Metals		☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO3					☐ <2				
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 um Filter				☒ Ice									
Chlorophyll		☒ CHL-SUITE-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 ☐ 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				☐ Ice									
		☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA				☐ Other									
Notes: SBIO 10/09/18 <u>WPR</u>															
Signature: <u>Maryann Dugan</u>						Date: <u>09/20/2018</u>									
Enter Field Parameters, Verify Station ID In LIMS DMT:						QC Station ID, Field Parameters In LIMS DMT:									
Scan/Save Field Sheets <u>WPR 10/09/18</u>						Verify Data In WIN:									

Field ID/WIN ID



G3SD0134

Location

DrainToHudson @ShadeAve

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

PUT STICKER UP ^ HERE		STORET STATION NUMBER: <u>G3SD0134</u>	DATE (MM/DD/YYYY): <u>09/20/18</u>	SAMPLING AGENCY: FDEP South ROC
FIELD ID/NAME: <u>G3SD0134</u>	COUNTY: <u>Sarasota</u>	LOCATION: <u>Drain to Hudson Bayou</u>	RECEIVING BODY OF WATER: <u>Sarasota Bay</u>	

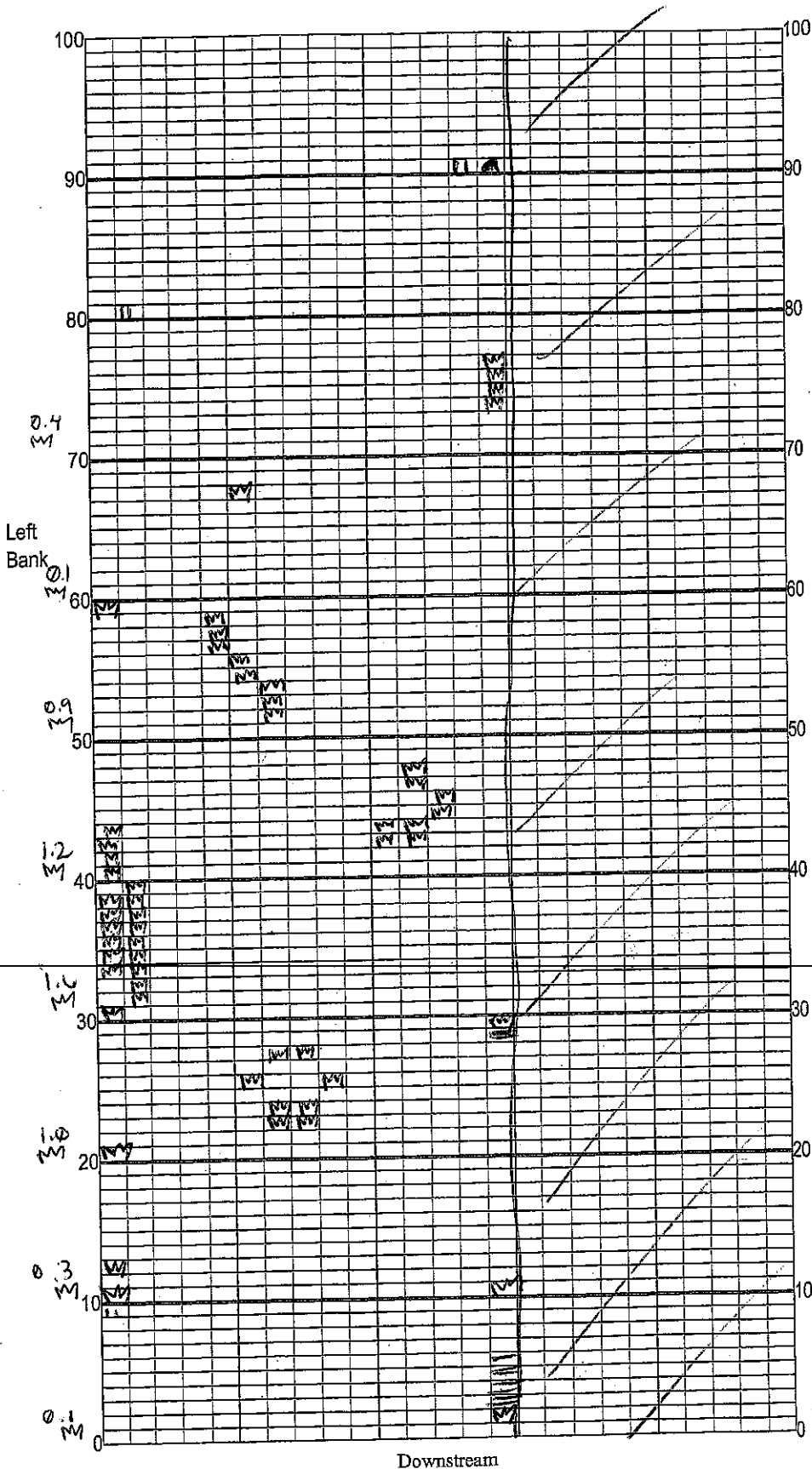
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>4</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 <u>4</u> 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>20</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 <u>20</u> 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>2</u> ----- Primary Score <u>30</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 <u>2</u> 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>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 2 1
Bank Stability	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.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank <u>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 <u>4</u>	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities
Right Bank <u>1</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	3 <u>2</u> <u>1</u>
Riparian Zone Vegetation Quality	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.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions).
Right Bank <u>3</u> Left Bank <u>2</u> ----- Secondary Score <u>19</u>	10 9	8 7 6	5 4	<u>3</u> <u>2</u> 1

49

TOTAL SCORE

Date: <u>09/20/2018</u>	Analyst: <u>MARYANN DUGAN, Nicole Reistad</u>	Signature: <u>Maryann Dugan</u>
----------------------------	--	------------------------------------

DEP-SOP-001/01 Form FD 9000-4
Stream/River Habitat Sketch Sheet



Location: Drain to Hudson Bayou

Date: 09/20/2016

Sampler: MARYANN DUGAN

100 m: Latitude 27.3263301
Longitude -82.5205934

0 m: Latitude 27.326333
Longitude -82.521584

Substrates: Code key, draw proportionate habitat abundance. % m^2

	Snags	<u>0.13</u>	<u>0.2</u>
	Roots/undercut banks	<u>0.33</u>	<u>0.5</u>
	Leaf Packs (or mats)	<u>0</u>	<u>0</u>
	Aquatic Macrophytes	<u>3.73</u>	<u>5.6</u>
	<u>ROCKS</u>	<u>0.07</u>	<u>0.1</u>
	Pools	total # observed = <u>0</u> # range expected = <u>5-6</u>	

Average width 1.5 m
Average depth 0.1 m

Velocity measured at 0 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:

1 Box = .1 m²

38/m velocity

4.26 M² AVAILABLE HABITAT

G3SD0134

Storet Number: ^ put sticker here

Date: 09/10/18

County: Sarasota

Waterbody: Drain to

Analyst: Maryann Dugan, Nicole Reistad

Signature:

Hudson Bayou

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. **bold is exotic invasive**

HERBACEOUS SPECIES	Meter Mark										Specime n collected (check)	HERBACEOUS SPECIES	Meter Mark										Specime n 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	X	X		X								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 sp.												Panicum repens											
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides											
Colocasia esculenta	X	X	X	X	X	X	X	X	X	X		Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides											
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontederia cordata			X								
Cyperus												Potamogeton illinoensis											
Diodia virginiana												Ruellia simplex											
Eichhornia crassipes												Sacciolepis striata											
Eleocharis (wispy viviparous)												Sagittaria kurziana											
Hydrilla verticillata	X	X	X	X	X	X	X	X	X	X		Sagittaria lancifolia											
Hydrocotyle sp.	X	X	X	X	X	X	X	X	X	X		Sagittaria latifolia											
Hygrophila polysperma												Salvinia minima											
Hymenachne amplexicaulis												Samolus parviflora											
Hymenocallis												Saururus cernuus											
Lachnanthes caroliniana												Sparganium americanum											
Landoltia punctata												Sphagneticola trilobata (Wedelia)	X				X						
Lemna sp.												Typha sp.											
Limnophila sessiflora												Urochloa mutica (Brachiaria)	X	X									
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
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	X	X						X	X	X													
>5 and ≤10% Macrophyte Coverage			X		X	X	X																
>10 and ≤25% Macrophyte Coverage																							
>25 and ≤50% Macrophyte Coverage																							
> 50% Macrophyte Coverage																							

G3SD0134

Form FD 9000-25

FDEP Rapid Periphyton Survey (DEP SOP FS 7230)

Revised 6/12/12

Site: Drain to Hudson

County: Sarasota

Date: 09/20/2018

Investigators: Nicola Reistad, Maryann Dugan

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N - 6)	Canopy Cover
0	1	N		40	1	N		80	1	N	
	2				2				2		
	3				3				3		
	4				4				4		
	5		92		5		52		5		89
	6				6				6		
	7				7				7		
	8				8				8		
	9	X			9	X			9	X	
10	1	N		50	1	N		90	1	N	
	2				2				2		
	3				3				3		
	4				4				4		
	5		83		5		85		5		92
	6				6				6		
	7				7				7		
	8				8				8		
	9	X			9	X			9	X	
20	1	N		60	1	N		100	1	N	
	2				2				2		
	3				3				3		
	4				4				4		
	5		96		5		84		5		92
	6				6				6		
	7				7				7		
	8				8				8		
	9	X			9	X			9	X	
30	1	N		70	1	N			1	N	
	2				2				2		
	3				3				3		
	4				4				4		
	5		70		5		95		5		
	6				6				6		
	7				7				7		
	8				8				8		
	9	X			9	X			9	X	

points ranked 4-6 0
total points assessed 99
% points ranked 4-6 0

Secchi depth: 0.25

Check accompanying data collected at same site/date.

Algal mat sample
Habitat Assessment ☒
Linear Veg. Survey ☒
SCI/Biorecon (circle 1)
Water sample ☒
RQ: 2018-09-17-66

Algal Thickness Rank

N	rough, no algae; slimy; algae to 1 mm
3	>1mm - 6 mm
4	>6 - 20 mm
5	>20 mm - 10 cm
6	>10 cm

(This fits with paper margins and orientation.)

Record "N" for points deeper than the Secchi depth; algae are presumed absent. Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. Note if thickness estimated for deep points which can be seen but not reached.

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 an 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%.

User Defined Space.
Location, directions,
samplers, whatever...

ASBESTOS
Field ID
STORET
1234567890123456

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

SAMPLE ID _____ ORG ID _____ LATITUDE 27.326389
 COUNTY Sarasota STORET # _____ LONGITUDE -82.521825
 DATE 09/20/2018 TIME 1120 SAMPLING AGENCY ADP - SROC
 SITE NAME Drain to Hudson Bayou @ Shade Ave
 FIELD ID/NAME G38D0134 RECEIVING BODY OF WATER Sarasota Bay

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>80</u> <u>20</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) <u>1.5</u> Depth (m)/Velocity (m/sec) <u>0.33</u> m/s <u>0.1</u> m/s			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>5</u> Right Bank: <u>5</u>						Hydrologic Modification Score (per FT 3101)			
High Water Mark: <u>0.2</u> + <u>0.2</u> = <u>0.4</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 ☐		
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☐ RPS ☐ LVS ☐ LCI ☐ BioRecon % Coverage ☐ Invert ☐ Peri # Times Sampled ☐ # Times Sampled			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: <u>0.2</u> <u>27.47</u> <u>7.16</u> <u>5.53</u> <u>70.0</u> <u>536</u> <u>0.24</u> <u>0.2</u> Mid: ☒ VOB Bottom: Meter ID: <u>7</u> TOTAL DEPTH <u>0.2</u>					
Woody Debris (Snags) <u>0.13</u> Undercut Banks / Roots <u>0.33</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>3.3</u> Rock or Shell Rubble <u>0.07</u> Sand Mud / Muck / Silt Other Other			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: <u>SAB101070</u> Exp: <u>04/11/19</u>			Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify)			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

Nicole Reistad, Maryann Dugan

SIGNATURE:

Nicole Reistad

DATE:

09/20/2018