



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified?

Yes / No

WIN Station Name: Bee Branch @ Loblolly Bay Rd

Date: 12/10/2018

(mm/dd/yyyy)

WIN/ Field ID: G3SD0085

WBID: 3235E

Latitude: 26.827612

(Decimal Degrees)

County: Glades

ORG ID:

Longitude: -81.48868

(Decimal Degrees)

Receiving Body of Water: Caloosahatchee River

RQ-2018- 10-29-76

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
Nicole Reistad John Barrington Kirby Wolke						☒	☒	☒	☒	☒	☒ Sample Container	☐ Van Dorn	☐ Pole		
											☐ Carboy	☒ Syringe			
											☐ Dipper	☐ Other			
											Depth Measured with <u>Secchi disk</u>				
Equipment ID <u>3312A</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>PRO-NONE</u>			Matrix: <u>Fresh</u> / Marine / DI						
Photos: Yes / <u>No</u> / Flow: No Flow / Intestinal / <u>(Flowing)</u> / NA						Tide: Rising/ Falling/ Slack/ <u>(NA)</u>			Tide Times: High Low						
Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (µmhos/cm)	Temp. (C°)					
EST	0930	0.65	0.3	0.65	3.94	40.6	6.54	0.18	365	19.0					
CEN					NR		NR								
Biological Samples Collected: None <u>(HA)</u> SCI <u>(RPS)</u> Algae ID <u>(LVS)</u> LVI Other:															
SBIO ID Numbers: SBIO-ID: <u>79062</u> HA-ID: <u>15513</u> RPS-ID: <u>9162</u> Macrophyte-ID: <u>11142</u> LIMS#: <u>2047968</u>															
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>SA8274050</u>		<u>10/01/19</u>		☒ <2		
Metals		☐ W-ICPMS ☐ W-ICP					☐ Ice ☐ HNO3						☐ <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		☒ 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 ☐ W-E8321-MS ☐ W-CARB-AA					☐ Ice ☐ Other								

Notes:

Field ID/WIN ID



G3SD0085

Location

Bee Branch @LoblollyBay

Signature:

Date:

12/10/2018

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:

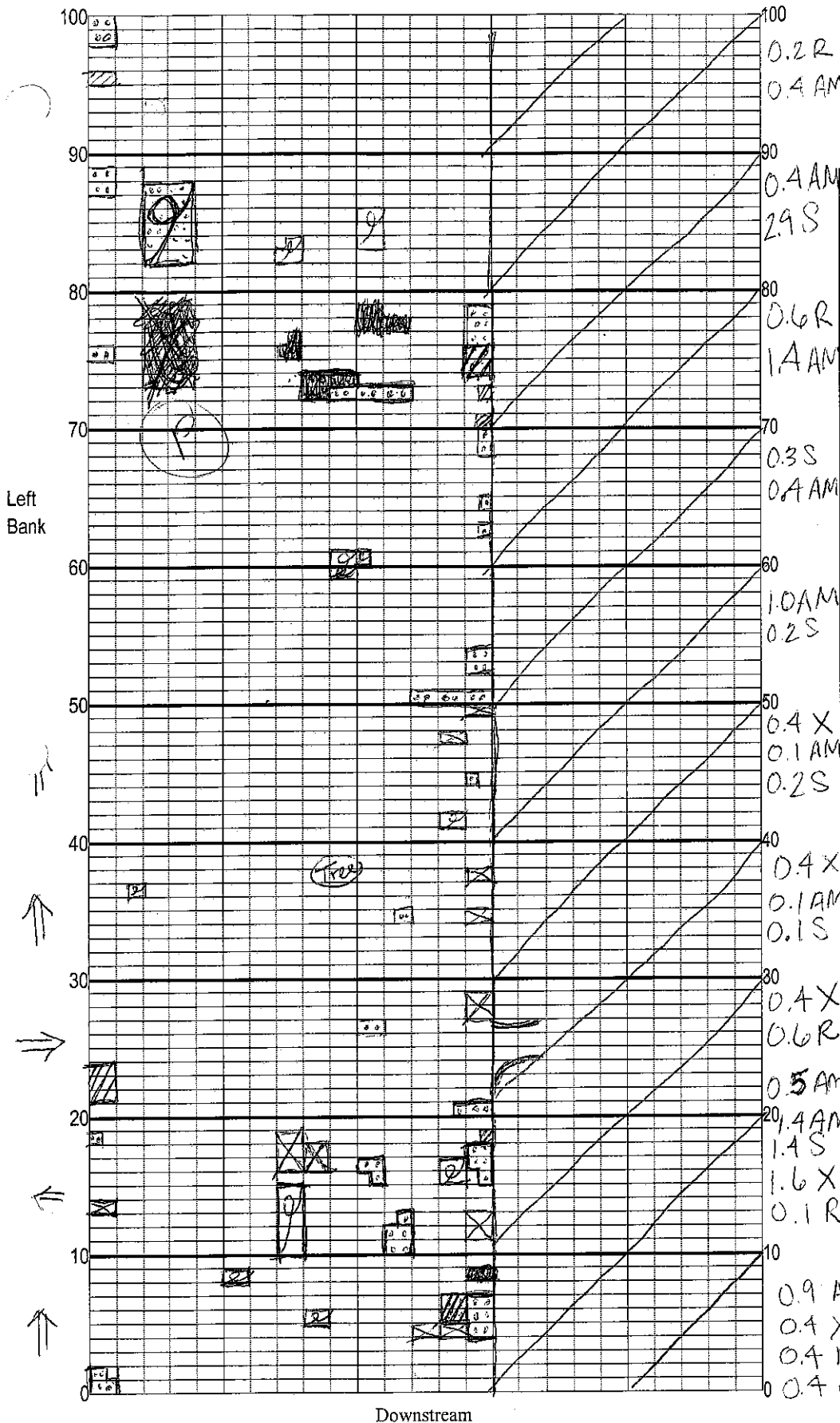
Verify Data in WIN:

(Initials/Date)

(Initials/Date)

(Initials/Date)

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



Location: Bee Branch
 Date: 12/10/2018
 Sampler: Nicole Reistad

100 m: Latitude 26.82656
 Longitude -81.48920
 0 m: Latitude 26.82640
 Longitude -81.48898

Substrates: Code key, draw proportionate habitat abundance. %

	Snags	<u>1.76</u>
	Roots/undercut banks	<u>0.63</u>
	Leaf Packs (or mats)	<u>1.06</u>
	Aquatic Macrophytes	<u>1.46</u>
	Rocks	<u>0</u>
	Pools	total # observed = <u>3</u> # range expected = <u>3-6</u>

Average width 3 m
 Average depth 0.4 m

Velocity measured at 0.59 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:

TOTALS
 5.3m² S
 1.9m² R
 3.2m² X
 4.4m² AM

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

100 = 1pm / 0.01
 50 = 4m / 0.01
 0 = 3m /

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

SAMPLING AGENCY: <u>7DEP- SOROC</u>		STORET STATION NUMBER: <u>G3SD0085</u>	DATE (MM/DD/YYYY): <u>12/10/18</u>	RECEIVING BODY OF WATER: <u>Caloosahatchee</u>
REMARKS: <u>FLOW TOO SLOW FOR SCI</u>	COUNTY: <u>Glades</u>	LOCATION: <u>Bee Branch @ Loblolly</u>	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>11</u>	20 19 18 17 16	15 14 13 12 11 <u>(11)</u>	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>5</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 <u>(5)</u> 4 3 2 1
Water Velocity <u>2</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 <u>(2)</u> 1
Habitat Smothering <u>NR</u> Primary Score <u>25</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 <u>(8)</u> 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 or straightening 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>NR</u>	20 19 18 17 <u>(16)</u>	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>9/10</u> Left Bank <u>9/10</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas. <u>NR</u> 10 <u>9</u>	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 woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>10</u> Left Bank <u>10</u>	Width of vegetation greater than 18 m <u>(10)</u> 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>7</u> Left Bank <u>7</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 <u>(7)</u> 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
Secondary Score <u>NR</u> <u>7068</u>				

93

TOTAL SCORE

Date: <u>12/10/2018</u>	Analyst: <u>Nicole Reistad,</u> <u>Kirby Wolfe,</u> <u>John Barrington</u>	Signature: <u>Nicole Reistad</u>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Bee Branch County: Glades Date: 12/10/18 Investigators: Kirby Wolfe, Nicole Reistad, John Barrington

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	V			60	1	N			
	2					2				
	3					3				
	4					4				
	5			72		5			54	
	6					6				
	7					7				
	8					8				
	9					9				
10	1	N			70	1	N			
	2					2				
	3					3				
	4					4				
	5			32		5			35	
	6					6				
	7					7				
	8					8				
	9					9				
20	1	N			80	1	N			
	2					2				
	3					3				
	4					4				
	5			70		5			32	
	6					6				
	7					7				
	8					8				
	9					9				
30	1	N			90	1	N			
	2					2				
	3					3				
	4					4				
	5			66		5			38	
	6					6				
	7					7				
	8					8				
	9					9				
40	1	N			100	1	N			
	2					2				
	3					3				
	4					4				
	5			51		5			21	
	6					6				
	7					7				
	8					8				
	9					9				
50	1	N				1	N			
	2					2				
	3					3				
	4					4				
	5			73		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:

Secchi depth 0.65
Estimated? N

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

Check accompanying data collected at same site/date:

Algal mat sample	
Linear Veg Survey	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	✓

RQ- 2018-10-29-76

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

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

Waterbody: BEE BRANCH

Date: 12/10/18

County: CLADES

Storet Number:

Analyst: JOHN BORRINGTON

Signature: [Signature]

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m² 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												Pontedaria 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								✓				MAYACA FLUITANS	D	D	✓	✓	✓	✓	✓	✓	✓		
Ludwigia repens		✓										TAXODIUM SP.	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Luziola fluitans																							

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

SAMPLE ID _____ ORG ID _____ LATITUDE 26.827612
COUNTY Glades STORET # _____ LONGITUDE -81.48868
DATE 12/10/2018 TIME 0930 SAMPLING AGENCY FDSP-SOROC
NAME Bee Branch @ Loblolly Bay Rd.
FIELD ID/NAME G3SD0085 RECEIVING BODY OF WATER Catoosabatchee River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>15</u> Silviculture <u>—</u> Field/Pasture <u>80</u> Agricultural <u>—</u> Residential <u>5</u> Commercial <u>—</u> Industry <u>—</u> Other (Specify) <u>—</u>								Landscape Development Intensity Index (LDI) <u> </u>	
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: <u>120</u> Right Bank: <u>120</u>				Hydrologic Modification Score (per FT 3101) <u> </u>				Typical Width (m) Depth (m)/Velocity (m/sec) Transect <u> </u> m wide <u> </u> m/s <u>0.01</u> m/s <u> </u> m/s	
High Water Mark: <u> </u> + <u>0.4</u> = <u> </u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No				<u>0.1</u> m deep <u>0.4</u> m deep <u>0.1</u> m deep	
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): <u> </u>			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			WATER QUALITY <table border="1"> <thead> <tr> <th></th> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top:</td> <td><u>0.3</u></td> <td><u>19.0</u></td> <td><u>6.54</u></td> <td><u>3.76</u></td> <td><u>40.6</u></td> <td><u>365</u></td> <td><u>0.18</u></td> <td><u>0.65</u></td> </tr> <tr> <td>Mid:</td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td>☒ VOB</td> </tr> <tr> <td>Bottom:</td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u> </u></td> <td><u>0.65</u></td> </tr> </tbody> </table>							Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:	<u>0.3</u>	<u>19.0</u>	<u>6.54</u>	<u>3.76</u>	<u>40.6</u>	<u>365</u>	<u>0.18</u>	<u>0.65</u>	Mid:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	☒ VOB	Bottom:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u>0.65</u>
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Woody Debris (Snags) <u> </u> <u> </u> <u> </u> Undercut Banks / Roots <u> </u> <u> </u> <u> </u> Leaf Packs or Mat <u> </u> <u> </u> <u> </u> Aquatic Vegetation <u> </u> <u> </u> <u> </u> Rock or Shell Rubble <u> </u> <u> </u> <u> </u> Sand <u> </u> <u> </u> <u> </u> Mud / Muck / Silt <u> </u> <u> </u> <u> </u> Other <u> </u> <u> </u> <u> </u> Other <u> </u> <u> </u> <u> </u>			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> </u> Exp: <u> </u>			Color Tannic ☒ Green (Algae) ☐ Clear ☒ Other (Specify) <u>NR</u>																																						
			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: <u> </u> Exp: <u> </u>			Clarity Clear ☒ Slightly Turbid ☒ NR Turbid ☐ Opaque ☐																																						
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☒ ☐ ☐ Aquatic Plants: ☐ ☐ ☒ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) <u> </u>																																									
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.																																												

SAMPLING TEAM
Nicole Reistad
SIGNATURE: Nicole Reistad **DATE:** 12/10/2018