FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified? Yes / No

WIN Station Name: Grassy Creek @ CR 621 E **Date:** 05/01/2019 (mm/dd/yyyy)

WIN/ Field ID: G4SD0165 **WBID:** 1932 **Latitude:** 27.30346 (Decimal Degrees)

County: Hendry **ORG ID:** 21FLFTM **Longitude:** -81.34731 (Decimal Degrees)

Receiving Body of Water: Lake Huntley **RQ-2019-** 04-29-20

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Nicole Reistad	X				X
Maryann Dugan	X		X		
Kristina Stivers		X		X	

Sampling Equipment
- [X] Sample Container [ ] Van Dorn [ ] Pole
- [ ] Carboy [X] Syringe
- [ ] Dipper [ ] Other
- Depth Measured with SECCHI
- Equipment ID 3312-B

Collection Method
- [X] Wading [ ] Canoe/Kayak
- [ ] From Shore [ ] Electric Motor
- [ ] Other [ ] Gasoline Motor

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

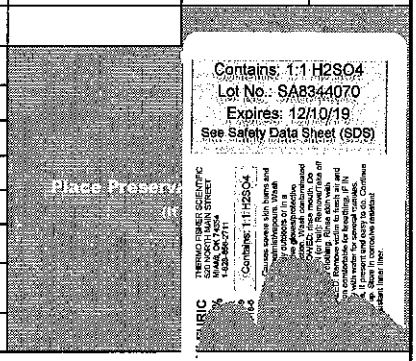
Photos: Yes / No **Flow:** No Flow / Interstitial / Flowing / NA **Tide:** Rising/ Falling/ Slack/ NA **Tide Times:** High NA Low NA

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	0955	0.3	0.15	0.3 S	5.28	64.5	7.42	0.08	167	25.5
CEN										

Biological Samples Collected: ~~FMB~~ ~~None~~ HA SCI 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	[X] W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	[X] Ice [X] H_2SO_4	SA8344070	12/10/19	[X] <2
Metals	[ ] W-ICPMS [ ] W-ICP	[ ] Ice [ ] HNO_3			[ ] <2
Filtered Nutrients	[X] W-PO4-F [X] Field Filtered 0.45 µm Filter	[X] Ice			
Chlorophyll	[X] CHLSUITE-W	[X] Ice			
Physical/Aggregate (Fresh)	[X] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	[X] Ice			
Physical/Aggregate (Marine)	[ ] Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	[ ] Ice			
Macroinvertebrates	[ ] MI-FW-QLDC	[ ] Formalin			
Periphyton	[ ] ALGAE-ID	[ ] Ice			
Microbiology	[X] E Coli [ ] F Coli [ ] Enterococci	[X] Ice			
Molecular	[ ] PCR-FILTER [ ] PCR-BacR [ ] PCR-GULL2 [ ] PCR-HF183 [ ] PCR-DG3 [ ] 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			
Phytoplankton	[ ] DTY-QN-C [ ] PKD-QN-C	[ ] Ice			



Notes:

Field ID/WIN ID G4SD0165

Location Grassy Creek @CR621E

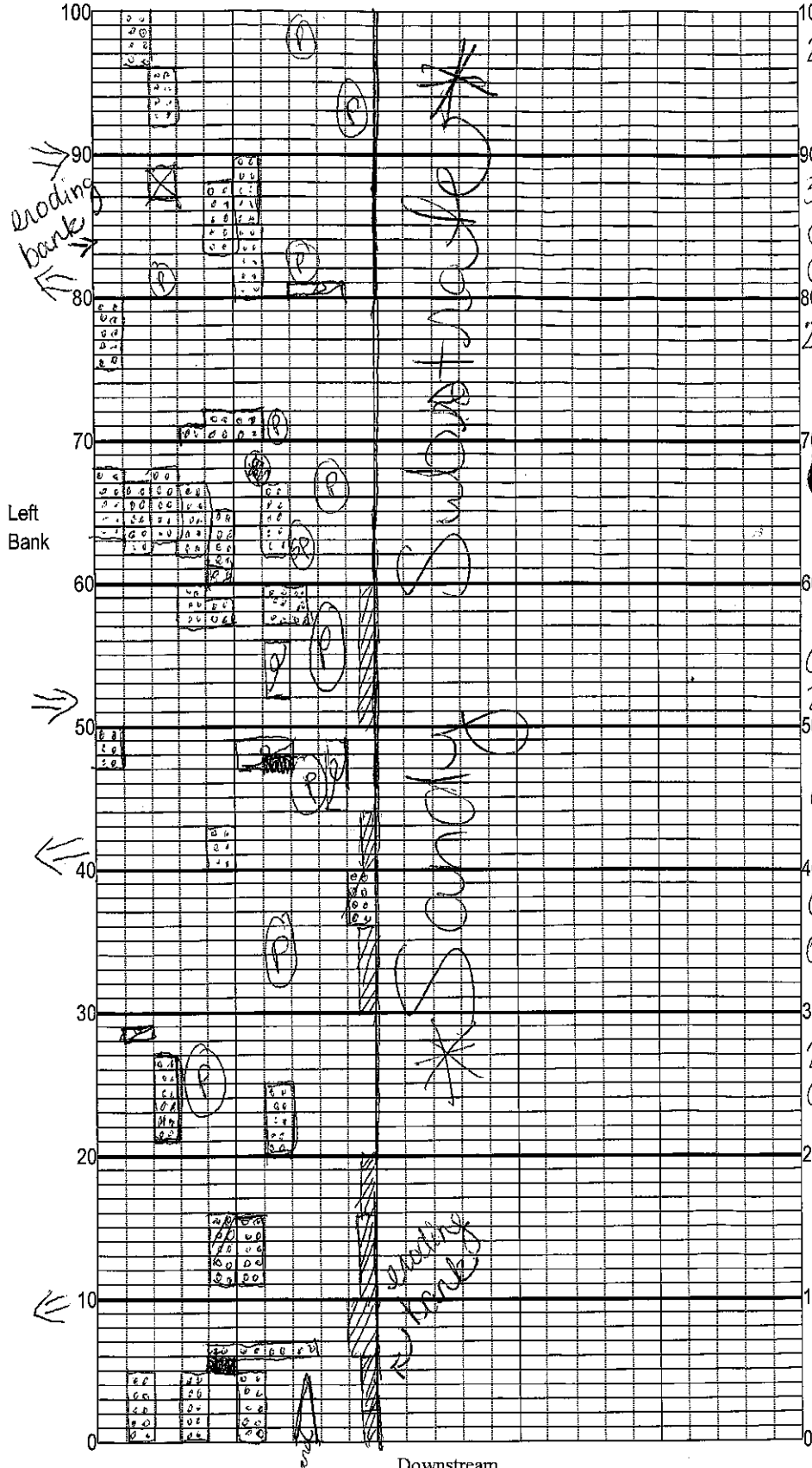
Signature: Maryann Dugan Date: 05/01/2019

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID In LIMS DMT: _____ (Initials/Date) QC Station ID, Field Parameters In LIMS DMT: _____ (Initials/Date)

Scan/Save Field Sheets _____ (Initials/Date) Migrate Data to WIN: _____ (Initials/Date) Verify Data In WIN: _____ (Initials/Date)

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).

2.0AM
3.0AM
0.4S
0.4X
2.0AM
6.0AM
1.0R
0.8S
2.2AM
1.2AM
0.4R
1.1S
0.8AM
0.6R
2.2AM
0.2S
1.0R
2.0AM
1.6R
3.8AM

Location: Grassy Creek

Date: 05/01/2019

Sampler: Nicole Reistad

100 m: Latitude 27.302634
Longitude -81.346497

0 m: Latitude 27.303410
Longitude -81.347159

Substrates: Code key, draw proportionate habitat abundance.	%
Snags	1.3
Roots/undercut banks	2.3
Leaf Packs (or mats)	0.20
Aquatic Macrophytes	12.8
Rocks	0
Pools — total # observed = 10; # range expected = 4-8	

Average width 2.0 m
Average depth 0.1 m

Velocity measured at 40,70 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:

TOTALS
25.2 AM
4.6 R
2.5 S
0.4 X

40m = .17 m/s
70m

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

SAMPLING AGENCY:	STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
FDEP- SOROC	G4SD0165	05/01/19	Lake Huntley
REMARKS:	**COUNTY:** Highlands	**LOCATION:** Grassy Creek	**FIELD ID/NAME:**

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 11	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 11	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 13	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 15 Primary Score 50	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** 13	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 or straightening 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 5 Left Bank 5	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the woody 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. L, R (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 10 Left Bank 10	Width of vegetation greater than 18 m L, R (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 3 Left Bank 3 Secondary Score 49	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). L, R (3) 2 1

99 **TOTAL SCORE**

Date:	Analyst:	Signature:
05/01/19	Nicole Reistad, Maryann Dugan, Kristina Stivers	Nicole Reistad

62-160.800, F.A.C.

Revision Date: January 2017

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Grassy Creek | County: Highlands | Date: 05/01/19 | Investigators: Kristina Stivers

STORET Station Number: GASD0165

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N	N	
	2			
	3			
	4			
	5			79
	6			
	7			
	8			
	9			
10	1	N	N	
	2			
	3			
	4			
	5			95
	6			
	7			
	8			
	9			
20	1	N	N	
	2			
	3			
	4			
	5			84
	6			
	7			
	8			
	9			
30	1	N	N	
	2			
	3			
	4			81
	5			
	6			
	7			
	8			
	9			
40	1	N	N	
	2			
	3			
	4			0
	5			89
	6			
	7			
	8			
	9			
50	1			
	2			
	3			
	4			
	5			71
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N	N	
	2			
	3			
	4			
	5			43
	6			
	7			
	8			
	9			
70	1	N	N	
	2			
	3			
	4			
	5			
	6			91
	7			
	8			
	9			
80	1	N	N	
	2			
	3			
	4			
	5			55
	6			
	7			
	8			
	9			
90	1	N	N	
	2			
	3			
	4			
	5			38
	6			
	7			
	8			
	9			
100	1	N	N	
	2			
	3			
	4			30
	5			
	6			
	7			
	8			
	9			

Secchi depth	0.3
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- 2019-04-29-20

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%.

G4SD0165

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD

Storet Number: ^ put sticker here | Date: 05/01/19 | County: Highlands | Waterbody: Grassy Creek

Analyst: MARYANN DUGAN | Signature: Maryann Dugan

Comments:

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. **bold is exotic invasive**

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		X	X		X	X	X	X	X	X	
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara sp.											
Cicuta maculata											
Cladium jamaicense											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Cyperus											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous) D	X	X	X	X	X	X	X	X	X		
Hydrilla verticillata	X	X	X	X	X						
Hydrocotle sp.											
Hygrophila polysperma											
Hymenachne amplexicaulis											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna sp.											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana								X	X		
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	X	X				X	X	X	X	X	
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontederia cordata											
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima	X	X		X	X	X	X	X	X	X	
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Sphagneticola trilobata (Wedelia)											
Typha sp.											
Urochloa mutica (Brachiaria)										X	
Vallisneria americana											
Zizania aquatica											

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

SAMPLE ID _____ ORG ID 21FLFTM LATITUDE 27.30346

COUNTY Highlands STORET # G4SD0165 LONGITUDE -81.34731

DATE 05/01/2019 TIME 0955 SAMPLING AGENCY SO RX

SITE NAME Granny Creek @ CR621E

FIELD ID/NAME _____ RECEIVING BODY OF WATER Lake Hunsley

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)
15			50	30	5		

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 : 50 Right Bank : 50

Hydrologic Modification Score (per FT 3101): _____

High Water Mark: 0.5 (m) + 0.1 (above present water level) = 0.6 (present depth) (above bed)

Artificially Impounded ☐ Yes ☐ No

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

_____ m wide

0.17 m/s	0.17 m/s	0.17 m/s
0.1 m deep	0.1 m deep	0.1 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

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 # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	1.3		
Undercut Banks / Roots	2.3		
Leaf Packs or Mat	0.2		
Aquatic Vegetation	12.8		
Rock or Shell Rubble..	0		
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)
Top :	0.15	25.5	7.42	5.28	64.5	167	0.08
Mid:							
Bottom							

SECCHI (M): 0.3 ☒ VOB

TOTAL DEPTH: 0.3

Meter ID: SNEL

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: SR0344070 Exp: 12/10/19

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:	☒	☐	☐	☐

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
MARYANN DUGAN, NICOLE REISTAD

SIGNATURE : MaryAnn Dugan

DATE : 05/01/2019