FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

April 2018

Data Qualified? Yes / No

WIN Station Name: Yellow Fever Creek @ NE Pine Island **Date:** 12/19/2018 (mm/dd/yyyy)

WIN/ Field ID: G3SD0074 **WBID:** 3240E **Latitude:** 26.682001 (Decimal Degrees)

County: Lee **ORG ID:** _____ **Longitude:** -81.9190914 (Decimal Degrees)

Receiving Body of Water: Caloosahatchee River **RQ-2018-** 11-12-69

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Chase Conley					X
Steve Cofone	X	X			
Gary Snorek			X		

Sampling Equipment

- [X] Sample Container [ ] Van Dorn [ ] Pole
- [ ] Carboy [X] Syringe
- [ ] Dipper [ ] Other _____
- Depth Measured with: Secchi
- Equipment ID: 3312A

Collection Method

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

Water Level: Dry/ Pooled/ Low / (Normal) / High / Flooded **Meter ID#** 11 Pro-Move **Matrix:** (Fresh) / Marine / DI

Photos: Yes / (No) **Flow:** No Flow / Intestital / (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)	1515	0.2	0.1	0.2 "S"	3.31	37.1	7.25	0.33	680	20.9
CEN										

Biological Samples Collected: None (HA) SCI (RPS) Algae ID (LVI) LVI Other:

SBIO ID Numbers: SBIO-ID: 790169 HA-ID: 15516 RPS-ID: 9165 Macrophyte-ID: NA 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	SA8274050	10/01/19	[X] <2
Metals	[X] W-ICPMS [X] W-ICP	[ ] Ice [ ] HNO_3	NA8040078	3/2019	[X] <2
Filtered Nutrients	[X] W-PO4-F [X] Field Filtered 0.45 µm Filter	[X] Ice			
Chlorophyll	[X] CHLSUITE-W	[ ] Ice			
Physical/Aggregate (Fresh)	[X] 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	[ ] 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			

Place Preservative Sticker(s) Here (If Available)

Notes:

Field ID/WIN ID: G3SD0074

Location: Yellow Fever Creek

Signature: _____ **Date:** 12/19/18

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 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
EPA SE - SORAC		G3SD0074	12/19/18	CALOOSAHATCHEE
REMARKS:	COUNTY: Lee	LOCATION: Yellow Fever		FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 9	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 5	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 5 Primary Score 29	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) 7 (Left Bank) 6	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) 9 (Left Bank) 4	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) 3 Secondary Score 43	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

(74) **TOTAL SCORE**

Date:	Analyst:	Signature:
12/19/18	MARYANN DUGAN	

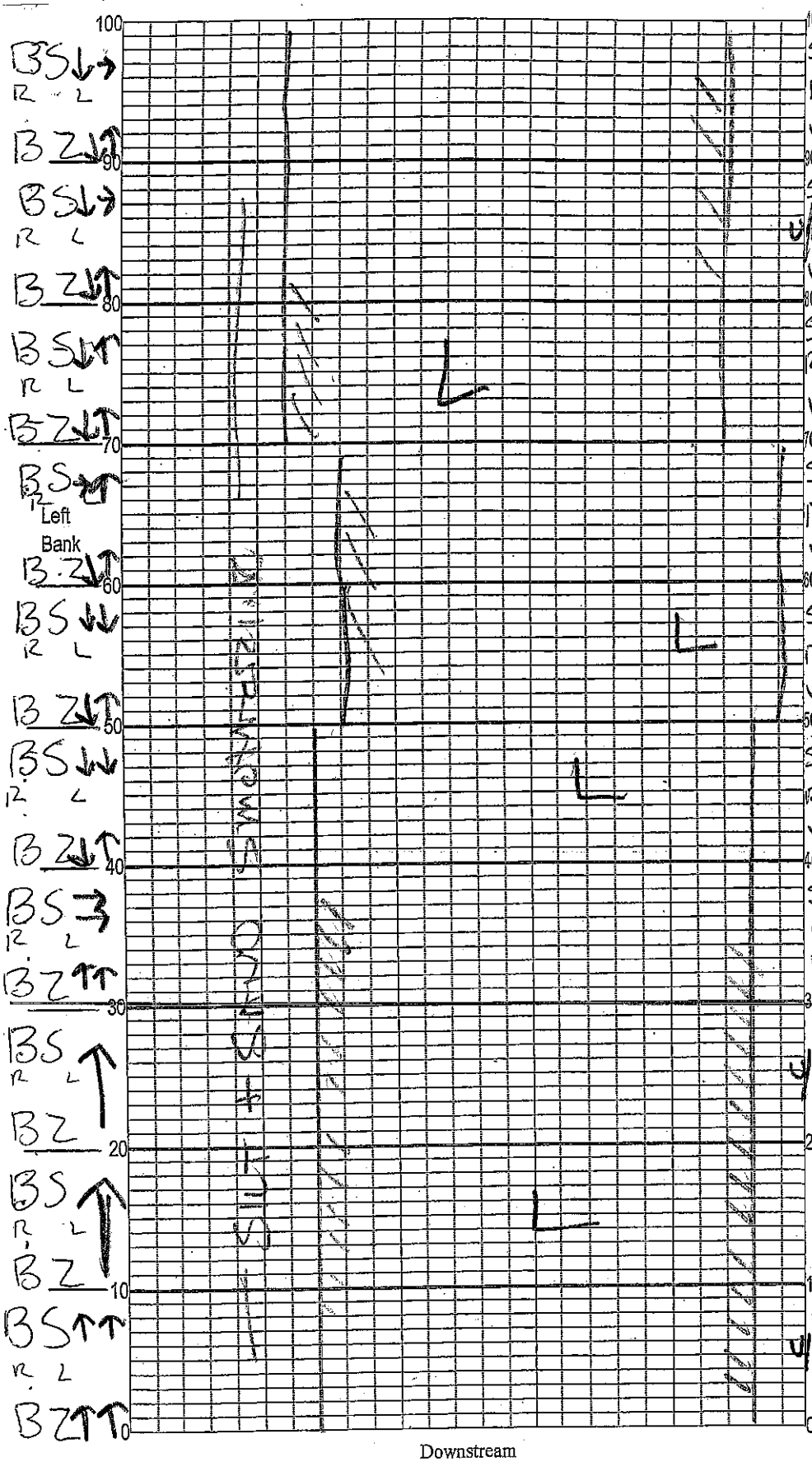
Field ID/WIN ID: G3SD0074

Location: Yellow Fever Creek

62-160.800, F.A.C. 5B10 79069

te: March 1, 2014

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



Location: Yellow Fever

Date: 12/19/18

Sampler: SC

100 m: Latitude 26.6978553
Longitude -81.9203369

0 m: Latitude 26.6969411
Longitude -81.9206079

Substrates: Code key, draw proportionate habitat abundance.		%
S	Snags	2.2
R	Roots/undercut banks	2.3
L	Leaf Packs (or mats)	.3
V	Aquatic Macrophytes	.1
HS	HABITAT SMOTH	↑↑
BS	BANK STABILITY	⇄
P	Pools	total # observed = 0 # range expected = 2-4

4.9%

Average width 4 m
Average depth .2 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: VELOCITY

1/

.17

AVG 0.10

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

Field ID/WIN ID G3SD0074

Location Yellow Fever Creek

400 ft

Revision Date: January 2017

DEP-SOP-001/01: Form FD 9000-3 (9/19/12)

PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

RQ-2013-10-07-72
Date: 1/2/34
User Defined Space. Location, directions, samplers, whatever...

ABCDEFGH
Field ID
STORET
1234567890123456

SAMPLE ID RP-2018-11-12-60 ORG ID _____
COUNTY LEE SAMPLING AGENCY S ROC
DATE 12/19/2018 TIME 1515
SITE NAME YELLOW FEVER CREEK
FIELD ID/NAME G35D0074 RECEIVING BODY OF WATER CALOOSAHATCHEE

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)
10				70	20		

Landscape Development Intensity Index (LDI):

Local Watershed Erosion (select one) : [X] None [ ] Slight [ ] Moderate [ ] Heavy

Local Watershed NPS Pollution : [X] No evidence [ ] Slight [ ] Moderate [ ] Heavy

Width of Riparian Vegetation (m) on Each Buffer Side — Left Bank : 8 Right Bank : 50

Hydrologic Modification Score (per FT 3101):

High Water Mark: 0.7 (m) + 0.2 (above present water level) = 0.9 (present depth) (above bed)

Artificially Impounded [ ] Yes [ ] No

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

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

4 m wide

Artificially Channelized : [ ] No [X] Mostly recovered, more sinuous [ ] Some recovery [ ] Recent, severe

Canopy Cover % [ ] Open [ ] Lightly Shaded (11-45%) [X] Heavily Shaded [ ] Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils [X] Absent [ ] Slight [ ] Moderate [ ] Profuse

Sediment Odors [X] Normal [ ] Sewage [ ] Petroleum [ ] Chemical [ ] Anaerobic [ ] Other (Specify) :

Smothering of Substrates

	None	Slight	Moderate	Severe
Sand Smothering:	[ ]	[X]	[ ]	[ ]
Silt Smothering:	[ ]	[X]	[ ]	[ ]
Algae Smothering:	[X]	[ ]	[ ]	[ ]

SUBSTRATE TYPE

Assessment Tool: [ ] SCI [X] RPS [X] LVS [ ] LCI [ ] BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	2.2		
Undercut Banks /Roots	2.3		
Leaf Packs or Mat	.3		
Aquatic Vegetation	.1		
Rock or Shell Rubble...			
Sand/Silt.....			
Sand/Gravel.....			
Mud/Muck/Silt			
Other			

ABUNDANCE

	Absent	Rare	Common	Abundant
Periphyton:	[X]	[ ]	[ ]	[ ]
Fish:	[ ]	[X]	[ ]	[ ]
Aquatic Plants:	[ ]	[X]	[ ]	[ ]
Iron/Sulfur Bacteria:	[X]	[ ]	[ ]	[ ]

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.1	20.9	7.25	3.31	37.1	680	0.33	0.2
Mid:								[X] VOB
Bottom								SITE DEPTH 0.2

Meter ID: PRO-MOVE Meter Verify: Y [X] N [ ]

Water Odors Normal [X] Petroleum [ ] Sewage [ ] Chemical [ ] Other [ ]

Water Surface Oils Normal [X] Sheen [ ] Globs [ ] Slick [ ] Other [ ]

Water Sample Taken? [X] Yes [ ] No
Sample Preserved? [X] Yes [ ] No
Lot Number: SAR2741060 Exp: 10/2019
NA 8080070 03/2019

Color Tannic [ ] Green (Algae) [ ] Clear [ ] Other (Specify) [X]

Algae Sample Taken? [ ] Yes [X] No
Sample Preserved? [ ] Yes [ ] No
Lot Number: _____ Exp: _____

Clarity Clear [ ] Slightly Turbid [X] Turbid [ ] Opaque [ ]

System Type: Stream [X] Lake [ ] Wetland [ ] Estuary [ ] Other(Specify) [ ] _____

WEATHER CONDITIONS / NOTES:

[X] The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM
CHASE CONLEY, STEVEN COPONI, GARY SNOREK, NICOLE REISTAD, JOHN BARRINGTON, MARYANN DUGAN

SIGNATURE : MaryAnn Dugan

DATE : 12/19/2018

Field ID/WIN ID

G3SD0074

Location

Yellow Fever Creek

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD

Date:	County:	Waterbody:
	Signature:	

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					
Bacopa caroliniana											
Bacopa monneri									X	X	
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)											
Hydrilla verticillata											
Hydrocotle sp.				X				X	X	X	
Hygrophila polysperma											
Hymenachne amplexicaulis											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna sp.											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens			X	X			X	X	X	X	
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											
Sphagneticola trilobata (Wedelia)											
Typha sp.											
Urochloa mutica (Brachiaria)											
Vallisneria americana											
Zizania aquatica											
Sabal palm	X				X						
panicum		X	X	X	X	X				X	
Paspalum		X									
Paspalum sp						X					
hyphaltis sp						X	X		X		

Field ID/WIN ID

G3SD0074

Location

Yellow Fever Creek

SBIO: #9165

9000-25 Rapid Periphyton Survey Field Sheet

Site:	County:	Date:	Investigators:
Yellow Fever Creek	Lee	12/19/18	Nicole Reistad

STORET Station Number:

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	N			60	1	N		
	2					2			
	3					3			
	4					4			
	5			89		5			61
	6					6			
	7					7			
	8					8			
	9					9			
10	1	N			70	1	N		
	2					2			
	3					3			
	4					4			
	5		✓	92		5			67
	6					6			
	7					7			
	8					8			
	9					9			
20	1	N			80	1	N		
	2					2			
	3					3			
	4		✓			4			
	5		✓	91		5			83
	6		✓			6			
	7					7			
	8					8			
	9					9			
30	1	N			90	1	N		
	2					2			
	3					3			
	4					4			
	5			78		5			88
	6					6			
	7					7			
	8					8			
	9					9			
40	1	N			100	1	N		
	2					2			
	3					3			
	4					4			
	5			81		5			84
	6					6			
	7					7			
	8					8			
	9					9			
50	1	N							
	2								
	3								
	4								
	5			87					
	6								
	7								
	8								
	9								

Secchi depth	0.2
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- 2018-11-12-60	

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%.