



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

PAGE ____ OF ____

Data Qualified?
Yes / No

STORET Station Name: S154C

Date: 7/26/16
(mm/dd/yyyy)

STORET Station ID: G4SE0089

Latitude: _____
(Decimal Degrees)

WBID: RQ-2016-06-27-20 ORG ID: 21FLWPB

Longitude: _____
(Decimal Degrees)

Receiving Body of Water: Kissimmee River

Field ID: G4SE0089

County: _____

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment				
R. Brewton			X	X	X		☒ Sample Container	☐ Van Dorn	☐ Pole		
M. Sewell		X		X			☐ Carboy	☐ Syringe			
							☐ Dipper	☐ Other			
							Equipment ID _____				
							Collection Method				
							☐ Wading				
							☒ From Shore				
							☐ Other (note below)				
							☐ Canoe/Kayak				
							☐ Electric Motor				
							☐ Gasoline Motor				
Water Level: Dry / Low / Normal / High / Flooded							Matrix: Fresh / Marine / DI				
Meter ID# <u>AK3</u>							Photos: Yes / No				
							Tide Falling: Yes / No / NA				
Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (umhos/cm)	Temp. (C°)	
EST	1345	0.3	2.8	5.1	68	6.9	0.35	0.3	724	30.7	
CEN		2.3		4.7	62	7.0	0.35		719	29.5	
Biological Samples Collected: None HA SCI LVS RPS LVI Other											
Parameter Suite		Parameter Methods					Preservation	Acid Lot#	Expiration	pH Check	
Preserved Nutrients		☐ W-NH3 / ☐ W-NO2NO3 / ☐ W-TKN / ☐ W-TOC / ☐ W-S-A-TP					☒ Ice ☒ H2SO4	157499	12/16	☒ <2	
Metals		☐ W-ICPMS ☐ W-ICP					☒ Ice ☒ HNO3			☐ <2	
Filtered Nutrients		☒ W-PO4-F ☐ Field Filtered 0.45 um Filter					☒ Ice				
Chlorophyll		☒ CHLSUITE-W					☒ Ice				
BOD		☐ BOD-UNIN					☐ Ice				
Physical/Aggregate (Kit A/C)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CHC / W-COLOR / W-SO4-IC / W-TDS					☒ Ice				
Physical/Aggregate (Kit B/D)		☐ Alkalinity / W-F / W-TSS / TURBIDITY					☐ Ice				
Macroinvertebrates		☐ MI-FW-QLDC					☐ Formalin				
Microbiology		☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR					☐ Ice				
Periphyton		☐ ALGAE-ID					☐ Ice				
Pesticides		☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R					☐ Ice				
		☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH					☐ Other				

Notes:

Structure closed no flow
SBTO UNIT 76743

Place Label Here
(If Available)

Signature: [Signature]

Date: 7/26/16

Field Parameters Entered into LIMS: AK3 8/29/16

(Initials/Date)

Field Parameters QC in LIMS: _____

(Initials/Date)

Date Migrated to STORET: _____

(Initials/Date)

Field Sheets Scanned/Saved: _____

(Initials/Date)

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

Waterbody: <u>L-67 creek above S154C</u>	Date: <u>7/26</u>	County: <u>Oreg</u>	Storet Number: <u>6455-087</u>
Analyst: <u>Sevell Brewb</u>	Signature: <u>[Signature]</u>		
Comments: <u>NO FLOW</u>	<u>S154C #76743</u> <u>[Initials]</u>		

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.

spaces for additional taxa names.						Meter Mark										Specimen collected (check)	Meter Mark										Specimen collected (check)										
HERBACEOUS SPECIES						0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100		HERBACEOUS SPECIES										0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
<i>Alternanthera philoxeroides</i>						P	P	P	P	P	P	P	P	P	P		<i>Micranthemum glomeratum</i>																				
<i>Bacopa caroliniana</i>																	<i>Micranthemum umbrosum</i>																				
<i>Bacopa monnieri</i>																	<i>Myriophyllum aquaticum</i>																				
<i>Bidens mitis</i>																	<i>Najas guadelupensis</i>																				
<i>Boehmeria cylindrica</i>																	<i>Nuphar luteum</i>																				
<i>Centella asiatica</i>																	<i>Orontium aquaticum</i>																				
<i>Ceratophyllum demersum</i>																	<i>Panicum hemitomon</i>						P	P	P	P	P	P	P	P	P	P					
<i>Chara</i>																	<i>Panicum repens</i>																				
<i>Cicuta maculata</i>																	<i>Panicum rigidulum</i>																				
<i>Cladium jamaicense</i>																	<i>Pistia stratioides</i>						P	P	D	D	D	D	P	P	P	P					
<i>Colocasia esculenta</i>																	<i>Polygonum glabra</i>																				
<i>Commelina diffusa</i>																	<i>Polygonum hydropiperoides</i>																				
<i>Commelina virginica</i>																	<i>Polygonum punctatum</i>																				
<i>Crinum americanum</i>																	<i>Pontedaria cordata</i>																				
<i>Diodia virginiana</i>																	<i>Potamogeton illinoensis</i>																				
<i>Eichhornia crassipes</i>																	<i>Ruellia simplex</i>																				
<i>Eleocharis (wispy viviparous)</i>																	<i>Sacciolepis striata</i>																				
<i>Hydrilla verticillata</i>																	<i>Sagittaria kurziana</i>																				
<i>Hydrocotyle</i>																	<i>Sagittaria lancifolia</i>																				
<i>Hygrophila polysperma</i>																	<i>Sagittaria latifolia</i>																				
<i>Hymenocallis</i>																	<i>Salvinia minima</i>																				
<i>Lachnanthes caroliniana</i>																	<i>Samolus parviflora</i>																				
<i>Landoltia punctata</i>																	<i>Saururus cernuus</i>																				
<i>Lemna</i>						P	P	P	P	P	P	P	P	P	P		<i>Sparganium americanum</i>																				
<i>Limnophila sessiflora</i>																	<i>Typha</i>																				
<i>Ludwigia leptocarpa</i>																	<i>Vallisneria americana</i>																				
<i>Ludwigia palustris</i>																	<i>Zizania aquatica</i>																				
<i>Ludwigia peruviana</i>								P			P																										

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

5-154C

Ward 3207

SAMPLE ID 64SE087 ORG ID 2161WPS LATITUDE _____
 COUNTY Oswego STORET # 64SE087 LONGITUDE _____
 DATE 7/6/17 TIME 1345 SAMPLING AGENCY _____
 SITE NAME 5-154C RECEIVING BODY OF WATER 655, mndc river
 FIELD ID/NAME 64SE087

RIPARIAN ZONE / STREAM FEATURES

SB101 76743 JP

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐							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 _____ m wide _____ m/s _____ m/s _____ m/s _____ m deep _____ m deep _____ m deep
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: ☐ Right Bank: ☐				Hydrologic Modification Score (per FT 3101) ☐			
High Water Mark: ☐ + ☐ = ☐ (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			WATER QUALITY							
Invert ☐ Peri ☐ % Coverage # Times Sampled # Times Sampled			Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Woody Debris (Snags)			Top: 0.3	30.7	7.0	5.1	68	724	0.55	6.3
Undercut Banks / Roots			Mid:							☐ VOB
Leaf Packs or Mat			Bottom: 2.3	29.5	7.0	4.7	62	719	0.55	TOTAL DEPTH
Aquatic Vegetation			Meter ID: <u>AK3</u>							
Rock or Shell Rubble..			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐				
Sand.....			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐				
Mud / Muck / Silt			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Clarity Clear ☐ Slightly Turbid ☐ Turbid ☒ Opaque ☐				
Other			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>canal</u>							
Other			AMBIENT FIELD CONDITIONS / NOTES: <u>Structure closed - NO flow</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.							

ABUNDANCE

Not Obs. Rare Common Abundant

Periphyton: ☐ ☒ ☒ ☐
 Fish: ☐ ☐ ☐ ☒
 Aquatic Plants: ☐ ☐ ☒ ☐
 Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐

SAMPLING TEAM

Seward Brewster

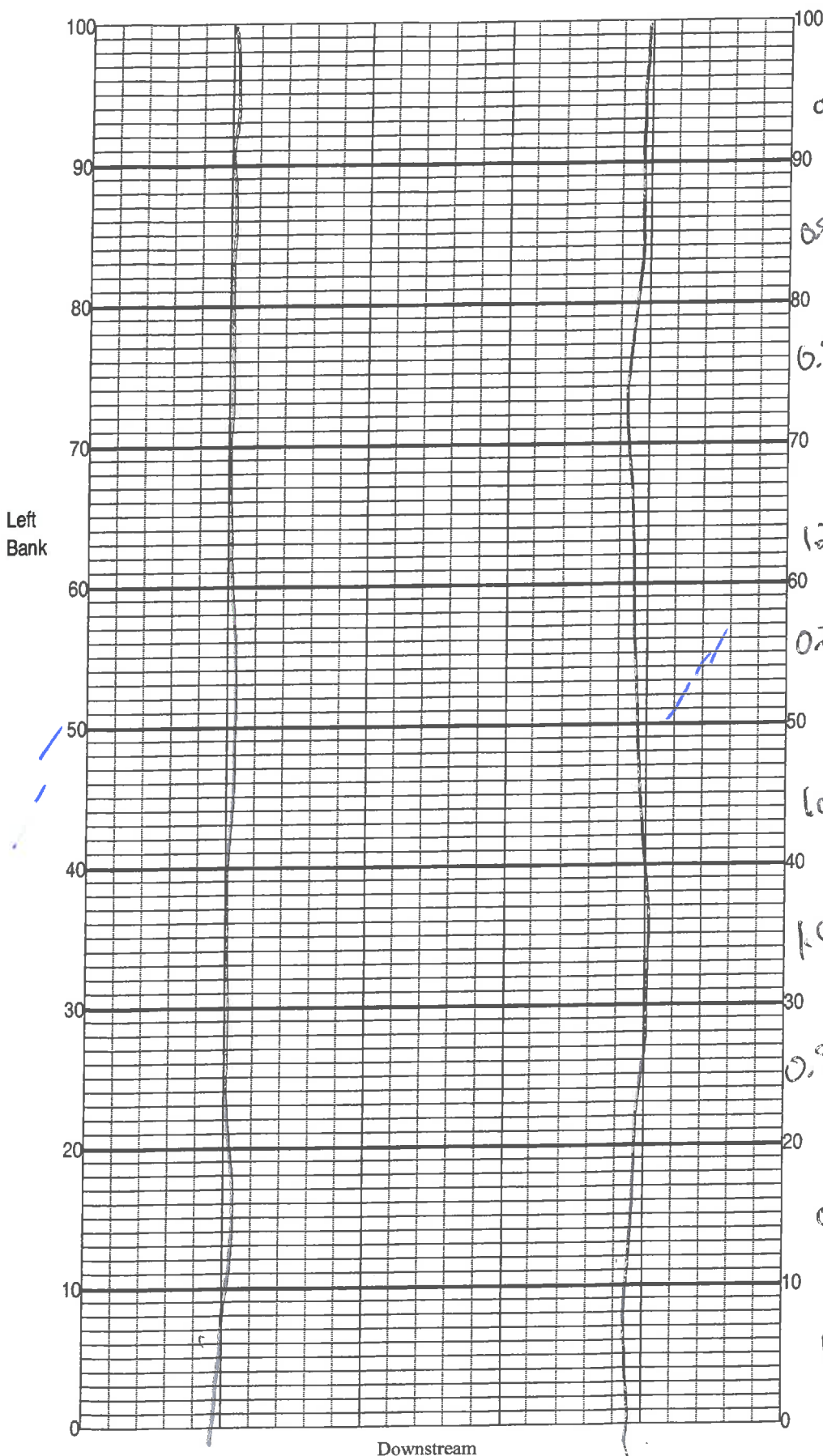
SIGNATURE:

Matt SCD

DATE:

7/6/17

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: S-181C

Date: 7/26/16

Sampler: Math Serell

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐	Snags	_____ %
☐	Roots/undercut banks	_____ %
☐	Leaf Packs (or mats)	_____ %
☐	Aquatic Macrophytes	_____ %
☐	_____	_____ %
☐	_____	_____ %
☐	Pools	total # observed = <u>0</u> # range expected = <u>0-1</u>

Average width 20 m

Average depth 4 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:

0.5m Pista / Alternanthera mix
NO Flow / Structure closed
1.0m

SBID # 76743

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

SAMPLING AGENCY: <i>21F1WPP</i>	STORET STATION NUMBER: <i>6450089</i>	DATE (MM/DD/YY): <i>7/26/16</i>	RECEIVING BODY OF WATER: <i>Kissimmee River</i>
REMARKS: <i>NO flow/Smothered</i>	COUNTY: <i>Okeechobee</i>	LOCATION: <i>S-181C</i>	FIELD ID/NAME: <i>6450089</i>

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 <i>3</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <i>(3)</i> 2 1
Substrate Availability <i>1</i>	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 <i>(1)</i>
Water Velocity <i>1</i>	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 <i>(1)</i>
Habitat Smothering <i>1 3</i> ----- Primary Score <i>8/16</i>	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 <i>(11)</i>	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 <i>(3)</i> 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 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 <i>1</i>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 <i>(1)</i>
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 <i>1</i> Left Bank <i>1</i>	10 9	8 7 6	5 4	3 2 <i>(1)</i>
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation > 12 to 18 m	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 <i>1</i> Left Bank <i>1</i>	10 9	8 7 6	5 4	3 2 <i>(1)</i>
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 <i>1</i> Left Bank <i>1</i> ----- Secondary Score <i>10</i>	10 9	8 7 6	5 4	3 2 <i>(1)</i>

23 TOTAL SCORE

Date: <i>7/26/16</i>	Analyst: <i>Matthew Sewell</i>	Signature: <i>Matthew Sewell</i>
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SBIO# 76743

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: S-154C County: Chesapeake Date: 7/20/16 Investigators: Sevick

STORET Station Number:

1456089

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	N	Y			2	N	X	
	3	N	Y			3	N		
	4	N				4	N		
	5	N		0		5	N		0
	6	N				6	N		
	7	N	Y			7	N		
	8	N	Y			8	N	Y	
	9	N				9	N		
10	1	N			70	1	N		
	2	N	Y			2	N	Y	
	3	N				3	N		
	4	N		0		4	N		
	5	N				5	N		0
	6	N				6	N		
	7	N				7	N		
	8	N	Y			8	N	Y	
	9	N				9	N		
20	1	N			80	1	N		
	2	N	X			2	N	Y	
	3	N				3	N		
	4	N		0		4	N		
	5	N				5	N		0
	6	N				6	N		
	7	N				7	N		
	8	N	Y			8	N	Y	
	9	N				9	N		
30	1	N			90	1	N		
	2	N	X			2	N	Y	
	3	N				3	N		
	4	N		0		4	N		
	5	N				5	N		0
	6	N				6	N		
	7	N				7	N		
	8	N	Y			8	N	Y	
	9	N				9	N		
40	1	N			100	1	N		
	2	N	Y			2	N	Y	
	3	N				3	N		
	4	N		0		4	N		
	5	N				5	N		0
	6	N				6	N		
	7	N				7	N		
	8	N	Y			8	N	Y	
	9	N				9	N		
50	1	N				1	N		
	2	N	Y			2	N	Y	
	3	N				3	N		
	4	N		0		4	N		
	5	N				5	N		0
	6	N				6	N		
	7	N				7	N		
	8	N	Y			8	N	Y	
	9	N				9	N		

Secchi depth 0.3
Estimated?

points ranked 4-6 0
total points assessed 29
% 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- 2016-06-27-20

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%.