



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

October 2017

Qualified Data

Yes

Location/STORET Station Name:

Spring Creek @ US98

Date:

01/11/18

STORET #

G1TLHR0084

WBID:

3518

Latitude:

30.084354

County:

Taylor

RQ -

2018-01-08-21

ORG ID:

21FLTLHR

Longitude:

83.664309

Receiving Body of Water:

Ferryway Hollow

Field ID:

G1TLHR0084

Sampling Team Members

J. Burdette
P. Blair

WQ Measurements
Sample Collection
Documentation
Preservation
Preservation Check

Sampling Equipment

☒ Sample Container ☐ Van Dorn ☐ Pole
☐ Carboy ☒ Syringe
☐ Dipper ☐ Other

Equipment ID

Collection Method

☐ Wading ☒ Canoe/Kayak
☐ From Shore ☐ Electric Motor
☐ Other ☐ Gasoline Motor

Water Level: Dry / Low / Normal / Above Normal / Flooded

Meter ID#

Matrix: Fresh / Marine / DI

Photos: Yes / No

Flow: No Flow / Intertidal / Flowing / NA

Tide: Rising/ Falling/ Slack/ NA

Tide Times: High Low

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1100	0.3	0.6	6.58	72.5	7.4	0.21	0.63	437	20.8
CEN			SBIO ID 78240							

Biological Samples Collected:

None HA SCI RPS Algae ID LVS LVI Other

SBIO ID Numbers:

SBIO-ID:

78185

HA-ID:

RPS-ID:

Macrophyte-ID:

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	SA7341020	12/7/18	<2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			<2
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHL SUITE-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	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice			
Molecular	☒ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD	☒ Ice			
Tracers	☒ W-SUC-AA-R ☐ W-UHERB-AA ☒ W-AHERB-AA	☒ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Ice ☐ Other			

Notes:

Secchi VCB 30.084354
US98 30.084366-66 83.664309
83.664346-66

Field/WIN ID

Location



G1TLHR0084



SPRING CREEK AT US98

Signature:

P. Blair

Date:

1/11/18

Field Parameters Entered into LIMS:

PB 1-17-18

(Initials/Date)

Field Parameters QC in LIMS:

PB 1/22/18

(Initials/Date)

Date Migrated to STORET:

(Initials/Date)

Field Sheets Scanned/Saved:

PB 1-29-18

(Initials/Date)

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

SAMPLING AGENCY: <u>8034</u>		STORET STATION NUMBER: <u>GITLHR0084</u>	DATE (MM/DD/YY): <u>1/11/18</u>	RECEIVING BODY OF WATER: <u>Fenholloway</u>
REMARKS:	COUNTY: <u>Taylor</u>	LOCATION: <u>Spring CK @ US98</u>	FIELD ID/NAME: <u>GITLHR0084</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>19</u>	20 <u>19</u> 18 17 16	15 14 13 12 11	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>13</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 <u>13</u> 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>18</u> ----- Primary Score <u>55</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 <u>18</u> 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	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>15</u>	20 19 18 17 16	<u>15</u> 14 <u>13</u> 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>6</u> Left Bank <u>5</u>	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. 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 <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>10</u> Left Bank <u>10</u> ----- Secondary Score <u>66</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 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

121 TOTAL SCORE

Date: <u>1/11/18</u>	Analyst: <u>gale</u>	Signature: <u>J. Burtche</u>
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DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

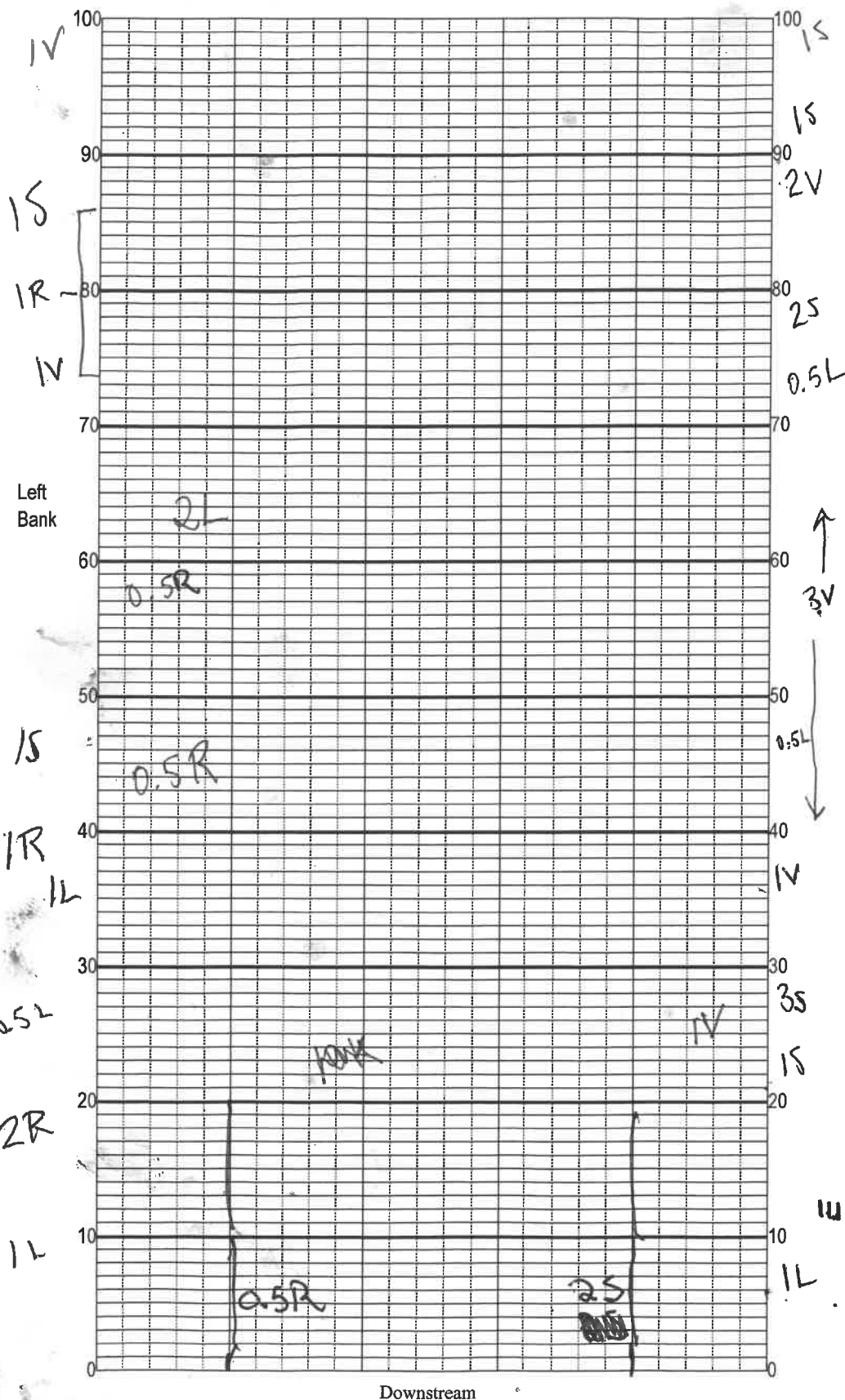
Waterbody: Spring Crk Date: 1/11/18 County: Taylor Storet Number: GILHROUS4
 Analyst: P. Blair Signature: Paul Blair

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.

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																							
Ludwigia repens																							
Luziola fluitans																							
												Nasturtium affine											
												Floridanum											
If no Dominant or Co-Dominant were selected, indicate with "X"	X	X			X		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																							

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



Location: Spring Ghousey
 Date: 1/11/18
 Sampler: S. Burt, J. Burt

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ S	Snags	<u>1.71</u>
☒ R	Roots/undercut banks	<u>0.79</u>
☒ L	Leaf Packs (or mats)	<u>0.93</u>
☒ V	Aquatic Macrophytes	<u>1.29</u>
☒ K	<u>Rocks</u>	_____
☐	<u>Sand</u>	_____
☐	Pools	total # observed = _____ # range expected = _____

Average width 7 m
 Average depth 0.6 m

Velocity measured at 10 meter mark. 0.16 m/s

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:

0.5R
1.1111 - 0.62
1.1111 - 5 = 12
1.1111 - R = 5.12
1.1111 - X = 9

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

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

SAMPLE ID _____ ORG ID 21 FTL HAR0084 LATITUDE _____
 COUNTY Taylor STORET # G1TLAR0084 LONGITUDE _____
 DATE 11/1/18 TIME 1100 SAMPLING AGENCY 8034
 SITE NAME Spring GNEUS98
 FIELD ID/NAME G1TLAR0084 RECEIVING BODY OF WATER Fenholloway

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>100</u> 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			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) _____			
High Water Mark: <u>0.5</u> + <u>0.6</u> = <u>0.6</u> 1.1 ₃₃ (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 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>20.8</u> <u>7.6</u> <u>6.58</u> <u>72.5</u> <u>437</u> <u>0.21</u> <u>0.6</u> Mid: _____ Bottom: _____ Meter ID: <u>Ex03</u>			
Woody Debris (Snags) <u>1.71</u> <u>4</u> Undercut Banks / Roots <u>0.79</u> <u>4</u> Leaf Packs or Mat <u>0.93</u> <u>4</u> Aquatic Vegetation <u>1.29</u> <u>4</u> Rock or Shell Rubble.. _____ Sand..... _____ Mud / Muck / Silt <u>95.28</u> <u>4</u> Other _____ Other _____		Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SA7341020</u> Exp: <u>12/1/18</u> Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____			
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☒ Fish: ☒ ☒ ☐ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☐ ☐ ☒ ☐		Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☐ Green (Algae) ☒ Clear ☐ Other (Specify) _____ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐			
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 P. Blais, J. Burtchett SIGNATURE: [Signature] DATE: 11/1/18

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Spring Creek US98 County: Kaylor Date: 7/1/18 Investigators: P. Blair, J. Burkett
 STORET Station Number: GILHR0084

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	4			60	1	4		
	2	4				2	4		
	3	2				3	2		
	4	2				4	2		
	5	2		45		5	2		55
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
10	1	2			70	1	2		
	2	2				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		65		5	2		60
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
20	1	3			80	1	2		
	2	3				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		50		5	2		66
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
30	1	4			90	1	3		
	2	2				2	3		
	3	2				3	2		
	4	2				4	2		
	5	2		48		5	2		88
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
40	1	3			100	1	4		
	2	3				2	4		
	3	3				3	4		
	4	2				4	2		
	5	2		42		5	2		78
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
50	1	4							
	2	4							
	3	2							
	4	2							
	5	2		49					
	6	2							
	7	2							
	8	2							
	9	2							

Secchi depth 0.6
 Estimated? No

points ranked 4-6 10
 total points assessed 71
 % points ranked 4-6 14.1%

Check accompanying data collected at same site/date.
 Algal mat sample N/A
 Linear Veg Survey ✓
 Habitat Assessment ✓
 SCI/Biorecon ✓
 Water sample ✓
 RQ- 2018-01-08-21

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%.