



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE 1 OF 1

Data Qualified?

Yes / No

October 2016

STORET Station Name: London Creek/Hatchineha Drain Date: 12/19/16

STORET Station ID: 26010985 WBID: 1472 Latitude: 28.06028 (mm/dd/yyyy)

County: Polk RQ: 2016-12-12-23 ORG ID: 21FLEN Longitude: -81.44944 (Decimal Degrees)

Receiving Body of Water: Lk Hatchineha Field ID: G4CE0120 (Decimal Degrees)

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
<u>Leif Roman</u> <u>Katie Williams</u>									☒ Sample Container	☐ Van Dorn	☐ Pole	
									☐ Carboy	☒ Syringe		
									☐ Dipper	☐ Other		
									Equipment ID			
									Collection Method			
									☐ Wading	Via Boat		
									☐ From Shore	☐ Canoe/Kayak		
									☐ Other (note below)	☐ Electric Motor		
										☒ Gasoline Motor		
Water Level: Dry / Low / Normal / <u>High</u> / Flooded				Matrix: <u>Fresh</u> / Marine / DI								
Meter ID# <u>Betty 67</u>				Photos: Yes / <u>No</u>				Tide Falling: Yes / No / <u>NA</u>				
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°)		
<u>EST</u>	<u>1222</u>	<u>0.3</u>	<u>1.6</u>	<u>3.9</u>	<u>45.31</u> <u>45</u> <u>#0</u>	<u>6.5</u>	<u>0.07</u>	<u>0.8</u>	<u>148</u>	<u>22.3</u>		
<u>CEN</u>		<u>1.1</u>		<u>0.2</u>	<u>2</u>	<u>6.7</u>					<u>0.08</u>	<u>172</u>
Biological Samples Collected: None / <u>HA</u> / SCI / <u>LVS</u> / <u>RPS</u> / 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				☒ <2		
Metals		☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO2				☐ <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						
Microbiology		☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR				☐ Ice						
Periphyton		☐ ALGAE-ID				☐ Ice						
Pesticides		☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH				☐ Ice ☐ Other						

Contains
1:1

Sulfuric Acid
SA-6209120
EXP: 07/27/17

Warning!
See SDS

Sticker(s) Here
(available)

Notes:

London Creek .25 miles
upstream of confluence
with Lk. Hatchineha

RQ-2016-12-12-23
Date: 12/19/16

G4CE0120

Field ID ↑

STORET ↓



26010985

Signature: K Williams

Date: 12/19/16

Field Parameters Entered into LIMS: _____
(Initials/Date)

Field Parameters QC in LIMS: _____
(Initials/Date)

Date Migrated to STORET: _____
(Initials/Date)

Field Sheets Scanned/Saved: _____
(Initials/Date)

FDEP FORM FD 9000-3: PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID _____ ORG ID 21FLUEN LATITUDE 28.06028
 COUNTY Polk STORET # 26010985 LONGITUDE -81.44944
 DATE 12/19/14 TIME _____ SAMPLING AGENCY _____
 SITE NAME London Creek .25 mi upstream of confluence with Lk. Hatchineha
 FIELD ID/NAME 64CE0120 RECEIVING BODY OF WATER Lk Hatchineha

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>85</u> Silviculture <u>15</u> Field/Pasture <u>15</u> Agricultural <u>15</u> Residential <u>15</u> Commercial <u>15</u> Industry <u>15</u> Other (Specify) <u>15</u>								Landscape Development Intensity Index (LDI) <u>10</u>	
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy						Typical Width (m) <u>10</u> Depth (m) <u>0.05</u> Velocity (m/sec) <u>1.6</u> Transect <u>10</u> m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18</u> Right Bank: <u>>18</u>						Hydrologic Modification Score (per FT 3101) <u>1.6</u>			
High Water Mark: <u>0.5</u> + <u>1.6</u> = <u>2.1</u> (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) <u>0.3</u>	Temp. (°C) <u>22.3</u>	pH (SU) <u>6.5</u>	D.O. (MG/L) <u>3.9</u>	D.O. Sat (%) <u>45</u>	Cond. (UMHO/CM) <u>148</u>	Salinity (PPT) <u>0.07</u>	SECCHI (M) <u>0.8</u>
Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation ☐ ☐ ☐ Rock or Shell Rubble ☐ ☐ ☐ Sand ☐ ☐ ☐ Mud / Muck / Silt ☐ ☐ ☐ Other ☐ ☐ ☐ Other ☐ ☐ ☐			Top: <u>0.3</u> Mid: <u>1.1</u> Bottom: <u>1.1</u>	Meter ID: <u>Betty 67</u>	Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐					
			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>6209120</u> Exp: <u>7/17</u>			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐				
			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐				
			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐				
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☒ ☐ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.							

SAMPLING TEAM

LGB, KMCW

SIGNATURE

Kullane

DATE:

12/19/14

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

SAMPLING AGENCY:		STORET STATION NUMBER: 26010985	DATE (MM/DD/YY): 12/19/16	RECEIVING BODY OF WATER: LK Hatchineha
REMARKS:	COUNTY: Polk	LOCATION: Hatchineha Drain	FIELD ID/NAME: G4CE0120	

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>6</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>2</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 5 4 3 2 1
Water Velocity <u>6</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 2 1
Habitat Smothering <u>8</u> ----- Primary Score <u>22</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 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>18</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
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. 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
Right Bank <u>10</u> Left Bank <u>10</u>				
Riparian Buffer Zone Width	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
Right Bank <u>10</u> Left Bank <u>9</u>				
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. 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
Right Bank <u>7</u> Left Bank <u>7</u> ----- Secondary Score <u>14</u>				

93 TOTAL SCORE

Date: 12/19/16	Analyst: KMCW	Signature: K. Williams
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Waterbody: Hatzlineha Drain

Date: 12/19

County:

Storet Number: 26010985

Analyst:

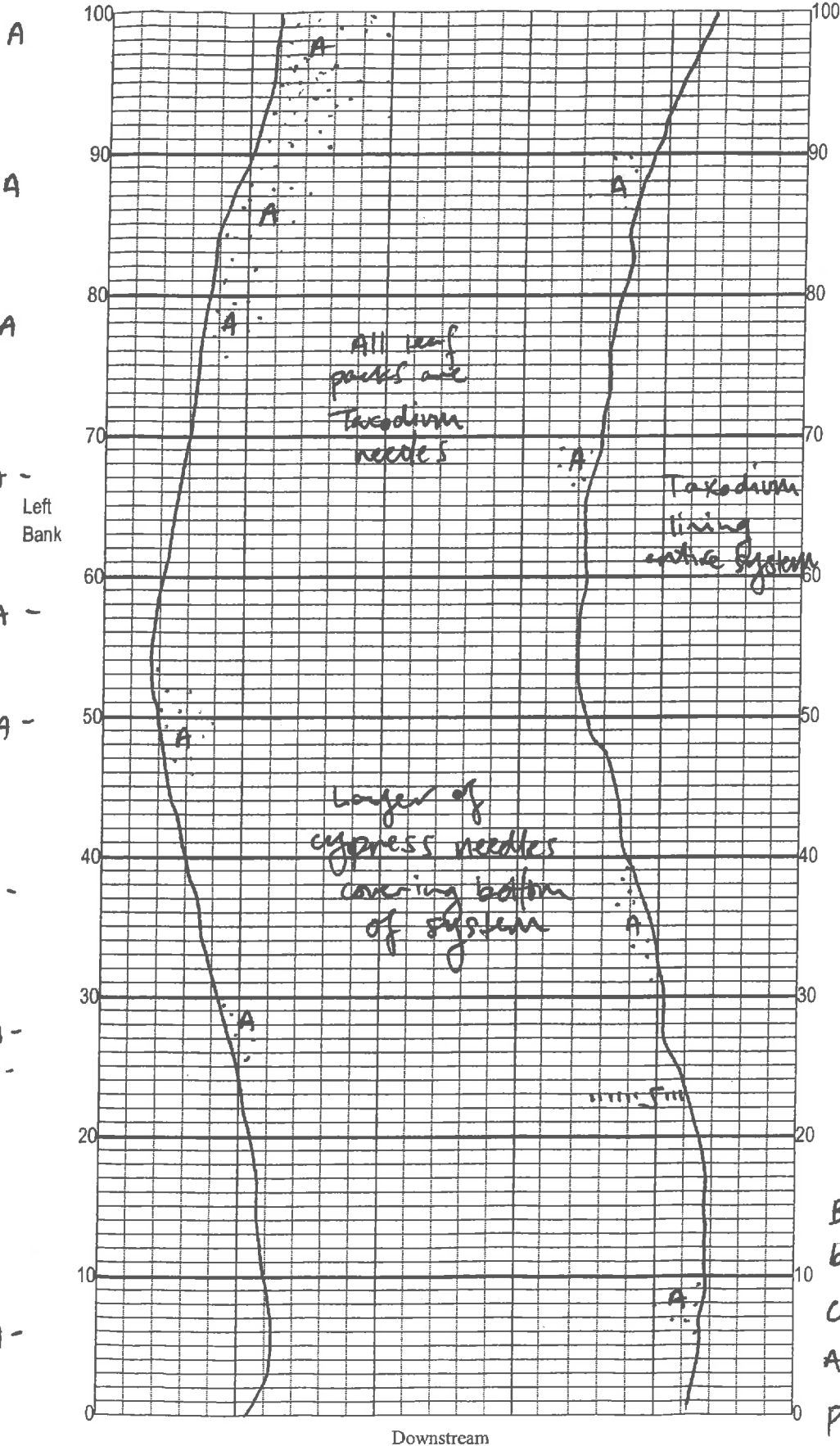
Signature: _____

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	
<i>Alternanthera philoxeroides</i>		/										<i>Micranthemum glomeratum</i>											
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>											
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>		/					/	/			
<i>Bidens bitis</i>												<i>Najas guadelupensis</i>											
<i>Boehmeria cylindrica</i>												<i>Nuphar luteum</i>						/	/				
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>						/	/				
<i>Cephalanthus occidentalis</i>								/				<i>Panicum hemitomon</i>											
<i>Ceratophyllum demersum</i>												<i>Panicum repens</i>											
<i>Chara</i>												<i>Panicum rigidulum</i>											
<i>Cicuta maculata</i>												<i>Pistia stratioides</i>			/		/						
<i>Cladium jamaicense</i>												<i>Polygonum glabra</i>			/								
<i>Colocasia esculenta</i>	/											<i>Polygonum hydropiperoides</i>											
<i>Crinum americanum</i>												<i>Polygonum punctatum</i>											
<i>Diodia virginiana</i>												<i>Pontedaria cordata</i>								/			
<i>Eichhornia crassipes</i>				/				/	/			<i>Potamogeton illinoensis</i>											
<i>Eleocharis (wispy viviparous)</i>												<i>Ruellia simplex</i>											
<i>Hydrilla verticillata</i>												<i>Sagittaria striata</i>											
<i>Hydrocotyle</i>												<i>Sagittaria kurziana</i>											
<i>Hygrophila polysperma</i>												<i>Sagittaria lancifolia</i>											
<i>Hymenocallis</i>												<i>Sagittaria latifolia</i>							/				
<i>Itea virginica</i>												<i>Salix caroliniana</i>											
<i>Lachnanthes caroliniana</i>												<i>Salvinia minima</i>	/	/	/	/	/	/	/	/	/	/	
<i>Landoltia punctata</i>												<i>Samolus parviflora</i>											
<i>Lemna</i>												<i>Saururus cernuus</i>			/								
<i>Limnophila sessiflora</i>												<i>Typha</i>											
<i>Ludwigia leptocarpa</i>												<i>Vallisneria americana</i>											
<i>Ludwigia palustris</i>		</																					

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



Location: Hatchincha Drain
 Date: 12/19/16
 Sampler: Karen Williams +
Leif Bone

100 m: Latitude _____	
Longitude _____	
0 m: Latitude _____	
Longitude _____	
Substrates: Code key, draw proportionate habitat abundance. %	
☒ S III	Snags _____
☐	Roots/undercut banks _____
☐	Leaf Packs (or mats) _____
☒ A	Aquatic Macrophytes _____
☐	_____
☐	_____
☐	Pools total # observed = _____ # range expected = _____
Average width <u>11</u> m	
Average depth <u>1.6</u> m	
Velocity measured at <u>50</u> meter mark.	
WQ & chemistry taken at <u>10</u> 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:

Banks of system dominated by invasive Salvinia microcarpa.
Colocasia, Taxodium, Salvinia,
Alternanthera, Eichornia,
Pistia, Nympha

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

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Hatchlineha Drain County: Polk Date: 12/19/14 Investigators: KMW, LGB

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

STORET Station Number:

26010985

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

Secchi depth 0.9
Estimated? 0.9

points ranked 4-6 0
total points assessed 96
% 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-2014-12-12-23

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

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

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Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover

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%.