



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

February 2016

Data Qualified?
Yes / No

STORET Station Name: Kissimmee @ PC33

Date: 03/03/2016
(mm/dd/yyyy)

STORET Station ID: G4SE0088

Latitude: 27.43226083

WBID: 3192E RQ: 2016-02-24-60

ORG ID: 21F1WPP3

Longitude: -81.134247
(Decimal Degrees)

Receiving Body of Water: Oklawaha

Field ID: G4SE0088-03032016

County: Highland
(Decimal Degrees)

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Ashley Huxley				X	X					
Matt Seidl					X	X	X			

Sampling Equipment		
☒ 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 / <u>Normal</u> / High / Flooded				Matrix: <u>Fresh</u> / Marine / DI			
Meter ID# <u>L11 GUG</u>				Photos: Yes / No			
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 (umhos/cm)	Temp. (C°)
EST	10:30	0.3	2.3	4.7	51	7.1	0.1	1.0	131	19.4
CEN	10:32	4.8	5.0	4.7	51	7.2	0.1		131	19.3

Biological Samples Collected: None HA SCI LVS RPS LVI Other

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ TKN / TP / Nox / NH3 / TOC ☐ Other	☒ Ice ☐ H ₂ SO ₄	5259020	9/16	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ <2
Filtered Nutrients	☒ oP ☐ Field Filtered 0.45 um Filter	☐ Ice			
Chlorophyll	☒ CHLSUITE-W	☐ Ice			
BOD	☐ BOD-INHB ☒ BOD-UNIN	☐ Ice			
Physical/Aggregate	☒ TSS / Turbidity / Alkalinity / Color ☐ Other	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococcus ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-LIHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other			

Notes:

Flow - 0.80 m/s (flow meter)
0.55 #leaf method
(=1.64 f/s) em

Place Label Here
(If Available)

Signature: Matt Seidl

Date: 3/3/16

Field Parameters Entered into LIMS: em 03/30/2016

Field Parameters QC in LIMS: 1/20/16

Date Migrated to STORET: 11/8/16
(Initials/Date)

Field Sheets Scanned/Saved: 1/20/16
(Initials/Date)

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

SAMPLE ID 645E088 ORG ID 21FLWPP LATITUDE _____
 COUNTY Hartford STORET # 645E088 LONGITUDE _____
 DATE 3/3/16 TIME 1045 SAMPLING AGENCY 21FLWPP
 SITE NAME Kissimmee @ PC33
 FIELD ID/NAME V.S. + 76030 RECEIVING BODY OF WATER lake O. Ketchikan

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) ☐ <u>25</u> <u>50</u> <u>25</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u> <u>0</u>							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 <u>40</u> m wide _____ m/s <u>0.5</u> m/s _____ m/s _____ m deep <u>2.3</u> m deep _____ m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>400</u> Right Bank: <u>100</u>				Hydrologic Modification Score (per FT 3101) ☐			
High Water Mark: <u>0.2</u> + <u>2.5</u> = <u>2.7</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 % Coverage ☐ INVERT # Times Sampled ☐ PERI # Times Sampled			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>19.4</u> <u>7.1</u> <u>4.7</u> <u>51</u> <u>131</u> <u>0.1</u> <u>1.0</u> Mid: _____ Bottom: <u>1.8</u> <u>19.3</u> <u>7.2</u> <u>4.7</u> <u>51</u> <u>131</u> <u>0.1</u> <u>2.3</u> Meter ID: <u>1.1 GUS</u>		
Woody Debris (Snags) <u>1</u> Undercut Banks / Roots <u>1</u> Leaf Packs or Mat Aquatic Vegetation <u>3</u> Rock or Shell Rubble.. Sand..... Mud / Muck / Silt Other Other			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>5254000</u> Exp: <u>4/6</u>		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☐ ☐ ☐ Aquatic Plants: ☐ ☐ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>River</u>			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.		
SAMPLING TEAM <u>A. Hurley</u> <u>M. Senell</u>			SIGNATURE: <u>M. Senell</u> DATE: <u>3/3/16</u>		

HA# 13605
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

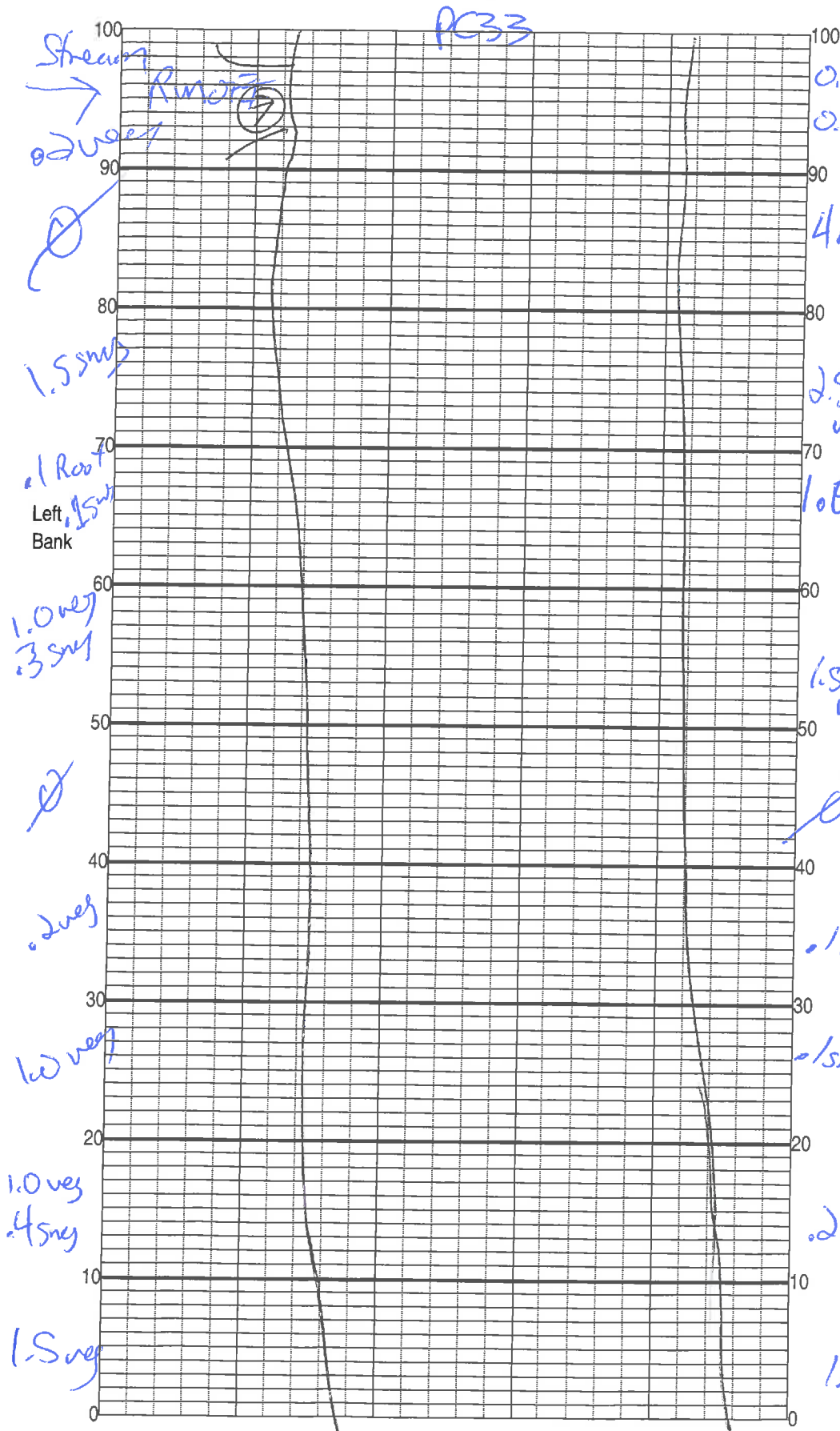
SAMPLING AGENCY: <u>21FI WPRB</u>	STORET STATION NUMBER: <u>64SE6088</u>	DATE (MM/DD/YY): <u>03/05/2016</u>	RECEIVING BODY OF WATER: <u>Lake Okechobee</u>
REMARKS: <u>tr p-76030</u>	COUNTY: <u>Highland</u>	LOCATION: <u>Restored Kissimmee @ PC33</u>	FIELD ID/NAME: <u>64SE6088</u>

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>7</u>	20 19 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 5 4 3 2 1
Water Velocity <u>20</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 _____ Primary Score <u>11</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 Artificial Channelization <u>11</u>	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 <u>10</u> Left Bank <u>10</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 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 <u>9</u> Left Bank <u>9</u> Secondary Score _____	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

112 TOTAL SCORE

Date: <u>3/3/16</u>	Analyst: <u>Hurley</u>	Signature: <u>[Signature]</u>
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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: 64 SE 0081 Restored Kissimmee
Date: 3/3/2016
Sampler: Hurley

100 m: Latitude _____
Longitude _____
0 m: Latitude 27.76030
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐	Snags	_____ %
☐	Roots/undercut banks	_____ %
☐	Leaf Packs (or mats)	_____ %
☐	Aquatic Macrophytes	_____ %
☐	_____	_____ %
☐	_____	_____ %
☒	Pools	total # observed = _____ # range expected = _____

Average width 40 m
Average depth 4 m

Velocity measured at 100 meter mark.

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:

12.9 v

19.5 m²

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

Waterbody: Kissimmee Date: 3/3/16 County: Highlands Storet Number: 0550088
 Analyst: Matthew Serell Signature: Matthew Serell

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>				X	X	X	X	X	X	X		<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>											
<i>Chara</i>												<i>Panicum repens</i>											
<i>Cicuta maculata</i>												<i>Panicum rigidulum</i>											
<i>Cladium jamaicense</i>												<i>Pistia stratioides</i>											
<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>Pontederia cordata</i>											
<i>Diodia virginiana</i>												<i>Potamogeton illinoensis</i>											
<i>Eichhornia crassipes</i>												<i>Ruellia simplex</i>											
<i>Eleocharis (wispy viviparus)</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>												<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>												<i>Sabal palm</i>											
<i>Ludwigia repens</i>												<i>Acer rubrum</i>											
<i>Luziola fluitans</i>												<i>Quercus sp.</i>											
<i>Baccharis sp</i>												<i>Salix</i>											
												<i>pern</i>											
												<i>Mikania Scaberr</i>											
												<i>fem 2</i>											
												<i>Echinocloa murex</i>											
												<i>Schous Terebinthina</i>											
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																							

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Harp KISS. mace @ DC33</u>					County: <u>Highland</u>		Date: <u>3/3/2006</u>		Investigators: <u>Matt Sed C</u> <u>Ashley K. Kline</u>		
STORET Station Number: <u>45E0081</u>											

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

Secchi depth	25
Estimated?	

# points ranked 4-6	0
total points assessed	22
% 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-2016-08-04-66	

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

Trip #76030
 RPSID # 8056

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%.