



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

January 2016

Data Qualified?
Yes / No

STORET Station Name: Hatchineha Canal 200 A S of Cypress Date: 2/14/16
(mm/dd/yyyy)
STORET Station ID: G4CE0064 Latitude: 28.0556
(Decimal Degrees)
WBID: 1472 D RQ: 2016-02-08-32 ORG ID: 21FLUEN Longitude: -81.3393
(Decimal Degrees)
Receiving Body of Water: Lk. Hatchineha Field ID: G4CE0064 County: Osceola

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection	Sampling Equipment		
Terry Riordan									☒ Sample Container	☐ Van Dorn	☐ Pole
Kate Williams									☐ 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 Boop</u> Photos: Yes / No									Tide Falling: Yes / No / <u>NA</u>		

Field Sample

Time Zone	Time	Total Depth (m)	Sample Depth	Temp (°C)	DO (mg/L)	DO (%SAT)	COND (µmhos/cm)	Salinity (ppt)	pH	Secchi Disk (m)
EST	1045	5.0	0.3	17.3	9.6	100	155	0.07	8.2	
CEN			4.5	17.0	9.5	98	156	0.07	7.9	

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 µm 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-UHERB-AA ☐ W-GLYPH		☐ Ice ☐ Other			
Place Preservative Sticker(s) Here (if Available)						

QA/QC Sample Information

Duplicate

Time Zone: EST CEN		Sample Depth (m): _____		Field ID: _____	
Time: _____		Total Depth (m): _____			
Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☐ TKN / TP / Nox / NH3 / TOC ☐ Other _____	☐ Ice ☐ H ₂ SO ₄			☐ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☐ oP ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (If Available)		
Chlorophyll	☐ CHLSUITE-W	☐ Ice			
BOD	☐ BOD-INHB ☐ BOD-UNIN	☐ Ice			
Physical/Aggregate	☐ TSS / Turbidity / Alkalinity / Color ☐ Other _____	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other _____			

Blank

Time Zone: EST CEN		Time: _____		Field ID: _____		Location: _____	
☐ Field Blank ☐ Equipment Blank ☐ Field Cleaned Equipment Blank		Equipment ID _____					
Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check		
Preserved Nutrients	☐ TKN / TP / Nox / NH3 / TOC ☐ Other _____	☐ Ice ☐ H ₂ SO ₄			☐ < 2		
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2		
Filtered Nutrients	☐ oP ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (If Available)				
Chlorophyll	☐ CHLSUITE-W	☐ Ice					
BOD	☐ BOD-INHB ☐ BOD-UNIN	☐ Ice					
Physical/Aggregate	☐ TSS / Turbidity / Alkalinity / Color ☐ Other _____	☐ Ice					
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice					
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Ice ☐ Other _____					

Notes:	Date: 02/16/16	G4CE0064 Field ID ↑ STORET ↓ G4CE0064
	Time: 1045	
	RQ-2016-02-08-32	
Signature: <i>Kullama</i>	Date: 2/16/16	

Field Parameters Entered into LIMS: MLL 2/23/16 (Initials/Date) Field Parameters QC in LIMS: RL 3-2-16 (Initials/Date)

Date Migrated to STORET: KWW 3/1/16 (Initials/Date) Field Sheets Scanned/Saved: _____ (Initials/Date)

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

SAMPLE ID 15773 ORG ID _____ LATITUDE _____
 COUNTY Osceola STORET # 64CE0064 LONGITUDE _____
 DATE 2/16/16 TIME _____ SAMPLING AGENCY FDBP
 SITE NAME Hatzlineha Canal
 FIELD ID/NAME 64CE0064 RECEIVING BODY OF WATER LK. Hatzlineha

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>10</u> <u>90</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>47</u> m wide m/s <u>0.04</u> m/s m/s m deep <u>5.0</u> m deep m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>0</u> Right Bank: <u>0</u>				Hydrologic Modification Score (per FT 3101) <u> </u>					
High Water Mark: <u>1.0</u> + <u>5.0</u> = <u>6.0</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 Woody Debris (Snags) ☐ ☐ ☐ Undercut Banks / Roots ☐ ☐ ☐ Leaf Packs or Mat ☐ ☐ ☐ Aquatic Vegetation ☐ ☐ ☐ Rock or Shell Rubble.. ☐ ☐ ☐ Sand..... ☐ ☐ ☐ Mud / Muck / Silt ☐ ☐ ☐ Other ☐ ☐ ☐ Other ☐ ☐ ☐			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>17.3</u> <u>8.2</u> <u>9.6</u> <u>100</u> <u>155</u> <u>0.07</u> <u>0.6</u> Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Bottom: <u>4.5</u> <u>17.0</u> <u>7.9</u> <u>9.5</u> <u>98</u> <u>156</u> <u>0.07</u> <u>5.0</u> Meter ID: <u>Betty Boop</u>			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____ 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) ☒ <u>canal</u>		
AMBIENT FIELD CONDITIONS / NOTES: <u><2m² plants, no LVS</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.			SAMPLING TEAM <u>TR/KMW</u>			SIGNATURE <u>Kulliams</u>		
DATE: <u>2/16/16</u>								

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

SAMPLING AGENCY:		STORET STATION NUMBER: <u>G4CE0064</u>	DATE (MM/DD/YY): <u>2/16/14</u>	RECEIVING BODY OF WATER: <u>Lk. Hatzlineha</u>
REMARKS:	COUNTY: <u>Osceola</u>	LOCATION: <u>Hatzlineha Canal</u>	FIELD ID/NAME: <u>G4CE0064</u>	

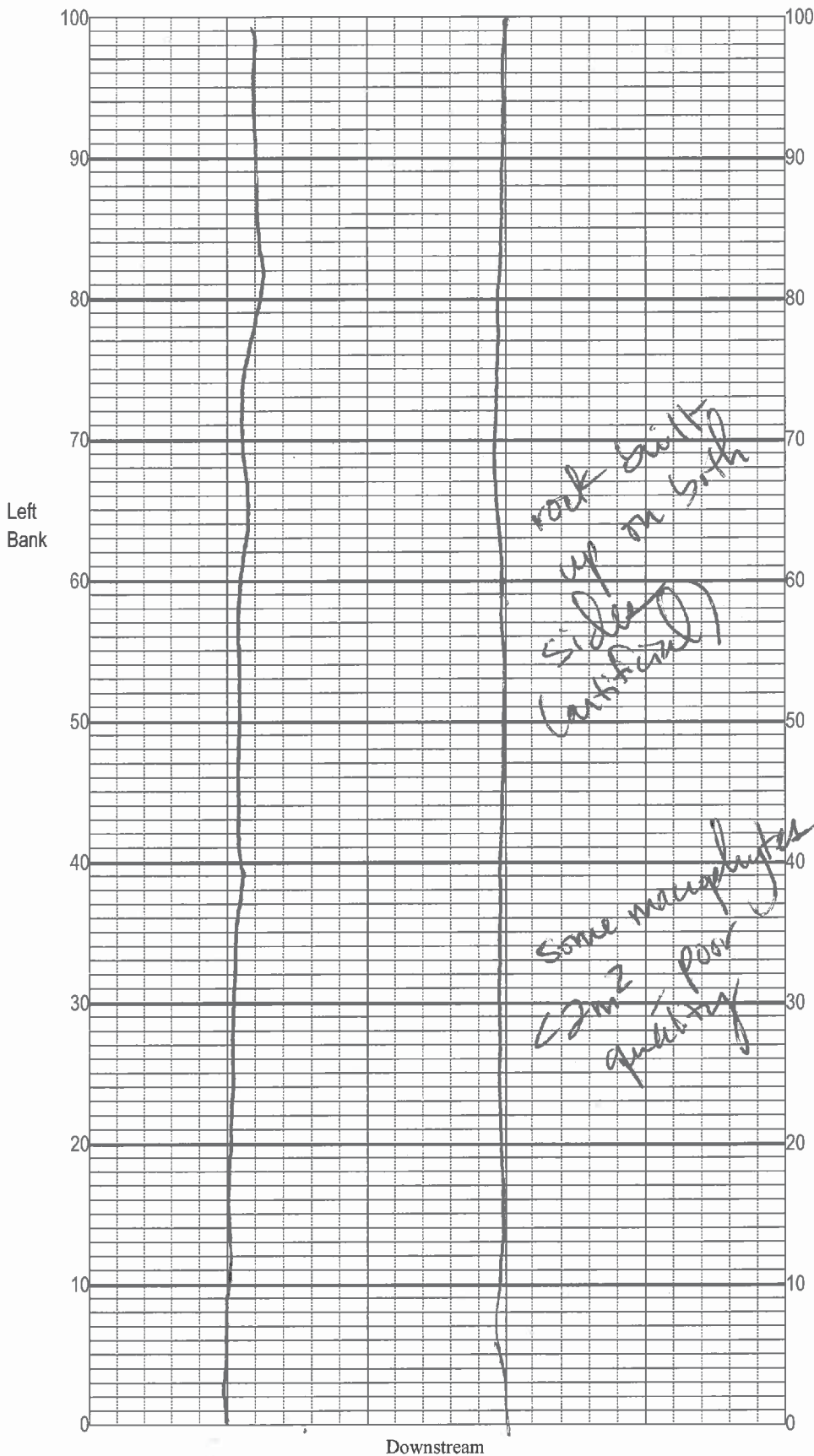
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>1</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>1</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>4</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>3</u> ----- Primary Score <u>9</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>1</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.	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 <u>9</u> Left Bank <u>9</u>	10 9	8 7 6	5 4	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	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 <u>3</u> Left Bank <u>3</u>	10 9	8 7 6	5 4	3 2 1
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 <u>2</u> Left Bank <u>1</u> ----- Secondary Score <u>20</u>	10 9	8 7 6	5 4	3 2 1

37

TOTAL SCORE

Date: <u>2/16/14</u>	Analyst: <u>Kate Williams</u>	Signature: <u>K Williams</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: Hatchers
Date: 2/16/16
Sampler: L. Williams

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

Hydrilla, Ceratophyllum
P. repens? (sprayed?)
P. geniculatum, Taxodium
(planted)

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Hatchineha Canal County: Osceola Date: 2/16/16 Investigators: TR/KMW

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

STORET Station Number: 64CE0004

Secchi depth 0.6
Estimated?

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-

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%.