



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

Data Qualified?
Yes / No

January 2019

WIN Station Name:

Apalachicola River 500m from Lola Landing Boat Ramp
Apalachicola River 375F-66 Date: 10/24/2019
(mm/dd/yyyy)

WIN/ Field ID:

G2TLHR0010-66 G2TLHR0044 WBID: 375F

Latitude:

30.16074
(Decimal Degrees)

County:

Liberty/Gadsden-66 Calhoun

ORG ID:

21FLTLHR

Longitude:

85.13677
(Decimal Degrees)

Receiving Body of Water:

Gulf of Mexico

RQ- 2019-06-24-36

Sampling Team Members

WQ Measurements
Sample Collection
Documentation
Preservation
Preservation Check

Sampling Equipment

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

Depth Measured with
Equipment ID

Collection Method

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

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded

Meter ID# 153484

Matrix: Fresh / Marine / DI

Photos: Yes / No

Flow: No Flow / Intestinal / Flowing / NA

Tide: Rising/ Falling/ Slack/ NA

Tide Times: High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPT)	Sp COND (µmhos/cm)	Temp. (C°)
EST	10:30 H+6	4.8	0.3	0.8	7.80	89.7	7.18	0.07	154.3	22.3
CEN	10:35		4.3	0.8	7.71	88.5	7.08	0.07	153.4	22.2

Biological Samples Collected: None HA SCI RPS Algae ID LVS LVI Other:

SBIO ID Numbers: SBIO-ID: 80424 HA-ID: 16351 RPS-ID: 9470 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	SA9203100	7/22/20	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <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-CHC / W-COLOR / W-SO4-IC / W-TDS	☐ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-BR-IC / 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-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-E8321-DI ☐ W-PCL-SQ-R ☐ W-E8321-MS ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes:

Place Label Here

Signature:

CK-3

Date:

10/24/2019

LIMS EVENT ID:

WIN Import ID:

Enter Field Parameters, Verify Station ID In LIMS DMT:

QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets

CK 10/28/2019
(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data In WIN:

(Initials/Date)

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

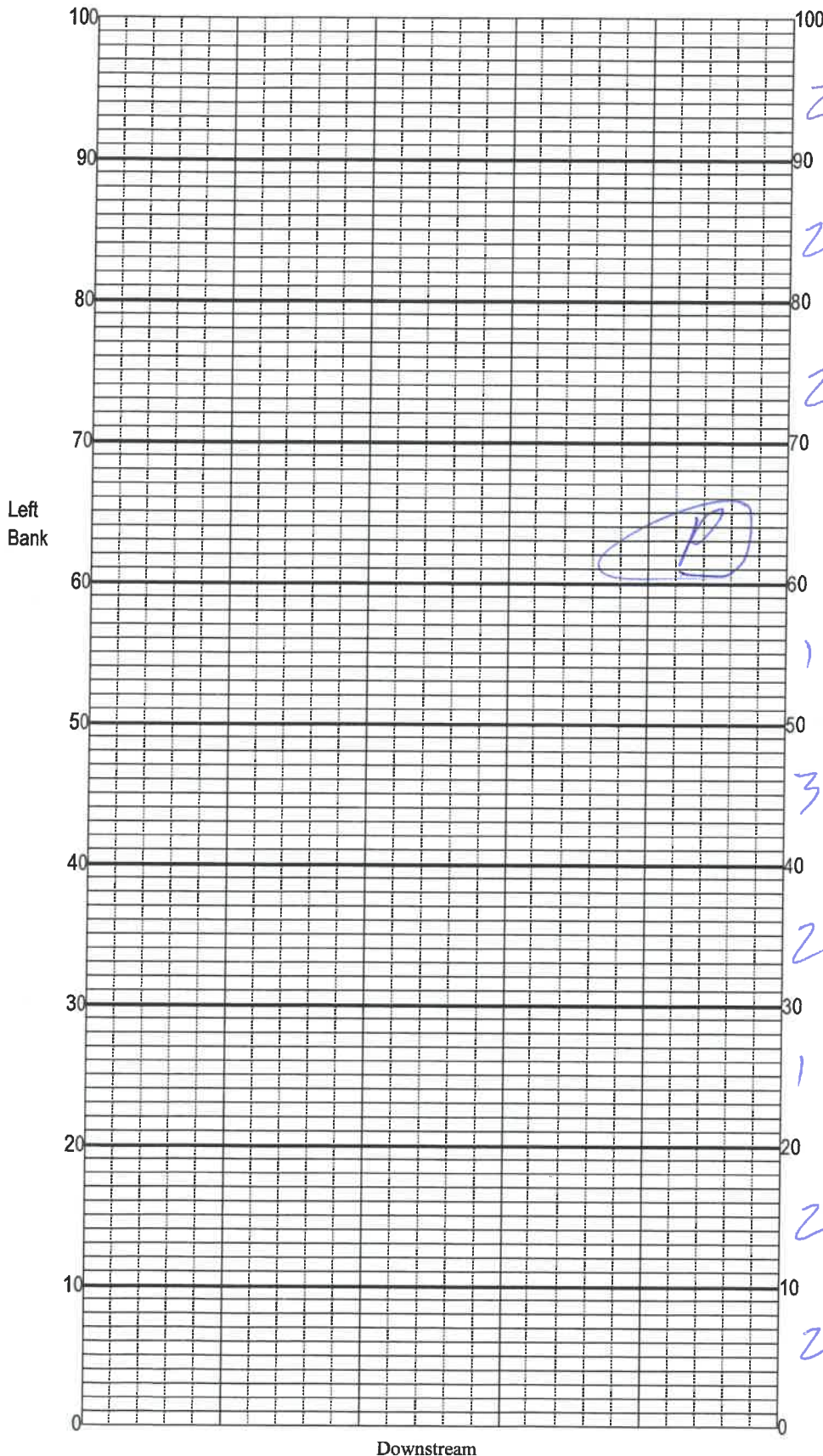
SAMPLING AGENCY: <u>21FLTLHR/8034</u>		STORET STATION NUMBER: <u>62TLHR00100</u>	DATE (MM/DD/YY): <u>10-24-19</u>	RECEIVING BODY OF WATER: <u>Gulf of Mexico</u>
REMARKS:	COUNTY: <u>Liberty/Calhoun</u>	LOCATION: <u>Apalachicola River 375F</u>	FIELD ID/NAME:	

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity <u>3</u> <u>816</u>	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 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>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 <u>13</u> ----- Primary Score <u>37</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>20</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>7</u> Left Bank <u>9</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>10</u> Left Bank <u>10</u> ----- Secondary Score <u>76</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

113 76 **TOTAL SCORE**

Date: <u>10-24-19</u>	Analyst: <u>Chris Green</u>	Signature: <u>Chris Green</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: G2TLHROO+044
Date: 10/24/2019
Sampler: Chris Green

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

Substrates: Code key, draw proportionate habitat abundance. %

<u>5</u>	Snags	<u>1.3</u>
<u>R</u>	Roots/undercut banks	<u>0</u>
<u>L</u>	Leaf Packs (or mats)	<u>0</u>
<u>A</u>	Aquatic Macrophytes	<u>0</u>
<u>0</u>	<u>rock</u>	<u>0</u>
<u>P</u>	Pools	total # observed = <u>1</u> # range expected = <u>0-1</u>

Average width 150 m
Average depth 4.8 m

Velocity measured at .33 meter mark.

WQ & chemistry taken at 0 meter mark.

Habitat Smothering: 5.14
Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability: L-9 - R-7
Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width: >18
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

175 - 1.3%

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

SAMPLE ID _____ ORG ID 21FLTLHR LATITUDE _____
 COUNTY Liberty/Calhoun STORET# 62TLHR0010W 44 LONGITUDE _____
 DATE 10-24-2019 TIME 10:50 SAMPLING AGENCY 8034
 SITE NAME Apalachicola River 375F
 FIELD ID/NAME 62TLHR0010W 44 RECEIVING BODY OF WATER Gulf of Mexico

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>218</u> Right Bank: <u>218</u>				Hydrologic Modification Score (per FT 3101) _____			
High Water Mark: <u>3.0</u> + <u>4.8</u> = <u>7.8</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 <table border="1"> <thead> <tr> <th>Depth (M)</th> <th>Temp. (°C)</th> <th>pH (SU)</th> <th>D.O. (MG/L)</th> <th>D.O. Sat (%)</th> <th>Cond. (UMHO/CM)</th> <th>Salinity (PPT)</th> <th>SECCHI (M)</th> </tr> </thead> <tbody> <tr> <td>Top: <u>0.3</u></td> <td><u>22.3</u></td> <td><u>7.18</u></td> <td><u>7.80</u></td> <td><u>89.7</u></td> <td><u>154.3</u></td> <td><u>0.07</u></td> <td><u>0.8</u></td> </tr> <tr> <td>Mid: _____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Bottom: <u>4.3</u></td> <td><u>22.2</u></td> <td><u>7.08</u></td> <td><u>7.71</u></td> <td><u>88.5</u></td> <td><u>153.4</u></td> <td><u>0.07</u></td> <td><u>4.8</u></td> </tr> </tbody> </table> Meter ID: <u>Pro DSS 153484</u>				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>22.3</u>	<u>7.18</u>	<u>7.80</u>	<u>89.7</u>	<u>154.3</u>	<u>0.07</u>	<u>0.8</u>	Mid: _____	_____	_____	_____	_____	_____	_____	_____	Bottom: <u>4.3</u>	<u>22.2</u>	<u>7.08</u>	<u>7.71</u>	<u>88.5</u>	<u>153.4</u>	<u>0.07</u>	<u>4.8</u>
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Woody Debris (Snags) <u>1.3</u> Undercut Banks / Roots <u>0</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>0</u> Rock or Shell Rubble.. <u>0</u> Sand..... <u>98.7</u> Mud / Muck / Silt _____ Other _____ Other _____		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: _____		Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐ Color Tannic ☒ Green (Algae) ☒ Clear ☐ Other (Specify) _____ Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐																																	
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☐ ☒ Aquatic Plants: ☒ ☐ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐		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 Chris Green / Jade Bortchett SIGNATURE: Chris DATE: 10-24-2019

T	WIN 62TLHROO	66 44
Store Number:		

Comments: less than $2m^2$ / NO veg.

[illegible]

FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

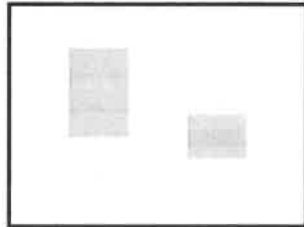
5% Macrophyte Coverage



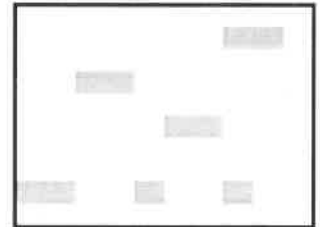
5% Macrophyte Coverage



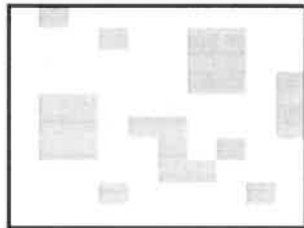
10% Macrophyte Coverage



10% Macrophyte Coverage



25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



Apalachicola River toba

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: G2TLHR0010 44 County: Liberty/Kalhou Date: 10-24-19 Investigators: Chris Green

STORET Station Number: WIN G2TLHR0010

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	~			60	1			
	2					2			
	3		✓			3		✓	
	4		✓			4		✓	
	5		✓	0		5		✓	0
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
10	1				70	1			
	2					2			
	3		✓			3		✓	
	4		✓			4		✓	
	5		✓	0		5		✓	0
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
20	1				80	1			
	2					2			
	3		✓			3		✓	
	4		✓			4		✓	
	5		✓	0		5		✓	0
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
30	1				90	1			
	2					2			
	3		✓			3		✓	
	4		✓			4		✓	
	5		✓	0		5		✓	0
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
40	1				100	1			
	2					2			
	3		✓			3		✓	
	4		✓			4		✓	
	5		✓	0		5		✓	0
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
50	1				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%.				
	2								
	3		✓						
	4		✓						
	5		✓	0					
	6		✓						
	7		✓						
	8		✓						
	9		✓						

Secchi depth	0.8
Estimated?	NO

# 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-2019-06-24-36	

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