



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2020

Meter Passed End

of Day CCV

Yes No

WIN Station Name: PETERS CREEK CULVERT SR 315

Peters Creek at CR315

Date: 02-12-2020

(mm/dd/yyyy)

WIN/ Field ID: 20030388

WBID: 2444

Latitude: 29.9445277

(Decimal Degrees)

County: Clay

ORG ID: 21 FLA

Longitude: -81.742861

Receiving Body of Water: Black Creek

RQ-2020- 02-10-15

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Brian Davis	☒	☒	☒	☒	☒
Kelly McDonald	☒	☒	☒	☒	☒
Amy Kalmbacher	☒	☒	☒	☒	☒

Sampling Equipment	
☒ Sample Container	☐ Van Dorn
☐ Syringe	☐ Pole
☐ Dipper	☐ Other
Depth Measured with <u>Stitch</u>	
Equipment ID <u>0460</u>	

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

Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded		Meter ID# <u>PRODSS Stich</u>	
Photos: Yes / <u>No</u>	Flow: No Flow / <u>Flowing</u> / NA	Tide: Rising/ Falling/ Slack/ <u>NA</u>	Tide Times: High Low
Biological Samples Collected: None <u>HA</u> <u>SCI</u> RPS Algae ID <u>LVS</u> LVI Other:			
SBIO ID Numbers:	SBIO-ID:	HA-ID:	RPS-ID:
Macrophyte-ID:		LIMS#:	
Notes:			

Duplicate Sample	
Time Zone: EST CEN Time: _____	Field ID: _____ (WIN ID_DUP)
WIN DMT Activity ID: _____	

Blank	
Time Zone: EST CEN Time: _____	Field ID: _____ (Blank Type_DDMMYYYY)
DI Source: _____	Location: _____
☐ Field Blank ☐ Equipment Blank ☐ Field Cleaned Equipment Blank	Equipment ID: _____

LIMS EVENT ID: _____ WIN Import ID: _____

Enter Field Parameters, Verify Station ID in LIMS DMT: _____ (Initials/Date) QC Station ID, Field Parameters in LIMS DMT: _____ (Initials/Date)

Scan/Save Field Sheets _____ (Initials/Date) Migrate Data to WIN: _____ (Initials/Date) Verify Data in WIN: _____ (Initials/Date)



RQ-2020- 02-10-15

Customer: 21 FLA

Project ID: Peters Creek SCI

Collected By: B. Davis, K. McDonald, A. Kalmbacher

Field Report Prepared By: K. McDonald

Sampling Agency: FDEP / NEROC

Peters Creek at CR315

WIN ID/Field ID:



20030388

PETERS CREEK CULVERT SR 315

Comments:

Contains: 1:1 HNO3
Lot No.: NA918080
Expires: 07/08/20
See Safety Data Sheet (SDS)

Contains: 1:1 H2SO4
Lot No.: SA9301030
Expires: 10/28/20
See Safety Data Sheet (SDS)

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Lot No.: SA9301030
Expires: 10/28/20
See Safety Data Sheet (SDS)

Matrix: ☒ Fresh ☐ Marine

(Check one)

☐ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTH)
2/12/2020	0945	8.00	85.4	18.6	5.67	0.1	0.2	0.2	61.3	0.03
	EST / CST						☒ VOB (S)			

Cental Lab please use top row for login purposes

EST / CST

Parameter Suite	Parameter Methods	Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	☒ W-NH3 / ☒ W-NO2NO3 / ☒ W-TKN / ☒ W-TOC / ☒ W-S-A-TP	☒ Ice ☒ H2SO4	☒ <2	1	A
	Lot # SA9301030 Exp: 10/28/20				
Metals (P-500ML)	☒ W-ICPMS ☒ W-ICP ☒ W-HARD	☒ Ice ☒ HNO3	☒ <2	1	A
	Lot # NA9189080 Exp: 7/8/20				
Filtered Nutrients (P125ML)	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice		1	A
	Filter Lot # R7KA86875 Syringe Lot #				
Chlorophyll (BP-1L)	☒ CHLSUITE-W	☒ Ice		1	A
Physical/Aggregate (Fresh) (P-1L)	☒ Alkalinity / ☒ W-F / ☒ W-TSS / ☒ TURBIDITY / ☒ W-CH-IC / ☒ W-COLOR / ☒ W-SO4-IC / ☒ W-TDS	☒ Ice		1	A
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / ☐ W-BR-IC / ☐ W-F / ☐ W-TSS / ☐ TURBIDITY	☐ Ice			
Macroinvertebrates (PJ-2L)	☒ MI-FW-QLDC	☒ Formalin		2	B
Periphyton (PT-50ML)	☐ ALGAE-ID	☐ Ice		1 Sent to ALS	A
Microbiology (Contract Lab Bottle)	☒ E Coli ☐ F Coli ☐ Enterococci	☒ Ice		1	A
Molecular (QPCR-P-500ML)	☒ PCR-HF183 ☒ PCR-BacR ☒ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD ☐ See Notes	☒ Ice		1	A
Tracers (BG-500ML)	☒ W-E8321-DI ☒ W-E8321-MS	☒ Ice		1	A
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☒ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-SQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution)	☐ Ice		3	A

Name:

Signature:

Date:

Kelly McDonald

Kelly McDonald

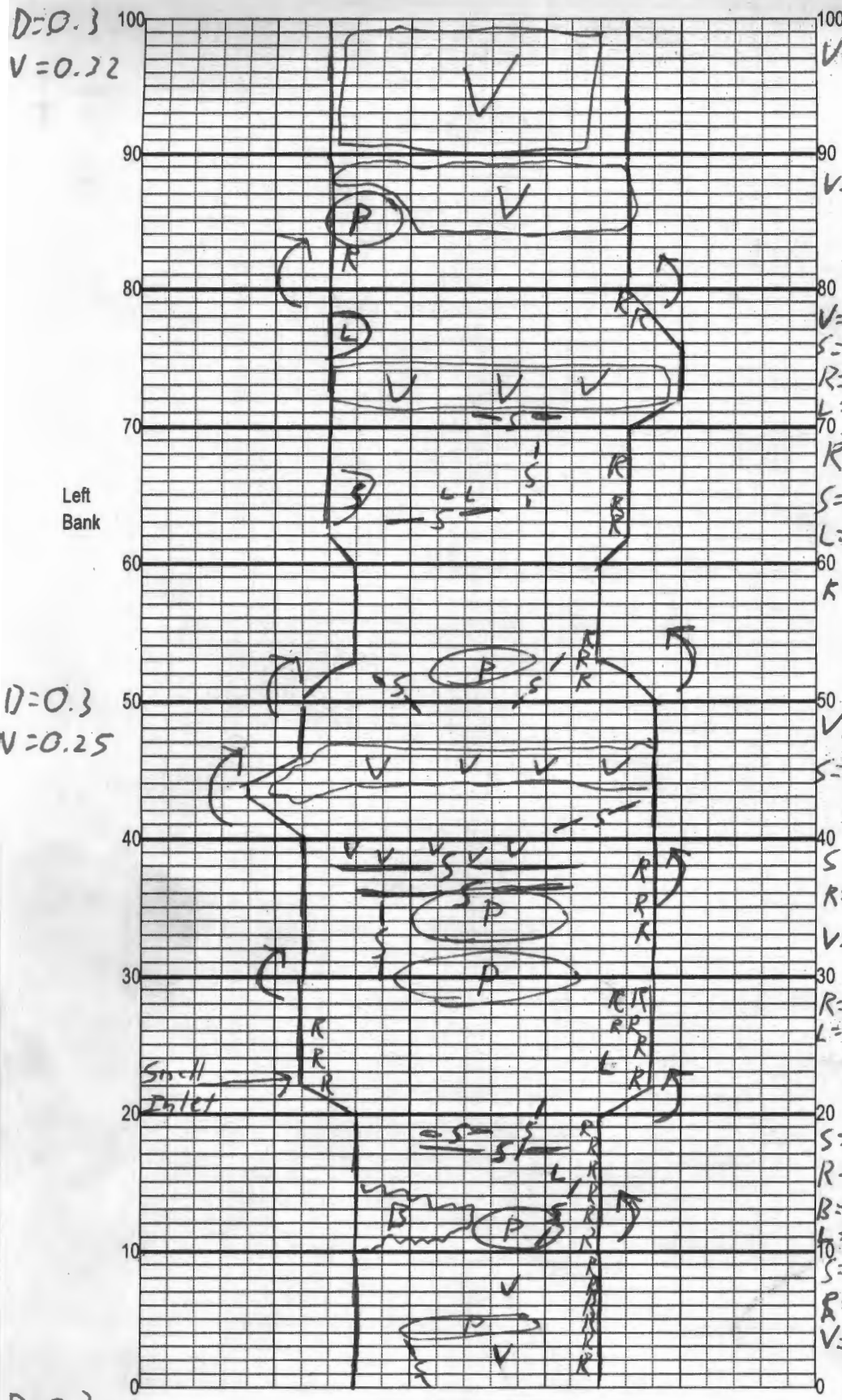
2/12/2020

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

[illegible]

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



Location: Peters Cr @ 315
 Date: 2/12/20
 Sampler: B Davis

100 m: Latitude	
Longitude	
0 m: Latitude	
Longitude	
Substrates: Code key, draw proportionate habitat abundance.	
<u>S</u> Snags	<u>3</u> %
<u>R</u> Roots/undercut banks	<u>5</u> %
<u>L</u> Leaf Packs (or mats)	<u>0.5</u> %
<u>V</u> Aquatic Macrophytes	<u>12.2</u> %
<u>B</u> Rock	<u>0.6</u> %
<u>P</u> Pools	total # observed = <u>6</u> # range expected = <u>6</u>
Average width	<u>1.5</u> m
Average depth	<u>0.3</u> m
Velocity measured at	<u>0.50, 1.00</u> meter mark.
WQ & chemistry taken at	<u>0</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:
 <2 M of Macrophytes was observed while doing the LVS? YES or NO

S = 4.5	3%
R = 7	5%
L = 0.75	0.5%
V = 18.25	12.2%
B = 1.0	0.6%

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

T = 21.3%

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

SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 20030388	DATE (MM/DD/YY): 2/12/20	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Clay	LOCATION: Petels Creek @ CR 315	FIELD ID/NAME:	

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>15</u>	20 19 18 17 16	(15) 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>13</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>18</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>15</u> Primary Score <u>60</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>19</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>6</u> Left Bank <u>6</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>10</u> Left Bank <u>10</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>9</u> Left Bank <u>9</u> Secondary Score <u>69</u>	10 9	8 7 6	5 4	3 2 1

129

TOTAL SCORE

Date: 2/12/20	Analyst: Brian Davis	Signature: B-D
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID 21FLA LATITUDE 29.9445277
 COUNTY Clay STORET# 20030388 LONGITUDE -81.742861
 DATE 2/12/20 TIME 945 SAMPLING AGENCY PEAR NEROC
 SITE NAME Peters Creek Culvert SR 315
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Governors Creek

RIPARIAN ZONE / STREAM FEATURES

Meter ID: Stitch

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ 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 <u>0.3</u> m/s _____ m/s _____ m deep <u>0.3</u> m deep _____ m deep			
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) ☐					
High Water Mark: <u>0.5</u> + <u>0.3</u> = <u>0.8</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></th> <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:</td> <td><u>0.1</u></td> <td><u>18.6</u></td> <td><u>5.67</u></td> <td><u>8.00</u></td> <td><u>85.4</u></td> <td><u>61.3</u></td> <td><u>0.03</u></td> <td><u>VOB</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bottom:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><u>0.2</u></td> </tr> </tbody> </table>							Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:	<u>0.1</u>	<u>18.6</u>	<u>5.67</u>	<u>8.00</u>	<u>85.4</u>	<u>61.3</u>	<u>0.03</u>	<u>VOB</u>	Mid:									Bottom:								<u>0.2</u>
	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)																																				
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Mid:																																												
Bottom:								<u>0.2</u>																																				
Woody Debris (Snags) <u>3</u> <u>5</u> Undercut Banks / Roots <u>5</u> <u>5</u> Leaf Packs or Mat <u>0.5</u> <u>1</u> Aquatic Vegetation <u>12.2</u> <u>5</u> Rock or Shell Rubble.. <u>0.6</u> <u>1</u> Sand..... <u>3</u> Mud / Muck / Silt Other Other			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) _____			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐																																						
			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			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) _____																																						
			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																									
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☐ ☒ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☐ ☐ ☐ ☒ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			AMBIENT FIELD CONDITIONS / NOTES: <u>Open canopy due to season.</u> Hydrologic Disturbance Scoring ☐ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10 ☐ The antecedent hydrologic conditions have been met to my best knowledge.																																									
SAMPLING TEAM <u>B. Davis, Kelly McDonald</u>			SIGNATURE: <u>B. Davis</u>			<u>2/12/20</u>																																						

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Peters Cr @ SR 315</u>					County: <u>Clay</u>		Date: <u>2/12/20</u>		Investigators: <u>B Davis, K McDonald</u>		
STORET Station Number: <u>2003 0388</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					2					
	3					3					
	4					4					
	5			50		5			50		
	6					6					
	7					7					
	8					8					
	9					9					
10	1	N			70	1	N				
	2					2					
	3					3					
	4					4					
	5			50		5			50		
	6					6					
	7					7					
	8					8					
	9					9					
20	1	N			80	1	N				
	2					2					
	3					3					
	4					4					
	5			30		5			50		
	6					6					
	7					7					
	8					8					
	9					9					
30	1	N			90	1	N				
	2					2					
	3					3					
	4					4					
	5			50		5			30		
	6					6					
	7	5				7					
	8	N				8					
	9					9					
40	1	N			100	1	N				
	2					2					
	3					3					
	4					4					
	5			70		5			30		
	6	5				6					
	7	N				7					
	8					8					
	9					9					
50	1	N			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			25							
	6										
	7										
	8										
	9										

Secchi depth VOP
Estimated?

points ranked 4-6 3
total points assessed 99
% points ranked 4-6 3%

Check accompanying data collected at same site/date.

Algal mat sample ☒
Linear Veg Survey ☒
Habitat Assessment ☒
SCI/Biorecon ☒
Water sample ☒

RQ-2020-02-10-15

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

Canopy coverage estimated without Densiometer.