



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
☒ Yes / ☐ No

WIN Station Name: Horse Creek @ 547

Date: 9/15/2021

WIN/Field ID: G4CE0207

WBID: 1436

ENR: -

Latitude: 28.1755

County: POLK

Org ID: 21FLCEN

Longitude: -81.6

Receiving Body of Water: Kissimmee River

RQ: 2021-08-02-32

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Matt Bearden	x		x		
☒	Terry Riordan		x		x	x
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☐ Syringe	☐ Pole
Depth measured with: Meter	
Secchi Equipment ID:	
Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# SHRIMP TRAP					
Photos: YES		Flow: FLOW		Tide:		Tide Times: High: Low:					
Biological Samples Collected: ☐ None ☒ HA ☒ SCI ☒ RPS ☐ Algae ID ☒ LVS ☐ LVI Other:											
SBIO ID Numbers: SBIO 83265 MACROPHYTE 12001 RPS 9803						LIMS: 2276589					
Notes:											

Duplicate Sample

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

Blank

Time Zone: EST	Time: 1045	Field ID: FB_09152021 (Blank Type_DDMYYYY)
DI Source: Lab	Location: Central ROC	
DI Type: Field Blank	Equipment ID: _____	
DI Container (Name/ID): #8		DI Container Type: Carboy

LIMS EVENT ID: CEN-DIST-2021-09-17-06	WIN Import ID: 29648
Enter Field Parameters, Verify Station ID In LIMS DMT: EB 9/27/21 (Initials/Date)	QC Station ID, Field Parameters In LIMS DMT: KWM 11/16/21 (Initials/Date)
Scan/Save Field Sheets _____ (Initials/Date)	Migrate Data to WIN: KWM 11/16/21 (Initials/Date)
Verify Data In WIN: _____ (Initials/Date)	



RQ-2021-08-02-32

Customer: WQAP

Project ID: SMP

Collected By: Matt Bearden, Terry Riordan

Field Report Prepared By: Matt Bearden

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G4CE0207

Location: Horse Creek @ 547

Comments:

Matrix: Fresh

(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 (PPT)			
	1030 EST	3.32	41	26	6.65	0.25	0.4 ☒ VOB (S)	0.4	142.8	0.07			
9/15/2021							Central Lab please use top row for login purposes						
	EST												
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 #	SA1105060		Exp:	4/30/2022							
Metals (P-500ML)		☒ W-ICPMS ☒ W-ICP ☒ W-HARD				☒ Ice ☒ HNO3*		☒ <2	1	A			
		Lot #	NA0344060		Exp:	1/4/22							
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A			
		Filter Lot #	17135566										
		Syringe Lot #	1091364										
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A			
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-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 Lot #	10.50911HN		☒ Formalin			2	B			
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice							
Microbiology (Contract Lab Bottle)		☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab				☒ Ice			2	C			
Molecular (QPCR-P-500ML)		☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-DG3 ☐ PCR-GULL2 ☐ PCR-GFD				☐ Ice							
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		☐ Ice					
		W-PCL-TQ-R		W-CARB-AA (5 ml of MCAA** Buffer Solution)									
Phytoplankton/Periphyton						DTY-QN-C PKD-QN-BV		☐ Ice					
Name: Matt Bearden Terry Riordan					Signature:				Date: 9/15/21				

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution



RQ- 2021-08-02-32

Collected By: Matt Bearden, Terry Riordan

Customer: WQAP

Field Report Prepared By: Matt Bearden, Terry Riordan

Project ID: SMP

Sampling Agency: FDEP

BLANK



FieldID: FB 09152021

Comments:

Matrix: Field Blank

(Check one) ☐ COMPOSITE ☒ GRAB

Date

Time

DI Source: Lab

9/15/2021

1045

EST

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		
	Lot # _____ Exp: _____				
Metals (P-500ML)	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ H2SO4	☐ <2		
	Lot # _____ Exp: _____				
Filtered Nutrients (P125ML)	☐ W-PO4-F Filter ☐ Field Filtered 0.45 µm	☐ Ice			
	Filter Lot # _____				
	Syringe Lot # _____				
Physical/Aggregate (Fresh) (P-1L)	☐ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-IC / TDS	☐ Ice			
Physical/Aggregate (Marine) (P-1L)	☐ Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Tracers (BG-500ML)	☒ W-E8321-DI ☒ W-E8321-MS	☒ Ice		1	D
Pesticides (BG-500ML) (BG-1L)	☐ W-E8321-DI ☐ WE8321-MS ☐ W-PSNP-TQ ☐ W-CT-CL-R ☐ W-PCL-TQ-R ☐ W-CARB-AA (5 ml of MCAA** Buffer Solution) ☐	☐ Ice			
Name: Matt Bearden Terry Riordan		Signature:		Date: 9/15/21	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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

SAMPLE ID _____ ORG ID 21FLCEN LATITUDE 28.175532
 COUNTY Polk STORET # G4CE0207 LONGITUDE -81.598158
 DATE 9/15/21 TIME 1610 SAMPLING AGENCY Central ROC
 SITE NAME Horse Creek @ 547
 FIELD ID/NAME G4CE0207 RECEIVING BODY OF WATER LAKE HUTCHINHA

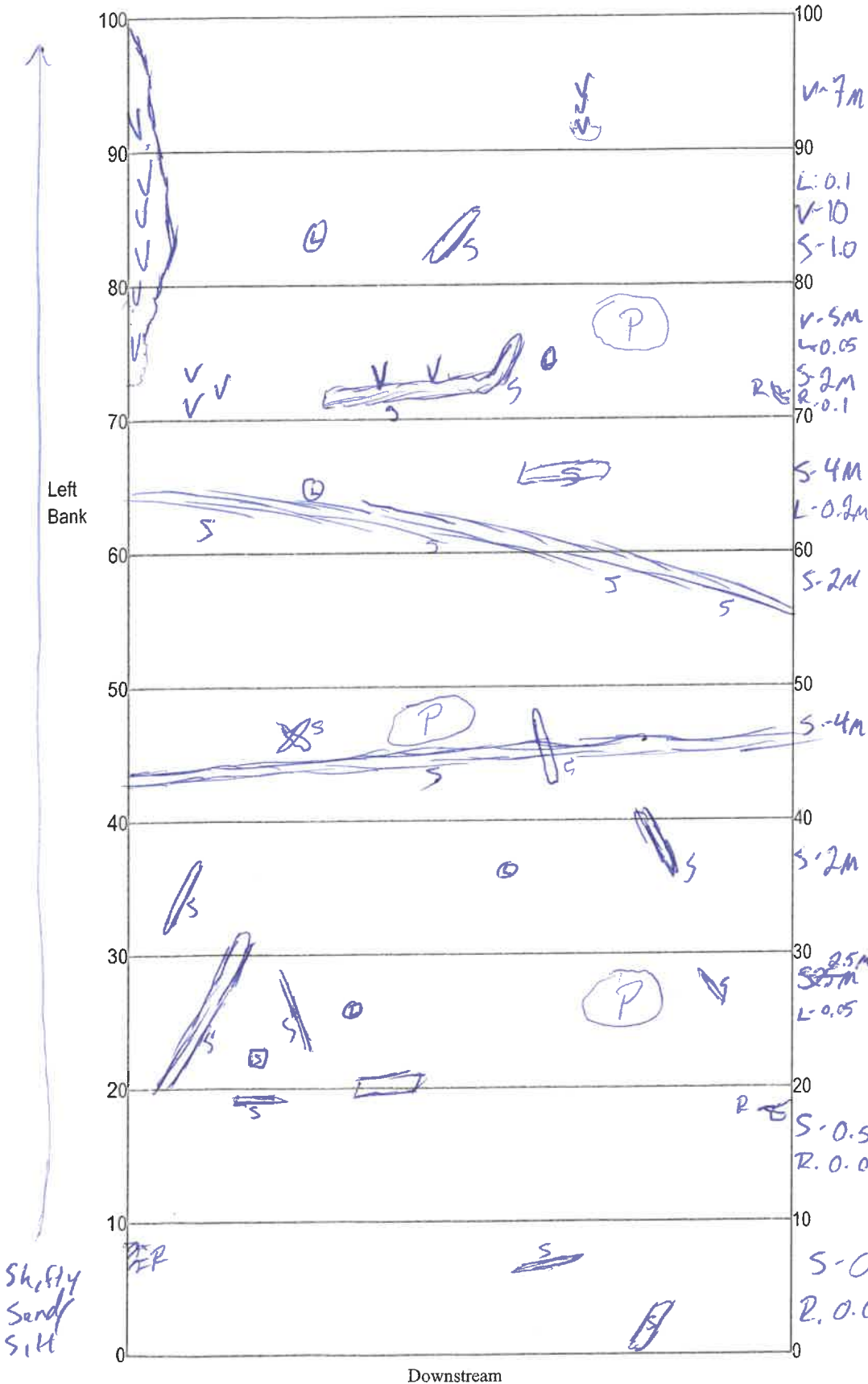
RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>50</u> Silviculture <u>35</u> Field/Pasture <u>30</u> Agricultural <u>10</u> Residential <u>5</u> Commercial <u>5</u> Industry <u>5</u> Other (Specify) <u>2.67</u>								Landscape Development Intensity Index (LDI) <u>2.67</u>	
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>5</u> m wide <u>1</u> m/s <u>0.25</u> m/s <u>1</u> m/s <u>1</u> m deep <u>0.4</u> m deep <u>1</u> m deep	
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u><6</u> Right Bank: <u>12-18</u>				Hydrologic Modification Score (per FT 3101) <u> </u>					
High Water Mark: <u>1.0</u> + <u>0.4</u> = <u>1.4m</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): <u> </u>			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>0.25</u></td> <td><u>26.0</u></td> <td><u>6.65</u></td> <td><u>3.32</u></td> <td><u>41.0</u></td> <td><u>142.8</u></td> <td><u>0.07</u></td> <td><u>0.4</u></td> </tr> <tr> <td>Mid:</td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td>☒ VOB</td> </tr> <tr> <td>Bottom:</td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>1</u></td> <td><u>0.4</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>0.25</u>	<u>26.0</u>	<u>6.65</u>	<u>3.32</u>	<u>41.0</u>	<u>142.8</u>	<u>0.07</u>	<u>0.4</u>	Mid:	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	☒ VOB	Bottom:	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>0.4</u>
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Woody Debris (Snags) <u>3.7</u> <u>7</u> <u> </u> Undercut Banks / Roots <u>0.04</u> <u>1</u> <u> </u> Leaf Packs or Mat <u>0.07</u> <u>2</u> <u> </u> Aquatic Vegetation <u>4.4</u> <u>7</u> <u> </u> Rock or Shell Rubble.. <u> </u> <u> </u> <u> </u> Sand..... <u>3</u> <u> </u> <u> </u> Mud / Muck / Silt <u> </u> <u> </u> <u> </u> Other <u> </u> <u> </u> <u> </u> Other <u> </u> <u> </u> <u> </u>			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐																																						
Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SA 1105060</u> Exp: <u>4/30/22</u>			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																						
Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: <u> </u> Exp: <u> </u>			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐																																									
ABUNDANCE <table border="1"> <thead> <tr> <th></th> <th>Not Obs.</th> <th>Rare</th> <th>Common</th> <th>Abundant</th> </tr> </thead> <tbody> <tr> <td>Periphyton:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Fish:</td> <td>☐</td> <td>☒</td> <td>☐</td> <td>☐</td> </tr> <tr> <td>Aquatic Plants:</td> <td>☐</td> <td>☐</td> <td>☒</td> <td>☐</td> </tr> <tr> <td>Iron/Sulfur Bacteria:</td> <td>☒</td> <td>☐</td> <td>☐</td> <td>☐</td> </tr> </tbody> </table>				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.																
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Periphyton:	☒	☐	☐	☐																																								
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SAMPLING TEAM <u>Mathew Bearden, Terry Riordan</u>			SIGNATURE: <u>Mathew B.L.</u>			DATE: <u>9/15/21</u>																																						

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



Location: G4CE0207
Horse Creek @ 547
 Date: 9/15/21
 Sampler: Matthew Bearden

100 m: Latitude 28° 10' 29.02"
 Longitude -81° 35' 48.85"
 0 m: Latitude 28° 10' 30.99"
 Longitude -81° 35' 51.78"

Substrates: Code key, draw proportionate habitat abundance.

☐ S	Snags	<u>3.7</u>
☐ R	Roots/undercut banks	<u>0.04</u>
☐ L	Leaf Packs (or mats)	<u>0.07</u>
☐ V	Aquatic Macrophytes	<u>4.4</u>
☐		
☐		
☐ P	Pools	total # observed = <u>3</u> # range expected = <u>2-4</u>

Average width 5 m
 Average depth 0.4 m

Velocity measured at 50 meter mark. 0.25

WQ & chemistry taken at 50 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:
 S: 18.6 m² 3.7%
 R: 0.2 m² 0.04%
 L: 0.35 m² 0.07%
 V: 22 m² 4.4%
8.21%

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

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

SAMPLING AGENCY: <u>Central ROC</u>		STORET STATION NUMBER: <u>G4CE0207</u>	DATE (MM/DD/YY): <u>9/15/21</u>	RECEIVING BODY OF WATER: <u>Lake Hotchkiss</u>
REMARKS:	COUNTY: <u>Polk</u>	LOCATION: <u>Horse Creek @ 547</u>	FIELD ID/NAME: <u>G4CE0207</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>9</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>8</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>15</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>11</u> ----- Primary Score <u>43</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 or straightening 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>8</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability → Right Bank <u>5</u> ← Left Bank <u>4</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody 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 woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>98</u> Left Bank <u>3</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>3</u> ----- Secondary Score <u>40</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

83

TOTAL SCORE

Date: <u>9/15/21</u>	Analyst: <u>Matthew Bearden</u>	Signature: <u>Matthew Bearden</u>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Horse Creek @ 547 County: Polk Date: 9/15/21 Investigators: M. Bearden, T. Borden

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

0 1 2 3 4 5 6 7 8 9 60 1 2 3 4 5 6 7 8 9 71

10 1 2 3 4 5 6 7 8 9 70 1 2 3 4 5 6 7 8 9 44

20 1 2 3 4 5 6 7 8 9 80 1 2 3 4 5 6 7 8 9 43

30 1 2 3 4 5 6 7 8 9 90 1 2 3 4 5 6 7 8 9 96

40 1 2 3 4 5 6 7 8 9 100 1 2 3 4 5 6 7 8 9 91

50 1 2 3 4 5 6 7 8 9 96

STORET Station Number: G4CE0207

Secchi depth 0.4
Estimated? N

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 X
Linear Veg Survey ✓
Habitat Assessment ✓
SCI/Biorecon ✓
Water sample ✓
RQ: 2021-08-02-32

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%.

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

Waterbody: Horse Creek Date: 9/15/21 County: Polk Storet Number: G4CK0309
 Analyst: Matthew Bearden Signature: Matthew Bearden

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m² 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	
Alternanthera philoxeroides	X	X	X	X	X	X	X	X	X	X		Micranthemum glomeratum											
Bacopa caroliniana												Micranthemum umbrosum											
Bacopa monnieri												Myriophyllum aquaticum											
Bidens mitis												Najas guadelupensis											
Boehmeria cylindrica												Nuphar luteum											
Centella asiatica												Orontium aquaticum											
Ceratophyllum demersum												Panicum hemitomon											
Chara												Panicum repens											
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides											
Colocasia esculenta												Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides											
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontedaria cordata											
Diodia virginiana												Potamogeton illinoensis											
Eichhornia crassipes												Ruellia simplex											
Eleocharis (wispy viviparous)												Sacciolepis striata											
Hydrilla verticillata												Sagittaria kurziana											
Hydrocotyle												Sagittaria lancifolia											
Hygrophila polysperma												Sagittaria latifolia											
Hymenocallis												Salvinia minima											
Lachnanthes caroliniana												Samolus parviflora											
Landoltia punctata												Saururus cernuus											
Lemna												Sparganium americanum											
Limnophila sessiflora												Typha											
Ludwigia leptocarpa												Vallisneria americana											
Ludwigia palustris												Zizania aquatica											
Ludwigia peruviana																							
Ludwigia repens																							
Luziola fluitans																							
												Whispy Hair plant											
												Potamogeton											
												Potamogeton											
												Potamogeton											
												Utricularia											
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																							