



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

February 2016

Data Qualified?
Yes / No

STORET Station Name: Weohyakapka Creek @ 800m N of 60

Date: 12/27/2016
(mm/dd/yyyy)

STORET Station ID: G4CE0108

Latitude: 27.87931

(Decimal Degrees)

WBID: 15730 RQ - 2016-12-12-25

ORG ID: 21FLCEN

Longitude: -81.40013

(Decimal Degrees)

Receiving Body of Water: Lk. Rosalie

Field ID: G4CE0108

County: Polk

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mike Linger		/	/	/	/	/
Mike Drennen		/	/	/	/	/

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>Boop / Non</u> Photos: Yes / <u>No</u>						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 (µmhos/cm)	Temp. (C°)
EST	13:49	0.3	2.3	7.3	84	7.3 ^{6.9} _{mk}	0.1	0.9	111	22.4
CEN		1.8		7.2	83	7.0 ^{6.9} _{mk}	0.1		111	22.4

Biological Samples Collected: None HA SCI LVS RPS LVI Other

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☐ H2SO4	6242080	8/29/17	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO2			
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			☐ <2
Chlorophyll	☒ CHL SUITE-W	☒ Ice			
BOD	☐ BOD-UNIN	☐ Ice			
Physical/Aggregate (Kit A/C)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Kit B/D)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ 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	☐ Ice			
	☐ W-PC-AA-SF ☐ W-UHERB-AA ☐ W-GLYPH	☐ Other			

Contains
1:1
Sulfuric Acid
SA-6242080
EXP: 08/29/17
Warning!
See SDS

Notes:

Weohyakapka Creek @
800m N of 60

Date: 12/27/16
RQ-2016-12-12-25

G4CE0108
Field ID ↑
STORET ↓
G4CE0108

Signature: [Signature]

Date: 12/27/16

Field Parameters Entered into LIMS: KMW 1/6/17
(Initials/Date)

Field Parameters QC in LIMS: _____
(Initials/Date)

Date Migrated to STORET: _____
(Initials/Date)

Field Sheets Scanned/Saved: _____
(Initials/Date)

FDEP FORM FD 9000-3: PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID 77210 ORG ID 21FLCEN LATITUDE 27.87931
 COUNTY Polk STORET # 64CED108 LONGITUDE -81.40013
 DATE 12/27/16 TIME 13:45 SAMPLING AGENCY FDEP CE-R60
 SITE NAME Wachapreague Creek @ 800m N of 60
 FIELD ID/NAME 64CED108 RECEIVING BODY OF WATER Lk Rosalie

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural <u>100</u> Silviculture <u> </u> Field/Pasture <u> </u> Agricultural <u> </u> Residential <u> </u> Commercial <u> </u> Industry <u> </u> Other (Specify) <u> </u>								Landscape Development Intensity Index (LDI) <u> </u>	
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy						Typical Width (m) <u>5</u> m wide Depth (m) <u>1.16</u> m/s Velocity (m/sec) <u>6 sec</u>			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718</u> Right Bank: <u>718</u>				Hydrologic Modification Score (per FT 3101) <u> </u>					
High Water Mark: <u>0.3</u> + <u>2.3</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 Type: Sand / spon

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 ☐
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SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☐ RPS ☐ LVS

☐ LCI ☐ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u>2</u>	<u>2</u>	<u> </u>
Undercut Banks / Roots	<u>3</u>	<u>7</u>	<u> </u>
Leaf Packs or Mat	<u> </u>	<u> </u>	<u> </u>
Aquatic Vegetation	<u>4</u>	<u>7</u>	<u> </u>
Rock or Shell Rubble	<u> </u>	<u> </u>	<u> </u>
Sand	<u> </u>	<u>2</u>	<u> </u>
Mud / Muck / Silt	<u> </u>	<u>2</u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>
Other	<u> </u>	<u> </u>	<u> </u>

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>22.4</u>	<u>6.9</u>	<u>7.3</u>	<u>84</u>	<u>111</u>	<u>0.1</u>	<u>0.9</u>
Mid:	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Bottom:	<u>1.8</u>	<u>22.4</u>	<u>6.9</u>	<u>7.2</u>	<u>83</u>	<u>111</u>	<u>0.1</u>	<u> </u>
Meter ID:	<u>Boop / Non</u>							<u>2.3</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:

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)

AMBIENT FIELD CONDITIONS / NOTES:

80's clear

☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

Mike Linger / Mike Drannen

SIGNATURE:

[Signature]

DATE:

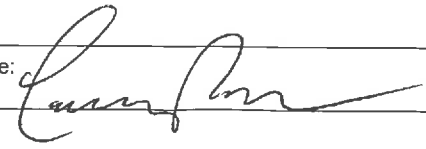
12/27/16

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

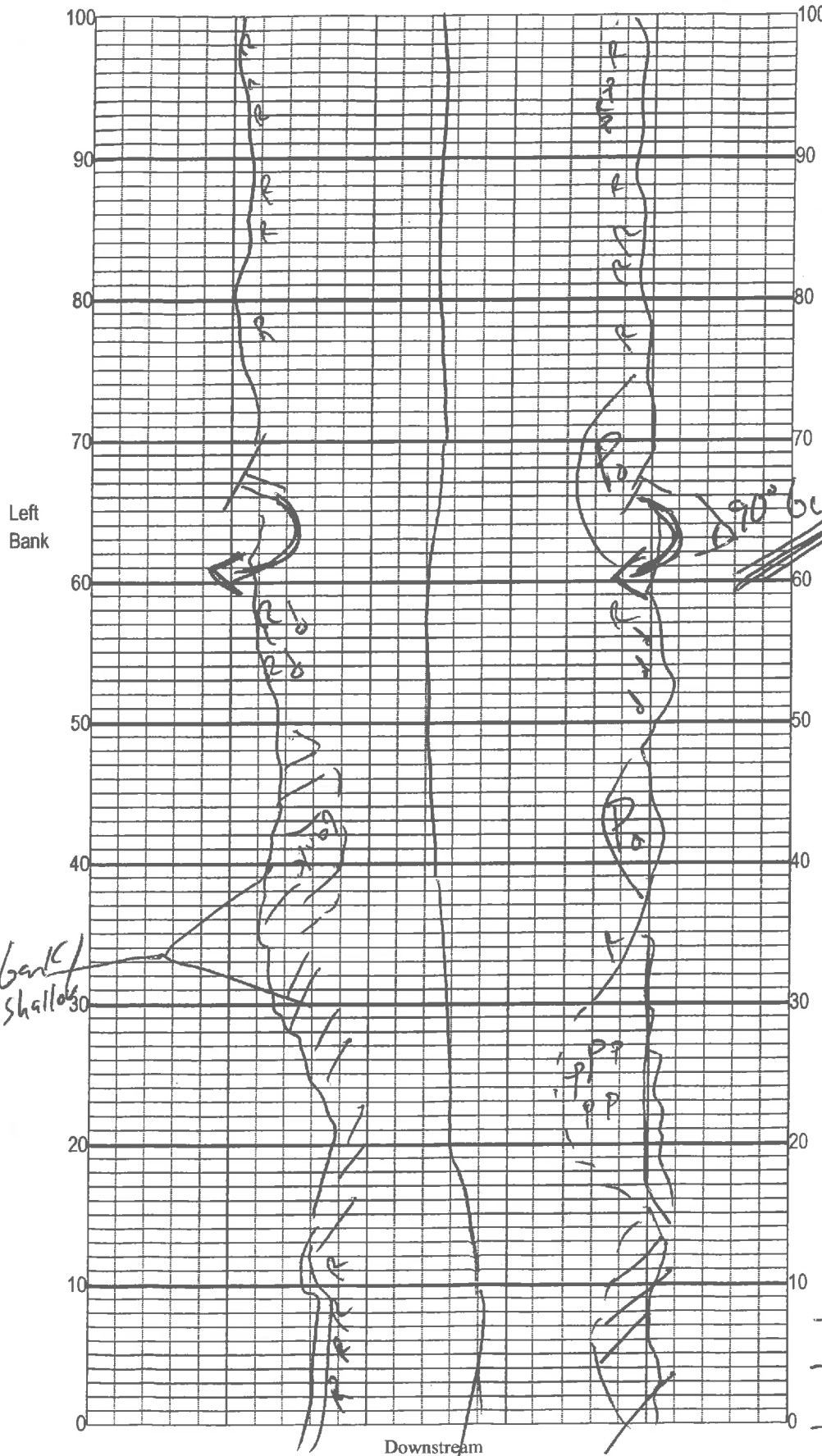
SAMPLING AGENCY: <u>FDLP - CEROC</u>		STORET STATION NUMBER: <u>64CE0108</u>	DATE (MM/DD/YY): <u>12/27/16</u>	RECEIVING BODY OF WATER: <u>Lk. Rosalie</u>
REMARKS:	COUNTY: <u>Polk</u>	LOCATION: <u>Wahyapka Crk. @ 800m N of 60</u>		FIELD ID/NAME: <u>64CE0108</u>

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>7</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>13</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>42</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>20</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>16</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>8</u> Left Bank <u>8</u> ----- Secondary Score <u>74</u>	10 9	- 8 - 7 6	5 4	3 2 1

116 **TOTAL SCORE**

Date: <u>12/27/16</u>	Analyst: <u>Mike Linger / Mike Drennan</u>	Signature: 
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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).

62-160.800, F.A.C

$$\begin{aligned} R &= 15 m^2 \\ P &= 20 m^2 \\ &> 35 m^2 / 500 m^2 = 7\% \end{aligned}$$

Location: Wahyaka crk.
800 m N of 60
Date: 12/27/16
Sampler: Mike Linger/Mike Pearson

100 m: Latitude 27.878917
Longitude -81.399948
0 m: Latitude 27.879681
Longitude -81.399859

Substrates: Code key, draw proportionate habitat abundance.	%
<u>S</u> Snags	<u>41</u>
<u>R</u> Roots/undercut banks	<u>3</u>
<u>L</u> Leaf Packs (or mats)	<u> </u>
<u>P</u> Aquatic Macrophytes	<u>4</u>
<u>Po</u> Pool	<u> </u>
<u> </u>	<u> </u>
<u> </u> Pools	total # observed = <u>2</u> # range expected = <u>2-4</u>

Average width 5 m
Average depth 2.3 m

Velocity measured at 50 meter mark.

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:

- Silt smothering (moderate) throughout
- 50% undercut bank (below BF)
- BF = .3 above
- SCI done from boat
- Flow velocity slower than norm (though still good @ 1.6 m/s)

Revision Date: March 1, 2014

Waterbody: Weohypkapa Creek @ 800m N of rd	Date: 12/27/16	County: Polk	Storet Number: 641E0108
Analyst: Mike Lohr	Signature: Dan Keli		

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>		✓		✓		✓	✓	✓		✓			<i>Micranthemum glomeratum</i>													
<i>Bacopa caroliniana</i>													<i>Micranthemum umbrosum</i>													
<i>Bacopa monnieri</i>													<i>Myriophyllum aquaticum</i>													
<i>Bidens bitis</i>													<i>Najas guadelupensis</i>													
<i>Boehmeria cylindrica</i>													<i>Nuphar luteum</i>		✓	✓	✓		✓		✓	✓				
<i>Centella asiatica</i>													<i>Orontium aquaticum</i>													
<i>Cephalanthus occidentalis</i>		✓		✓				✓	✓		✓		<i>Panicum hemitomon</i>													
<i>Ceratophyllum demersum</i>													<i>Panicum repens</i>													
<i>Chara</i>					✓	✓							<i>Panicum rigidulum</i>													
<i>Cicuta maculata</i>													<i>Pistia stratioides</i>		✓	✓	✓	✓	✓	✓	✓	✓	✓			
<i>Cladium jamaicense</i>													<i>Polygonum glabra</i>		✓		✓	✓	✓	✓	✓	✓		✓		
<i>Colocasia esculenta</i>													<i>Polygonum hydropiperoides</i>													
<i>Crinum americanum</i>													<i>Polygonum punctatum</i>													
<i>Diodia virginiana</i>													<i>Pontedaria cordata</i>		✓	✓	✓		✓	✓			✓			
<i>Eichhornia crassipes</i>													<i>Potamogeton illinoensis</i>					✓	✓				✓			
<i>Eleocharis (wispy viviparous)</i>		✓	✓		✓	✓				✓			<i>Ruellia simplex</i>													
<i>Hydrilla verticillata</i>													<i>Sagittaria striata</i>		✓	✓	✓	✓		✓	✓		✓			
<i>Hydrocotyle</i>													<i>Sagittaria kurziana</i>													
<i>Hygrophila polysperma</i>													<i>Sagittaria lancifolia</i>													
<i>Hymenocallis</i>													<i>Sagittaria latifolia</i>													
<i>Itea virginica</i>													<i>Salix caroliniana</i>													
<i>Lachnanthes caroliniana</i>													<i>Salvinia minima</i>		✓	✓	✓	✓	✓	✓	✓	✓	✓			
<i>Landoltia punctata</i>													<i>Samolus parviflora</i>													

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Wahyapaka Creek 800 m N of County: Polk Date: 12/27/2016 Investigators: Mike Linger

STORET Station Number: 124 CED 108

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	N	72	60	1	3	N	72
	2	N	N			2	3	N	
	3	X	X			3	X	Y	
	4	X	Y			4	X	Y	
	5	X	Y			5	X	Y	
	6	X	Y			6	X	Y	
	7	X	Y			7	X	Y	
	8	N	N			8	N	N	
	9	N	N			9	N	N	
10	1	N	N	80	70	1	N	N	76
	2	N	N			2	N	N	
	3	X	Y			3	X	Y	
	4	X	Y			4	X	Y	
	5	X	Y			5	X	Y	
	6	X	Y			6	X	Y	
	7	X	Y			7	X	Y	
	8	N	N			8	N	N	
	9	3	N			9	4	N	
20	1	N	N	80	80	1	X	N	80
	2	N	N			2	X	N	
	3	X	Y			3	X	Y	
	4	X	Y			4	X	Y	
	5	X	Y			5	X	Y	
	6	X	Y			6	X	Y	
	7	X	Y			7	X	Y	
	8	N	N			8	N	N	
	9	N	N			9	4	N	
30	1	N	N	90	90	1	3	N	84
	2	N	N			2	N	N	
	3	X	Y			3	X	Y	
	4	X	Y			4	X	Y	
	5	X	Y			5	X	Y	
	6	X	Y			6	X	Y	
	7	X	Y			7	X	Y	
	8	N	N			8	N	N	
	9	3	N			9	N	N	
40	1	N	N	100	100	1	N	N	56
	2	N	N			2	N	N	
	3	X	Y			3	N	X	
	4	X	Y			4	N	X	
	5	X	Y			5	N	X	
	6	X	Y			6	N	X	
	7	X	Y			7	3	N	
	8	N	N			8	N	N	
	9	3	N			9	N	N	
50	1	N	N	68	50	1	N	N	68
	2	N	N			2	N	N	
	3	X	Y			3	X	Y	
	4	X	Y			4	X	Y	
	5	X	Y			5	X	Y	
	6	X	Y			6	X	Y	
	7	X	Y			7	X	Y	
	8	N	N			8	N	N	
	9	N	N			9	N	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%.

Secchi depth 0.9
Estimated? N

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

Check accompanying data collected at same site/date.
Algal mat sample ☐
Linear Veg Survey ☒
Habitat Assessment ☒
SC/Biorecon ☒
Water sample ☒
RQ- 2016-12-12-25

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