



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2016

PAGE ____ OF ____

Check box if data qualified

STORET Station Name: Livingston Creek @ Ruck's Dairy Road Date: 01/21/2016
(mm/dd/yyyy)

STORET Station ID: 26011019 Latitude: _____
(Decimal Degrees)

WBID: 1685B RQ - 2016-01-18-26 ORG ID: 21FLCEN Longitude: _____
(Decimal Degrees)

Receiving Body of Water: _____ Field ID: _____ County: Polk

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Duplicate Collection	Blank Collection
Mike Linger		☒	☒	☒	☒	☒		
Mike Drennan			☒	☒	☒	☒		

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 / Normal / High / Flooded Matrix: Fresh / Marine / DI
Meter ID# 11C / 11E Photos: Yes / No Tide Falling: Yes / No / NA

Sample Type: <u>Field Sample</u> / Duplicate / Field Blank / Equipment Blank Equipment ID# <u>11C</u> / <u>11E</u>										
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	12:30	0.9	0.3	13.8	8.9	86	172	0.1	6.9	0.7
CEN										

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 / TN ☐ Other _____	☒ Ice ☒ H2SO4	5259020	9/16	☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ < 2
Filtered Nutrients	☒ oP ☒ Field Filtered 0.45 µm Filter	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	☐ Ice			
Periphyton	☐ ALGAE-ID	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R ☐ W-PSCL-TQA ☐ W-UHERB-AA ☐ W-GLYPH ☐ Other _____	☐ Ice ☐ Other _____			

Notes: G4CE0085-26011019
N 27.7090 Field Parameters only,
W 81.4469 cooler not delivered

RQ-2016-01-18-26 **G4CE0085 26011019**
Date: 1/21/16
Time: 12:30

Field ID 26011019
STORET

Signature: Mike Linger Date: 1/21/16

Field Parameters Entered into LIMS: _____ (Initials/Date) Field Parameters QC in LIMS: _____ (Initials/Date)
Date Migrated to STORET: _____ (Initials/Date) Field Sheets Scanned/Saved: _____ (Initials/Date)

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

SAMPLE ID	75831	ORG ID	21FLCEN	LATITUDE	
COUNTY	Polk	STORET #	26011019	LONGITUDE	
DATE	1/21/16	TIME	1100	SAMPLING AGENCY	FOEP- C-ROC
SITE NAME	Livingston Creek @ Buck's Dairy Road				
FIELD ID/NAME	64CE0085 RECEIVING BODY OF WATER				

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):								Landscape Development Intensity Index (LDI)	
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)		
☒	☐	☐	☐	☐	☐	☐	☐		
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy								Typical Width (m) Depth (m)/Velocity (m/sec) Transect	
Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy								7 m wide	
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)					
Left Bank: >18 Right Bank: >18									
High Water Mark: 0.3 + 0.9 = 1.2 (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No					
Artificially ☐ No ☒ Mostly recovered, more sinuous				Canopy Cover % ☐ Open ☒ Lightly Shaded (11-45%)					
Channelized: ☐ Some recovery ☐ Recent, severe				☐ Heavily Shaded ☐ Moderate Shaded (46-80%)					

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse		Sediment Odors ☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☒ Anaerobic ☒ Other (Specify): Sulfur		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 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: 0.3 13.8 6.9 8.9 86 172 0.1 0.7 Mid: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Bottom: ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Meter ID: 11C / 11E 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: System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐		Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ 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: ☒ ☐ ☐ ☐		AMBIENT FIELD CONDITIONS / NOTES: 60's - clear ☐ The antecedent hydrologic conditions have been met to my best knowledge.			

SAMPLING TEAM

Mike Linger, Mike Drennan

SIGNATURE:

[Signature]

DATE:

1/21/16

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

SAMPLING AGENCY: <u>FOEP</u> <u>Livingston Creek @ Rock's Dairy Rd</u>		STORET STATION NUMBER: <u>26011019</u>	DATE (MM/DD/YY): <u>1/21/16</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Polk</u>	LOCATION: <u>↓</u>	FIELD ID/NAME: <u>G4CE0085</u>	

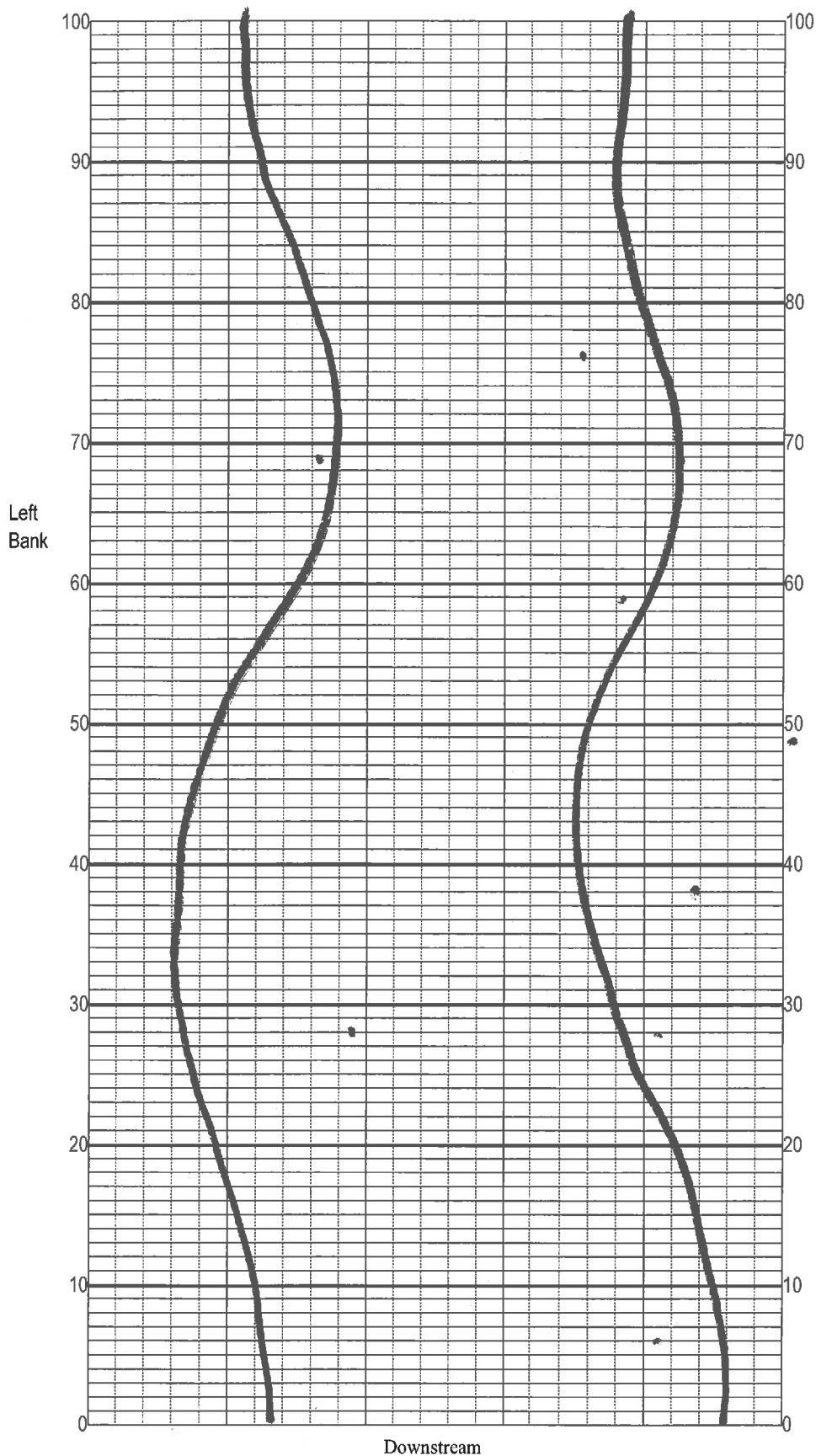
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock]	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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>12</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>6</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: > 1.25 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>16</u> ----- Primary Score <u>47</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>15</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>8</u> Left Bank <u>4</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>9</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>8</u> ----- Secondary Score <u>6263</u>	10 9	8 7 6	5 4	3 2 1

109 110

TOTAL SCORE

Date: <u>1/21/16</u>	Analyst: <u>Mike Linger</u> <u>Mike Brennan</u>	Signature: <u>[Signature]</u>
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Livingston Creek
 Date: 1/21/2016
 Sampler: Mike Linger

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

S Snags 0.7

R Roots/undercut banks 1.4

L Leaf Packs (or mats) 0.3

P Aquatic Macrophytes 2.1

☐ _____ %

☐ _____ %

☐ Pools total # observed = 7
 # range expected = 1-3

Average width 7 m
 Average depth 1 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:

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

$A = 760 \text{ m}^2$

$S = 5 \text{ m}^2$
 $R = 10 \text{ m}^2$
 $L = 2 \text{ m}^2$
 $P = 15 \text{ m}^2$
 $> 32 \text{ m}^2 / 700 \text{ m}^2 = 4.5\%$

Revision Date: March 1, 2014

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

SAMPLING AGENCY: <u>FDEP - C-ROC</u>		STORET STATION NUMBER: <u>26011019</u>	DATE (MM/DD/YYYY): <u>01/21/16</u>	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: <u>Polk</u>	LOCATION: <u>Livingston Creek @ Ruck's Dairy Road</u>	FIELD ID/NAME: <u>G4CE0085</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>12</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>6</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>16</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae.	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae.	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth).	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation.
Primary Score <u>47</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	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>15</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>4</u> Left Bank <u>8</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>9</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>9</u> Secondary Score <u>63</u>	10 9	8 7 6	5 4	3 2 1

109 110^{CAD} TOTAL SCORE

Date: <u>1/21/16</u>	Analyst: <u>Mike Linger</u>	Signature: <u>Mike Linger</u>
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Livingston Creek @ Rick's Dairy Road County: Polk Date: 1/21/16 Investigators: Mike Linear

STORET Station Number: 26011019

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	4			60	1	3		
	2	3				2	3		
	3	N				3	2		
	4	N				4	2		
	5	2		12		5	2		8
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	3		
10	1	3			70	1	2		
	2	3				2	2		
	3	2				3	2		
	4	2				4	2		
	5	2		20		5	2		16
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	2		
20	1	2			80	1	3		
	2	2				2	4		
	3	2				3	2		
	4	2				4	2		
	5	2		12		5	2		12
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	3		
30	1	3			90	1	4		
	2	2				2	4		
	3	2				3	2		
	4	2				4	2		
	5	2		8		5	2		20
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	3				9	2		
40	1	5			100	1	2		
	2	3				2	3		
	3	2				3	2		
	4	2				4	2		
	5	2		16		5	2		16
	6	2				6	2		
	7	2				7	2		
	8	2				8	2		
	9	2				9	4		
50	1	3			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	4							
	3	2							
	4	2							
	5	2		12					
	6	2							
	7	2							
	8	2							
	9	2							

Secchi depth 0.7
Estimated?

points ranked 4-6 9
total points assessed 99
% points ranked 4-6 9

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

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

Waterbody: <u>Livingston Creek</u>	Date: <u>1/21/16</u>	County: <u>Polk</u>	Storet Number: <u>26011019</u>
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Analyst: Mike Linger Signature: Mike Linger

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.

	Meter Mark										Specime n collected (check)		Meter Mark										Specime n collected (check)
HERBACEOUS SPECIES	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100		HERBACEOUS SPECIES	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 monneri</i>											<i>Myriophyllum aquaticum</i>	✓	✓	✓	✓	✓	✓			✓	✓		
<i>Bidens mitis</i>											<i>Najas guadelupensis</i>												
<i>Boehmeria cylindrica</i>											<i>Nuphar luteum</i>	✓	✓	✓		✓	✓	✓			✓		
<i>Centella asiatica</i>			✓			✓	✓				<i>Orontium aquaticum</i>												
<i>Ceratophyllum demersum</i>											<i>Panicum hemitomon</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
<i>Chara</i>											<i>Panicum repens</i>												
<i>Cicuta maculata</i>											<i>Panicum rigidulum</i>												
<i>Cladium jamaicense</i>											<i>Pistia stratioides</i>												
<i>Colocasia esculenta</i>											<i>Polygonum glabra</i>												
<i>Commelina diffusa</i>											<i>Polygonum hydropiperoides</i>												
<i>Commelina virginica</i>											<i>Polygonum punctatum</i>		✓	✓		✓		✓			✓		
<i>Crinum americanum</i>											<i>Pontedaria cordata</i>	✓	✓	✓	✓		✓			✓			
<i>Diodia virginiana</i>											<i>Potamogeton illinoensis</i>												
<i>Eichhornia crassipes</i>											<i>Ruellia simplex</i>												
<i>Eleocharis (wispy viviparous)</i>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	<i>Sacciolepis striata</i>												
<i>Hydrilla verticillata</i>											<i>Sagittaria kurziana</i>												
<i>Hydrocotyle</i>											<i>Sagittaria lancifolia</i>												
<i>Hygrophila polysperma</i>											<i>Sagittaria latifolia</i>	✓				✓		✓	✓				
<i>Hymenocallis</i>											<i>Salvinia minima</i>												
<i>Lachnanthes caroliniana</i>											<i>Samolus parviflora</i>												
<i>Landoltia punctata</i>											<i>Saururus cernuus</i>												
<i>Lemna</i>											<i>Sparganium americanum</i>												
<i>Limnophila sessiliflora</i>	✓	✓			✓	✓		✓	✓		<i>Typha</i>												
<i>Ludwigia leptocarpa</i>											<i>Vallisneria americana</i>												
<i>Ludwigia palustris</i>											<i>Zizania aquatica</i>												
<i>Ludwigia peruviana</i>											<i>Schoenoplectus</i>												
<i>Ludwigia repens native</i>						✓			✓		<i>Scirpus Californicus</i>	✓			✓								
<i>Luziola fluitans</i>											<i>Mitella Scan</i>	✓	✓	✓		✓	✓	✓	✓	✓	✓		
											<i>Rhynchospora sp</i>	✓											
											<i>American weed tim. sess</i>	✓	✓	✓									