

SCI

Site Name Sweetwater Creek @ East of Valley Cir Sample Date 2/20/2019

WBID 2956X WIN ID G2CE0195 RQ 2019-02-18-43

	Initial/Date	QC Initial/Date
Water chemistry data to LIMS	LMD 02/22/2019	MKL 2/25/19
Create SBIO station visit	LMD 2/22/19	n/a
Phys/Chem entry	LMD 2/22/19	MKL 2/25/19
Habitat Assesment entry	LMD 2/22/19	MKL 2/25/19
Vascular entry (add LIMS ID to entry)	_____	n/a
RPS entry	LMD 2/22/19	MKL 2/25/19
Authorize SBIO data	MKL 2/25/19	n/a
Scan all sheets to 21FLCEN folder	LMD 2/22/19	n/a
LIMS/WIN migration		n/a
File in cabinet		n/a

Comments/notes:

Macrophytes < 2m², sampled as a minor



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?

Yes / No

WIN Station Name: Sweetwater Creek @ East of Valley Cir

Date: 02/20/2019
(mm/dd/yyyy)

WIN/ Field ID: G2CE0195

WBID: 2956X

Latitude: 28.699861

County: Seminole

ORG ID: 21FLCEN

Longitude: -81.431460

Receiving Body of Water: Wekiva River

RQ-2019-02-18-43

Sampling Team Members

Mike Linger

Mike Drennan

Sampling Equipment

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

Depth Measured with Seichi Disk / Line / Meter

Equipment ID Leadfoot, Knothead, Crush/Bucket, Mucky/Trap

Collection Method

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

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

Meter ID# Scud Bucket

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 (umhos/cm)	Temp. (C°)
EST	1219	0.3	0.2	0.3(s)	7.47	86.9	6.67	0.13	270.9	22.9
CEN										

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

SBIO ID Numbers: SBIO-ID: 79225 HA-ID: 15648 RPS-ID: 9234 Macrophyte-ID: LIMS#: 20642824

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	SA8085170	3/26/19	☒ <2
Metals	☒ W-ICPMS ☒ W-ICP	☒ Ice ☒ HNO3	NA8197080	7/16/19	☒ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice	13615055		
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ ME-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 ☐ WE8321-MS ☐ W-CARB-AA	☐ Ice ☐ Other			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

H2SO4
LOT# SA8085170
EXP: 03/26/19

Place Preservative Sticker(s) Here
(If Available)

HNO3
LOT# NA8197080
EXP: 07/16/2019

WIN ID / Field ID →

Sweetwater Creek @
East of Valley Cir



G2CE0195

Signature: Mike Linger

Date: 2/20/19

LIMS EVENT ID: CENT-DIST-2019-02-21-01

Enter Field Parameters, Verify Station ID In LIMS DMT: LMD 2/22/19

QC Station ID, Field Parameters In LIMS DMT: MKL 2/25/19

Scan/Save Field Sheets LMD 2/22/19

Migrate Data to WIN:

Verify Data In WIN:

(Initials/Date)

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

SAMPLE ID 79225 ORG ID 21 FL CEN LATITUDE 28.699861
 COUNTY Seminole STORET # 62CE0195 LONGITUDE -81.431460
 DATE 2/20/19 TIME 1200 SAMPLING AGENCY FDEP
 SITE NAME Sweetwater Creek @ East of Valley Cir
 FIELD ID/NAME 62CE0195 RECEIVING BODY OF WATER Wekiva River

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐ <u>20</u> <u>80</u>								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 <u>3.5</u> m wide <u>0.15</u> m/s <u>0.24</u> m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>5</u> Right Bank: <u>10</u>				Hydrologic Modification Score (per FT 3101) ☐					
High Water Mark: <u>0.3</u> + <u>0.24</u> = <u>0.54</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

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 ☐	
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SUBSTRATE TYPE Assessment Tool: ☒ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon				WATER QUALITY							
				Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top:				<u>0.2</u>	<u>22.9</u>	<u>6.67</u>	<u>7.47</u>	<u>86.9</u>	<u>270.9</u>	<u>0.13</u>	<u>3.0.3</u>
Mid:											☒ VOB
Bottom:											
Meter ID: <u>Sand Bucket</u>				TOTAL DEPTH <u>0.3</u>							
Woody Debris (Snags) <u>2.5</u> <u>7</u>				Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐				Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐			
Undercut Banks / Roots <u>0.6</u> <u>21</u>				Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>NA806570</u> Exp: <u>3/20/19</u>				Color Tannic ☐ Green (Algae) ☐ Clear ☒ Other (Specify) ☐			
Leaf Packs or Mat <u>4.9</u> <u>7</u>				Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☐ No Lot Number: <u>NA8147080</u> Exp: <u>3/16/19</u>				Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐			
Aquatic Vegetation <u>0.4</u> <u>2</u>											
Rock or Shell Rubble <u>0.6</u> <u>1</u>											
Sand <u>2</u>											
Mud / Muck / Silt											
Other											
Other											

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: <u>80's breezy</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.							

SAMPLING TEAM Mike Linger / Mike Drennan SIGNATURE: [Signature] DATE: 2/20/19

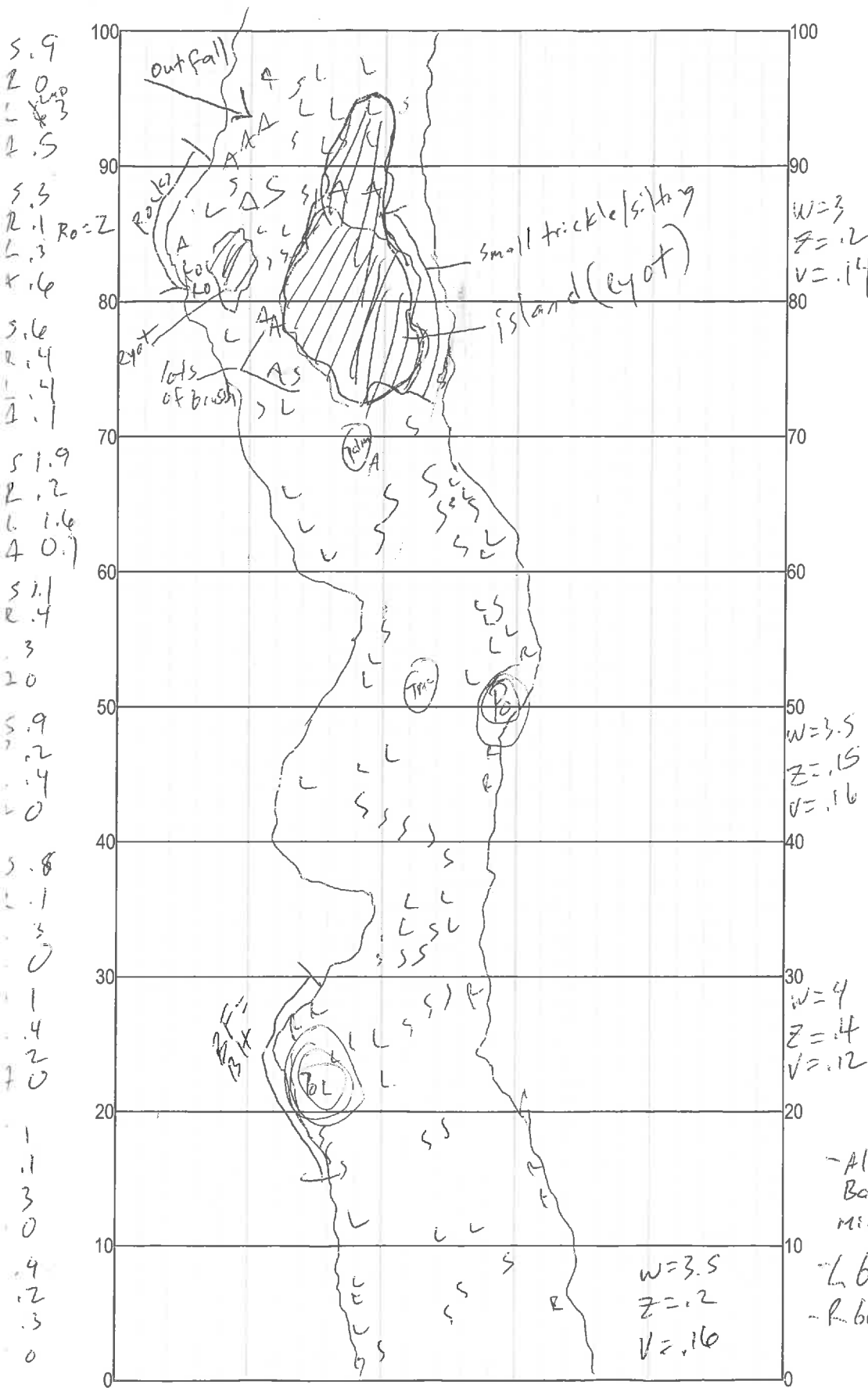
DEP Form FD 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY: <u>FDEP-CEROC</u>		STORET STATION NUMBER: <u>62CE0195</u>	DATE (MM/DD/YY): <u>02/20/19</u>	RECEIVING BODY OF WATER: <u>Wekiva River</u>
REMARKS:	COUNTY: <u>Seminole</u>	LOCATION: <u>Sweetwater Creek @ East of Valley Cir</u>	FIELD ID/NAME: <u>62CE0195</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>11</u>	20 19 18 17 16	15 14 13 12 <u>11</u>	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 <u>9</u> 8 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>12</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 <u>12</u> 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>12</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 <u>12</u> 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 <u>19</u> 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>10</u> Left Bank <u>8</u> <u>18</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. <u>10</u> 9	Only meets 2 of the 3 requirements for optimal bank stability. <u>8</u> 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>5</u> Left Bank <u>2</u> <u>7</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 <u>5</u> 4	Less than 6 m of buffer zone due to intensive human activities 3 <u>2</u> 1
Riparian Zone Vegetation Quality Right Bank <u>9</u> Left Bank <u>4</u> <u>13</u> ----- Secondary Score <u>100</u> <u>57</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 <u>9</u>	>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 <u>4</u>	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). 3 2 1

100 TOTAL SCORE

Date: <u>2/20/19</u>	Analyst: <u>Mike Linger / Mike Drennan</u>	Signature: 
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Location: Sweetwater Creek
@ East of Valley Cir
 Date: 2/20/19
 Sampler: Mike Linger/Mike Diennen

100 m: Latitude 28.699861
 Longitude -81.431460
 0 m: Latitude 28.700241
 Longitude -81.432247

Substrates: Code key, draw proportionate habitat abundance. %

<u>S</u>	Snags	<u>2.5</u>
<u>R</u>	Roots/undercut banks	<u>0.6</u>
<u>L</u>	Leaf Packs (or mats)	<u>4.9</u>
<u>A</u>	Aquatic Macrophytes	<u>0.4</u>
<u>Lo</u>	Rock	<u>0.6</u>

P Pools total # observed = 2
 # range expected = 2-4

Average width 3.5 m
 Average depth 0.24 m
 Velocity measured at 10, 30, 50, 80 meter mark.

WQ & chemistry taken at 100 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:

- Alternanthera, Ludwigia repens / growing
 Bacopa, Magnolia, Collocasia, ~~microseris~~
 Microseris, Nyssa

- L buffer = < 5m
 - R buffer = 10m+

* - origin 1200m US
 - water plant 600m US
 - Lake Brantley Canal ~ 400m US

- W = 3.5 m
 - Z = 0.24 m
 - V = 0.15 m/s

Downstream
 A = 1.3
 S = 8.9
 R = 2.1
 L = 17.0
 R = 2.0
 31.3/350 = 8.9%

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Sweetwater Creek (2956x) County: Seminole Date: 2/20/19 Investigators: Mike Linger
 STORET Station Number: 62CE0195

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		60	1	N	N	
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		64		5	N		72
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
10	1	N			70	1	3		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		72		5	N		48
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
20	1	N			80	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		84		5	N		24
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
30	1	N			90	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		80		5	N		32
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
40	1	N			100	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		92		5	N		38
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		
50	1	N				1	N		
	2	N				2	N		
	3	N				3	N		
	4	N				4	N		
	5	N		84		5	N		
	6	N				6	N		
	7	N				7	N		
	8	N				8	N		
	9	N				9	N		

Secchi depth 0.3
 Estimated?

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 ✓
 SC/Biorecon ✓
 Water sample ✓
 RQ- 2019-02-18-43

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: Sweetwater Creek (295'X)	Date: 2/20/14	County: Seminole	Storet Number: G2CE0195
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Analyst: Mike Lingo Signature: Mike Lingo

Comments: $\angle 2m^2$, Not entered into SBIO

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.

[illegible]