



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2016

PAGE 1 OF 6

Data Qualified?
Yes / No

STORET Station Name: RQ-2016-02-08-60

STORET Station ID: 2/8/2016
WBID 1761A

WBID: RQ - Arbuckle Creek @
Arbuckle Cr. Road



SD020816-3

Field ID
STORET
*26010029



Date: (mm/dd/yyyy)

(Decimal Degrees)

(Decimal Degrees)

Receiving Body of Water: Lake Istokpoga Field ID:

County: Highlands

Sampling Team Members

Cory Anderson
Danny Berger

WQ Measurements
Sample Collection
Documentation
Preservation
Preservation Check
Duplicate Collection
Blank Collection

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# A Photos: Yes / No

Tide Falling: Yes / No / NA

Field Sample

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	1058	3.2	0.3	14.5	4.4	44	102	-	5.2	0.7
CEN			2.7	14.5	4.3	43	104	-	5.2	

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 ☐ Other	☒ Ice ☒ H ₂ SO ₄	5259020	9/16/16	☒ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☒ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☒ OP ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
BOD	☐ BOD-INHB ☒ BOD-UNIN	☒ Ice			
Physical/Aggregate	☒ TSS / Turbidity / Alkalinity / Color ☐ Other	☒ 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	☐ Ice ☐ Other			

QA/QC Sample Information

Duplicate

Time Zone: EST CEN		Sample Depth (m): _____		Field ID: _____	
Time: _____		Total Depth (m): _____			
Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☐ TKN / TP / Nox / NH3 / TOC ☐ Other _____	☐ Ice ☐ H ₂ SO ₄			☐ < 2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ < 2
Filtered Nutrients	☐ oP ☐ Field Filtered 0.45 µm Filter	☐ Ice	Place Preservative Sticker(s) Here (if Available)		
Chlorophyll	☐ CHLSUITE-W	☐ Ice			
BOD	☐ BOD-INHB ☐ BOD-UNIN	☐ Ice			
Physical/Aggregate	☒ TSS / Turbidity / Alkalinity / Color ☐ Other _____	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enteroc ☐ 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	☐ Ice ☐ Other _____			

Field Blank

Equipment Blank Equipment ID#

Time Zone: EST CEN	Time: _____	Field ID: _____	Location: _____
--------------------	-------------	-----------------	-----------------

Notes: <i>Blackwater River system</i>	Place Label Here (if Available)
Signature: <i>[Signature]</i>	Date: <i>2/8/2016</i>

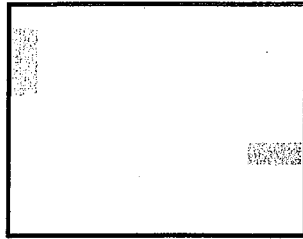
Field Parameters Entered into LIMS: _____ (Initials/Date)	Field Parameters QC in LIMS: _____ (Initials/Date)
Date Migrated to STORET: _____ (Initials/Date)	Field Sheets Scanned/Saved: _____ (Initials/Date)

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET																									
Waterbody: <u>Arbuckle Creek @ Arbuckle Creek All</u>										Date: <u>2/8/16</u>					County: <u>Highlands</u>					Storet Number: <u>26010029</u>					
Analyst: <u>Carey Anderson Danny Berger</u>										Signature: <u>[Signature]</u>															
Comments: <u>Blackwater River System</u>																									
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m ² 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										Specime n collected (check)	HERBACEOUS SPECIES		Meter Mark										Specime n 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>	P										P			
<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>			P	P	D	D	D	P	P	P	P			
<i>Chara</i>											<i>Panicum repens</i>														
<i>Cicuta maculata</i>											<i>Panicum rigidulum</i>														
<i>Cladium jamaicense</i>											<i>Pistia stratioides</i>	P	P	P						P	P				
<i>Colocasia esculenta</i>											<i>Polygonum glabra</i>														
<i>Commelina diffusa</i>											<i>Polygonum hydropiperoides</i>														
<i>Commelina virginica</i>	RP										<i>Polygonum punctatum</i>		P	P	P	P		P	C	P	C				
<i>Crinum americanum</i>											<i>Pontedaria cordata</i>														
<i>Diodia virginiana</i>											<i>Potamogeton illinoensis</i>														
<i>Eichhornia crassipes</i>	P	P									<i>Ruellia simplex</i>														
<i>Eleocharis (wispy viviparous)</i>											<i>Sacciolepis striata</i>														
<i>Hydrilla verticillata</i>											<i>Sagittaria kurziana</i>														
<i>Hydrocotyle</i>								CRP			<i>Sagittaria lancifolia</i>														
<i>Hygrophila polysperma</i>	P										<i>Sagittaria latifolia</i>														
<i>Hymenocallis</i>											<i>Salvinia minima</i>	P	P	P	C	P	P	P	C	P	C				
<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 sessiflora</i>											<i>Typha</i>														
<i>Ludwigia leptocarpa</i>	P										<i>Vallisneria americana</i>														
<i>Ludwigia palustris</i>											<i>Zizania aquatica</i>														
<i>Ludwigia peruviana</i>											<i>Brachiaria mutica</i>	D	D	D	C	P			P						

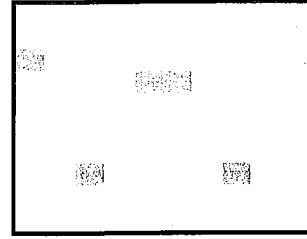
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

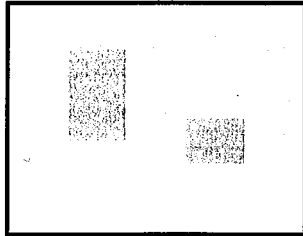
5% Macrophyte Coverage



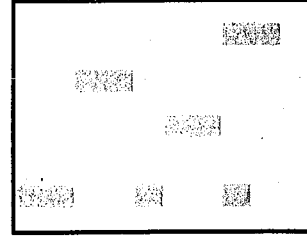
5% Macrophyte Coverage



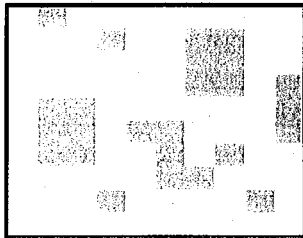
10% Macrophyte Coverage



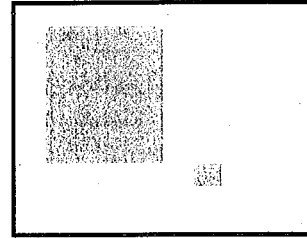
10% Macrophyte Coverage



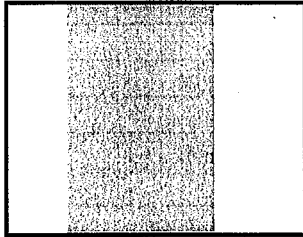
25% Macrophyte Coverage



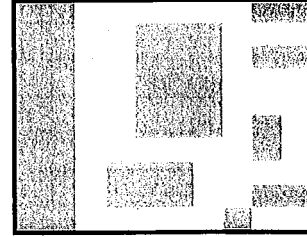
25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



2/8/2016

WBID 1761A

Arbuckle Creek @

Arbuckle Cr. Road



SD020816-3

Field ID

STORET
*26010029

25 Rapid Periphyton Survey Field Sheet

Inty:

Highlands

Date:

2/8/2016

Investigators:

Grey Anderson, Danny Berger

STORET Station Number:

26010029

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		96	60	1	N		96
	2	N				2	N		
	3	X				3	X		
	4	N	✓			4	N	✓	
	5		✓			5		✓	
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
10	1	N		96	70	1	N		96
	2	N				2	N		
	3	X				3	X		
	4	N	✓			4	N	✓	
	5		✓			5		✓	
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
20	1	N		96	80	1	N		96
	2	N				2	N		
	3	X				3	X		
	4	N	✓			4	N	✓	
	5		✓			5		✓	
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
30	1	N		96	90	1	N		96
	2	N				2	N		
	3	X				3	X		
	4	N	✓			4	N	✓	
	5		✓			5		✓	
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
40	1	N		96	100	1	N		96
	2	N				2	N		
	3	X				3	X		
	4	N	✓			4	N	✓	
	5		✓			5		✓	
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	
50	1	N		96		1	N		
	2	N				2	N		
	3	X				3	X		
	4	N	✓			4	N	✓	
	5		✓			5		✓	
	6		✓			6		✓	
	7		✓			7		✓	
	8		✓			8		✓	
	9		✓			9		✓	

Secchi depth 0.7
Estimated?

points ranked 4-6 0
total points assessed 0
% points ranked 4-6 0

Check accompanying data collected at same site/date.

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

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

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 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID	ORG ID <u>21FLFTM</u>	LATITUDE
COUNTY <u>Highlands</u>	STORET # <u>26010029</u>	LONGITUDE
DATE <u>2/8/2016</u>	TIME <u>1058</u>	SAMPLING AGENCY <u>21FLFTM</u>
SITE NAME <u>Arbuckle Creek at Arbuckle Creek Road</u>		
FIELD ID/NAME <u>SD020816-3</u>	RECEIVING BODY OF WATER <u>Lake Istokopje</u>	

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):		Landscape Development Intensity Index (LDI)	
Forest/Natural <u>50</u>	Silviculture <u>50</u>	Field/Pasture <u>50</u>	Agricultural <u>50</u>
Residential <u>50</u>	Commercial <u>50</u>	Industry <u>50</u>	Other (Specify) <u>50</u>
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		<u>100</u> m wide	
Width of Riparian Vegetation (m) on Each Buffer Side		Hydrologic Modification Score (per FT 3101)	
Left Bank: <u>18+</u>	Right Bank: <u>18+</u>	<u>0.13</u> m/s	
High Water Mark: <u>0</u> + <u>3.2</u> = <u>3.2</u>		<u>3.2</u> m deep	
(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		Sediment Odors		Smothering of Substrates					
☒ Absent ☐ Slight		☒ Normal ☐ Sewage ☐ Petroleum		Sand Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐					
☐ Moderate ☐ Profuse		☐ Chemical ☐ Anaerobic		Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐					
		☐ Other (Specify):		Algae Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐					
SUBSTRATE TYPE		WATER QUALITY							
Assessment Tool: ☐ SCI ☒ RPS ☒ LVS		Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
☐ LCI ☐ BioRecon		Top: <u>0.3</u>	<u>14.5</u>	<u>5.2</u>	<u>4.4</u>	<u>44</u>	<u>102</u>		<u>0.7</u>
% Coverage		Mid:							☐ VOB
# Times Sampled		Bottom: <u>2-7</u>	<u>14.5</u>	<u>5.2</u>	<u>4.3</u>	<u>43</u>	<u>104</u>		TOTAL DEPTH <u>3.2</u>
# Times Sampled		Meter ID: <u>A</u>							
Woody Debris (Snags)		Water Odors Normal ☒ Petroleum ☐		Water Surface Oils Normal ☒ Sheen ☐					
Undercut Banks / Roots		Sewage ☐ Chemical ☐ Other ☐		Globs ☐ Slick ☐ Other ☐					
Leaf Packs or Mat		Water Sample Taken? ☒ Yes ☐ No		Color Tannic ☒ Green (Algae) ☐					
Aquatic Vegetation		Sample Preserved? ☒ Yes ☐ No		Clear ☐ Other (Specify) ☐					
Rock or Shell Rubble..		Lot Number: _____ Exp: _____		Clarity Clear ☐ Slightly Turbid ☐					
Sand		Algae Sample Taken? ☐ Yes ☒ No		Turbid ☒ Opaque ☐					
Mud / Muck / Silt		Sample Preserved? ☐ Yes ☐ No							
Other		Lot Number: _____ Exp: _____							
Other									
ABUNDANCE		System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐							
Not Obs. Rare Common Abundant		AMBIENT FIELD CONDITIONS / NOTES:							
Periphyton: ☐ ☒ ☐ ☐		<u>Blackwater type River system</u>							
Fish: ☒ ☐ ☐ ☐		☒ The antecedent hydrologic conditions have been met to my best knowledge.							
Aquatic Plants: ☐ ☐ ☒ ☐									
Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐									

SAMPLING TEAM	SIGNATURE	DATE
<u>Corey Anderson, Danny Berger</u>	<u>[Signature]</u>	<u>2/8/16</u>