



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

PAGE ____ OF ____

February 2016

Data Qualified?
Yes / No

STORET Station Name: GITLHR0029 Little Aucilla River Date: 6/22/16
(mm/dd/yyyy)

STORET Station ID: GITLHR0029 Latitude: 30.49089
(Decimal Degrees)

WBID: 3314 RQ: 2016-05-23-29 ORG ID: 21FELHR Longitude: -83.70850
(Decimal Degrees)

Receiving Body of Water: Aucilla River Field ID: GITLHR0029 County: Madison

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Chris Green									
Colby Marshall									
Tom Woods									

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# <u>600XCM#12</u>				Photos: Yes / No				Tide Falling: Yes / No / NA			
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	1340	0.3	0.75	2.4	28	3.5	0.03	0.4	68	23.3	
CEN											

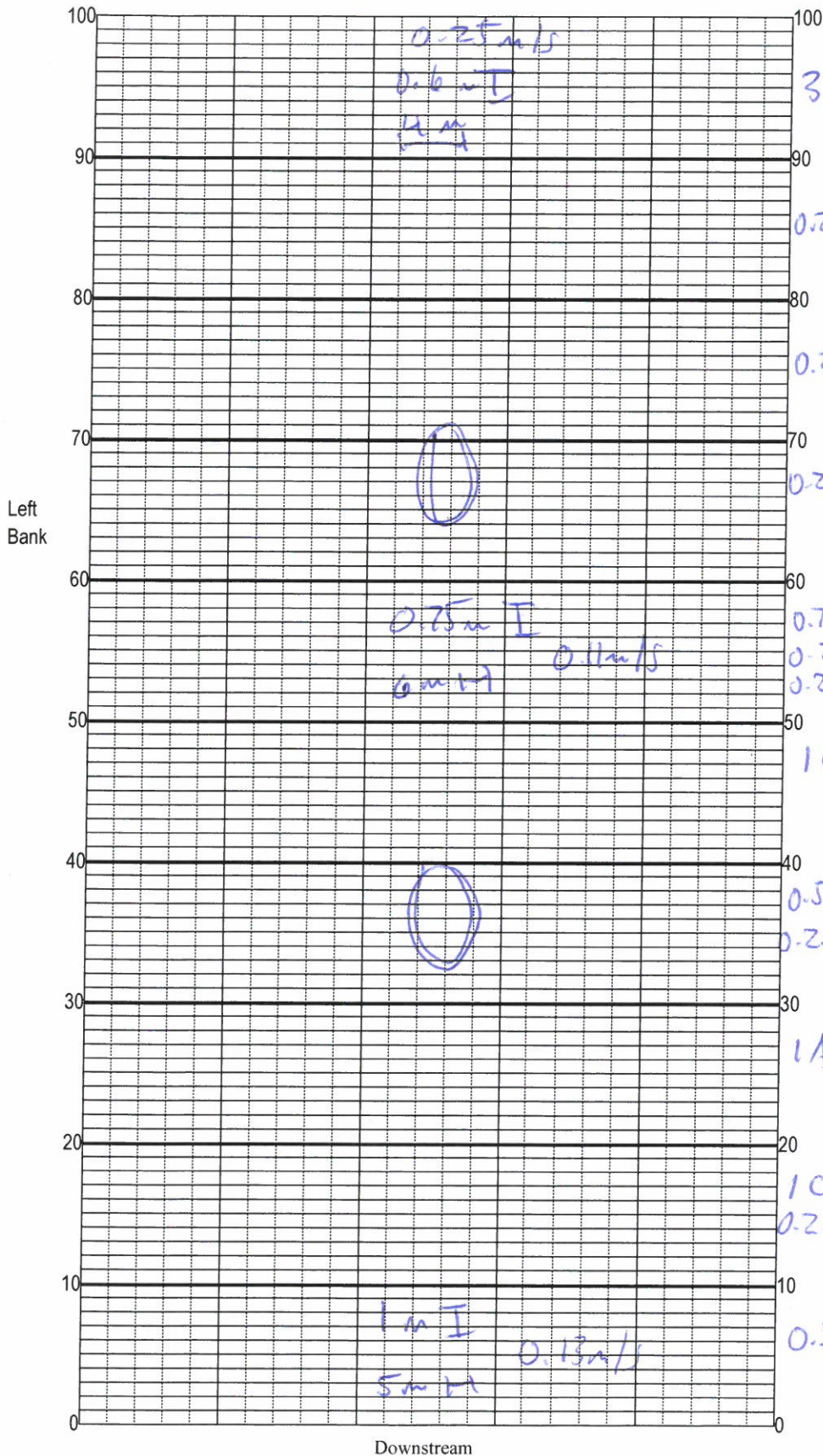
Biological Samples Collected:		None	HA	SCI	LVS	RPS	LVI	Other
Parameter Suite	Parameter Methods		Preservation		Acid Lot#	Expiration	pH Check	
Preserved Nutrients	☐ W-NH3 / ☐ W-NO2NO3 / ☐ W-TKN / ☐ W-TOC / ☐ W-S-A-TP		☒ Ice ☐ H2SO4		SA-5259020	9/16	☒ <2	
Metals	☒ W-ICPMS ☐ W-ICP		☐ Ice ☐ HNO2				☐ <2	
Filtered Nutrients	☒ W-PO4-F ☐ Field Filtered 0.45 µm Filter		☐ Ice					
Chlorophyll	☒ CHLSUITE-W		☐ Ice					
BOD	☐ BOD-UNIN		☐ 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	☒ 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					

Notes: <u>SCI @ 1400</u>	Place Label Here (If Available)
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Signature: _____	Date: _____
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Field Parameters Entered into LIMS: <u>cm 7/12/16</u> (Initials/Date)	Field Parameters QC in LIMS: <u>cm 9/12/16</u> (Initials/Date)
Date Migrated to STORET: <u>cm 9/29/16</u> (Initials/Date)	Field Sheets Scanned/Saved: <u>cm 10/6/16</u> (Initials/Date)

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



Location: Little Anacapa River
 Date: 6/22/16
 Sampler: Marshall/Woods

100 m: Latitude _____
 Longitude _____

0 m: Latitude _____
 Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☒ A	Snags	<u>0.6</u>
☒ B	Roots/undercut banks	<u>0.7</u>
☒ C	Leaf Packs (or mats)	<u>0.4</u>
☒ D	Aquatic Macrophytes	_____
☒ E	<u>Rock</u>	_____
☐	_____	_____
☒ F	Pools	total # observed = <u>2</u> # range expected = <u>2-4</u>

Average width 5 m
 Average depth 0.75 m

Velocity measured at 100 meter mark.

WQ & chemistry taken at 100 meter mark.

Habitat Smothering: slight to none
 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: > 18m x 2
 Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

0.4 m sec/ch

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>8034</u>		STORET STATION NUMBER: <u>GITLHR002J</u>	DATE (MM/DD/YY): <u>6/22/16</u>	RECEIVING BODY OF WATER: <u>Aucilla River</u>
REMARKS:	COUNTY: <u>Madison</u>	LOCATION: <u>Little Aucilla River</u>	FIELD ID/NAME: <u>GITLHR002J</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>13</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>3</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>19</u> ----- Primary Score <u>48</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>19</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>8</u> Left Bank <u>10</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. 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 root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>10</u> Left Bank <u>10</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>10</u> Left Bank <u>10</u> ----- Secondary Score <u>77</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

125

TOTAL SCORE

Date: <u>6/22/16</u>	Analyst: <u>Chris Green</u>	Signature: <u>Chris Green</u>
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DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID G1TL4R0029 ORG ID 21FLTL4R LATITUDE 30.49085
 COUNTY Madison STORET # G1TL4R0029 LONGITUDE -83.70850
 DATE 6/22/16 TIME 1400 SAMPLING AGENCY 8034
 TE NAME Little Aucilla River
 FIELD ID/NAME G1TL4R0029 RECEIVING BODY OF WATER Aucilla 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>80</u> <u>10</u> <u>10</u> <u></u> <u></u> <u></u> <u></u> <u></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>5</u> m wide <u>0.1</u> m/s <u>0.2</u> m/s <u>0.2</u> m/s <u>0.5</u> m deep <u>0.75</u> m deep <u>0.5</u> m deep			
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) ☐					
High Water Mark: <u>1.5</u> + <u>0.75</u> = <u>2.25</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):			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>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: <u>0.3</u></td> <td><u>23.3</u></td> <td><u>3.5</u></td> <td><u>2.4</u></td> <td><u>24</u></td> <td><u>68</u></td> <td><u>0.03</u></td> <td><u>0.4</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>☐ VOB</td> </tr> <tr> <td>Bottom:</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>☐ VOB</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>0.3</u>	<u>23.3</u>	<u>3.5</u>	<u>2.4</u>	<u>24</u>	<u>68</u>	<u>0.03</u>	<u>0.4</u>	Mid:							☐ VOB	Bottom:							☐ VOB
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Mid:							☐ VOB																																	
Bottom:							☐ VOB																																	
Woody Debris (Snags) <u>0.6</u> <u>5</u> Undercut Banks / Roots <u>0.7</u> <u>5</u> Leaf Packs or Mat <u>0.6</u> <u>5</u> Aquatic Vegetation Rock or Shell Rubble..... Sand..... <u>91.9</u> <u>5</u> Mud / Muck / Silt Other Other			Meter ID: <u>600 x L M # 12</u>			TOTAL DEPTH <u>0.75</u>																																		
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:	☒	☐	☐	☐	Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water Sample Taken? ☐ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: <u>SA-SC59020</u> Exp: <u>9/16</u> 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 ☐									
	Not Obs.	Rare	Common	Abundant																																				
Periphyton:	☒	☐	☐	☐																																				
Fish:	☐	☐	☒	☐																																				
Aquatic Plants:	☒	☐	☐	☐																																				
Iron/Sulfur Bacteria:	☒	☐	☐	☐																																				
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐			AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.																																					

SAMPLING TEAM

SIGNATURE:

DATE:

Chris Green / Colby Marshall /
Jon Woods

Ch 3

6/22/16

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

Waterbody: Little Auxilla River	Date: 6/22/16	County: Madison	Storet Number: G17K20027
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Analyst: Ten Woods / Colby Marshall Signature: Colby Marshall

Comments: LVS CZag²

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										Specimen collected (check)		Meter Mark										Specimen 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	
Alternanthera philoxeroides											Micranthemum glomeratum												
Bacopa caroliniana											Micranthemum umbrosum												
Bacopa monneri											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																							
If no Dominant or Co-Dominant were selected, indicate with "X"																							

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Little Aucilla River</u>					County: <u>Madison</u>		Date: <u>6/22/16</u>		Investigators: <u>Green/MacCall/ Woods</u>	
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	STORET Station Number: <u>G174720029</u>
0	1	N			60	1	N			Secchi depth <u>0.4</u> Estimated? <u></u> # points ranked 4-6 <u>0</u> total points assessed <u>96</u> % points ranked 4-6 <u></u>
	2					2				
	3					3				
	4					4				
	5			94		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				Check accompanying data collected at same site/date. Algal mat sample <u></u> Linear Veg Survey <u>✓</u> Habitat Assessment <u>✓</u> SCI/Biorecon <u>✓</u> Water sample <u>✓</u> RQ- <u>2016-05-23-29</u>
	2					2				
	3					3				
	4					4				
	5			95		5			96	
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				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
	2					2				
	3					3				
	4					4				
	5			92		5			74	
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5			96		5			92	
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5			90		5			91	
	6					6				
	7					7				
	8					8				
	9					9	N			
50	1				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									
	3									
	4									
	5			96						
	6									
	7									
	8									
	9	N								