

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

SAMPLE ID 83545 ORG ID 21FLWQSP LATITUDE 30.43422
 COUNTY MADISON STORET # 22040130 LONGITUDE -83.72214
 DATE 12/15/2021 TIME 930 SAMPLING AGENCY FDEP/AEQAS
 SITE NAME AUCILLA RIVER @ 7 BRIDGES
 FIELD ID/NAME AUC @ 7 BRIDGE RECEIVING BODY OF WATER Apalachee Bay
RQ-2021-12-13-16

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) ☐								Landscape Development Intensity Index (LDI) <u>1.3</u>
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>7</u> m wide <u>0.2</u> m/s <u>0.33</u> m/s <u>0.33</u> m/s				
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>1-2</u>				
High Water Mark: <u>0.2</u> + <u>0.7</u> = <u>0.9</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></th> <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:</td> <td><u>0.1</u></td> <td><u>17.3</u></td> <td><u>7.1</u></td> <td><u>4.61</u></td> <td><u>548.3</u></td> <td><u>200.2</u></td> <td></td> <td><u>—</u></td> </tr> <tr> <td>Mid:</td> <td></td> <td></td> <td></td> <td></td> <td><u>48.3</u></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></td> <td></td> </tr> </tbody> </table> Meter ID: <u>154185</u>							Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top:	<u>0.1</u>	<u>17.3</u>	<u>7.1</u>	<u>4.61</u>	<u>548.3</u>	<u>200.2</u>		<u>—</u>	Mid:					<u>48.3</u>			☐ VOB	Bottom:												
	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)																																								
Top:	<u>0.1</u>	<u>17.3</u>	<u>7.1</u>	<u>4.61</u>	<u>548.3</u>	<u>200.2</u>		<u>—</u>																																								
Mid:					<u>48.3</u>			☐ VOB																																								
Bottom:																																																
<table border="1"> <thead> <tr> <th></th> <th>% Coverage</th> <th>INVERT # Times Sampled</th> <th>PERI # Times Sampled</th> </tr> </thead> <tbody> <tr> <td>Woody Debris (Snags)</td> <td><u>15%</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Undercut Banks / Roots</td> <td><u>71</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Leaf Packs or Mat</td> <td><u>71</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Aquatic Vegetation</td> <td><u>71</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Rock or Shell Rubble..</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sand.....</td> <td><u>82</u></td> <td><u>4</u></td> <td></td> </tr> <tr> <td>Mud / Muck / Silt</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				% Coverage	INVERT # Times Sampled	PERI # Times Sampled	Woody Debris (Snags)	<u>15%</u>	<u>4</u>		Undercut Banks / Roots	<u>71</u>	<u>4</u>		Leaf Packs or Mat	<u>71</u>	<u>4</u>		Aquatic Vegetation	<u>71</u>	<u>4</u>		Rock or Shell Rubble..				Sand.....	<u>82</u>	<u>4</u>		Mud / Muck / Silt				Other				Other				Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐		
	% Coverage	INVERT # Times Sampled	PERI # Times Sampled																																													
Woody Debris (Snags)	<u>15%</u>	<u>4</u>																																														
Undercut Banks / Roots	<u>71</u>	<u>4</u>																																														
Leaf Packs or Mat	<u>71</u>	<u>4</u>																																														
Aquatic Vegetation	<u>71</u>	<u>4</u>																																														
Rock or Shell Rubble..																																																
Sand.....	<u>82</u>	<u>4</u>																																														
Mud / Muck / Silt																																																
Other																																																
Other																																																
			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐																																										
			Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____			Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐																																										
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:	☒	☐	☐	☐	System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐																				
	Not Obs.	Rare	Common	Abundant																																												
Periphyton:	☒	☐	☐	☐																																												
Fish:	☐	☒	☐	☐																																												
Aquatic Plants:	☐	☐	☒	☐																																												
Iron/Sulfur Bacteria:	☒	☐	☐	☐																																												
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.																																																
SAMPLING TEAM <u>Ashley O'Neal</u> <u>Sarah Noble</u> <u>Leora Sprague</u> <u>Chandler Hammond</u>				SIGNATURE: <u>Chandler Hammond</u>		DATE: <u>12/15/2021</u>																																										

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

SAMPLING AGENCY: FDEP DEAR AEGAS		STORET STATION NUMBER: 22040130	DATE (MM/DD/YY): 12/15/21	RECEIVING BODY OF WATER: Apalachee Bay
REMARKS:	COUNTY: Madison	LOCATION: Aucilla River @ 7 bridges	FIELD ID/NAME: Auc@7 Bridge	

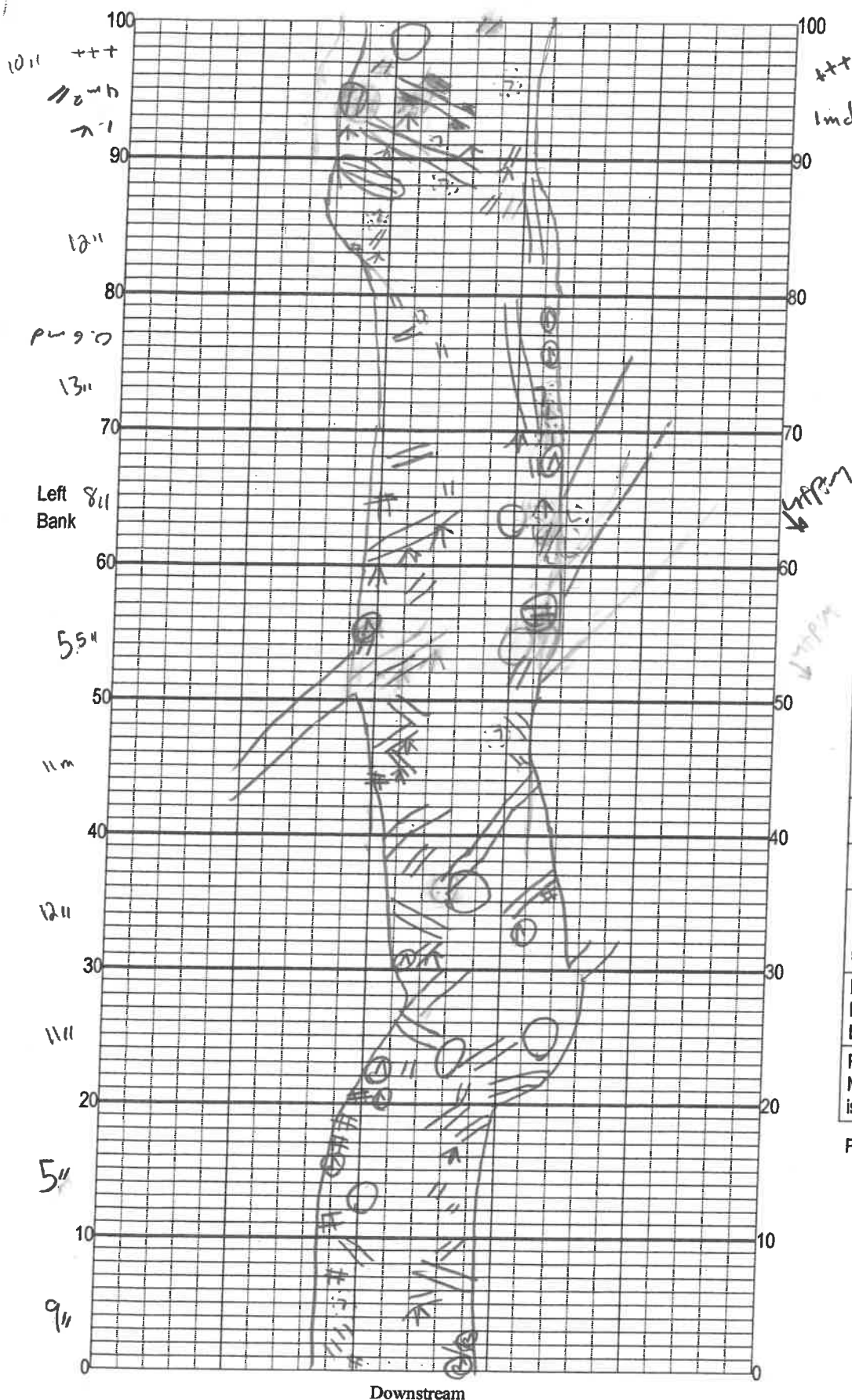
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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 16	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 10	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 10	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 17 Primary Score 63	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 20	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 10 Left Bank 10	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 10 Left Bank 10	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 10 Left Bank 10 Secondary Score 80	10 9	8 7 6	5 4	3 2 1

143

TOTAL SCORE

Date: 12/15/2021	Analyst: Chandler Hammond	Signature: Chandler Hammond <i>Chandler Hammond</i>
-------------------------	----------------------------------	---

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).

Location: Aucilla River @ 7 Bridges

Date: 12/15/2021

Sampler: Chandler Hammond

100 m: Latitude 30.43422

Longitude -82.72214

0 m: Latitude

Longitude

Substrates: Code key, draw proportionate habitat abundance.

	%
☒ Snags	15
☒ Roots/undercut banks	>1
☒ Leaf Packs (or mats)	>1
☒ Aquatic Macrophytes	>1
☐ sand	82
☐	
☐ Pools	total # observed = 6 # range expected = 13

Average width 7 m

Average depth 0.7 m

Velocity measured at 50 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:

Pontedericia
Ceratophyllum

0.33m/s velocity

L 0.2 0.33 R 0.33

RPS ID: 9816

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Aucilla River @ 7 bridgesCounty: MadisonDate: 12/15/2021Investigators: SN KS 40
CHSTORET Station Number: 22040130

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			60	1	N		
	2	N				2	N		
	3	N				3	N		
	4	N	✓	96		4	N		
	5	N	✓	5N		5	N		96
	6	N	✓			6	N	✓	5N
	7	N	✓			7	N		
	8	N				8	N		
	9	N				9	N		
10	1	N			70	1	N		
	2	N	✓			2	N		
	3	N	✓			3	N		
	4	N	✓	5N		4	N		94
	5	N	✓	88		5	N	✓	5N
	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	✓	94		4	N		96
	5	N	✓	5N		5	N		5N
	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	✓	92		4	N		94
	5	N	✓	5N		5	N		5N
	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		90		4	N	✓	78
	5	N	✓	5N		5	N	✓	5N
	6	N				6	N	✓	
	7	N				7	N	✓	
	8	N				8	N	✓	
	9	N				9	N	✓	
50	1	N							
	2	N							
	3	N	✓						
	4	N	✓	96					
	5	N	✓	5N					
	6	N	✓						
	7	N	✓						
	8	N							
	9	N							

Secchi depth	—
Estimated?	—

# points ranked 4-6	0
total points assessed	90
% points ranked 4-6	0%

Check accompanying data collected at same site/date.

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

RQ- 2021-12-13-16

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: <u>Assilla River</u>	Date: <u>12/15/20</u>	County: <u>Madison</u>	Storet Number: <u>22040130</u>
Analyst: <u>Ashley O'Neal, Sarah Mable, Kasey Springer, Chandler H.</u>		Signature: <u>[Signature]</u>	
Comments:			

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.

[illegible]

SITE NAME: AUCILLA RIVERDATE: 12/15/21TIME: 930 ^(EST) CSTDEPTH: 0.1 ftFIELD ID: AUC07BRIDGE

SAMPLING TEAM MEMBERS	WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
SARAH NOBLE			✓		✓
ASHLEY O'NEAL					
KARA SPRAGUE	✓				
CHANDLER HAMMOND			✓		

SAMPLING EQUIPMENT	
☒ Sample Container	☐ Tubing type: _____
☐ Pole	☐ Other: _____
☐ Pump ID#: _____	☐ Other: _____
WATER QUALITY MEASUREMENTS	
Instrument ID: <u>154185</u>	
COLLECTION MODE	
☒ Wading	☐ Via Boat
☐ Diving	☐ Canoe
☐ From Shore	☐ Electric Motor
☐ Other	☐ Gasoline Motor

Parameter Suite	Parameter(s)/Method	Matrix Code*	Preservation**	Preservative Lot #	pH Check	# Bottles ***
Preserved Nutrients	☒ TKN ☒ TP ☒ NO ₃ ☒ NH ₃ ☒ TOC ☐ Total N ☐ Other: _____	S W	☒ Ice ☒ H ₂ SO ₄	SA1105060	☒ <2	1
Filtered Nutrients	☐ OP ☐ Other: _____	S W	☒ Ice ☒ .45 um Filter			1
Unpreserved Nutrients	☐ NO ₂ ☐ NO ₃ ☐ SO ₄ ☐ Other: _____	W	☐ Ice			
Physical/Aggregate Properties	☒ TDS ☒ TSS ☐ TS ☐ Turbidity ☒ Alk ☒ Color ☐ Other: <u>CL, F, SO₄</u>	S W	☒ Ice			1
Chlorophyll	☐ CHL-PPTN-W <u>CHLSUITE-W</u>	S W	☒ Ice			1
BOD	☐ BOD-INHB ☐ BOD-UNIN	W	☐ Ice			
Microbiology <u>180T</u>	☒ E coli ☐ T Coli ☐ F Coli ☐ Enteroc ☐ F Strep	S W	☒ Ice			2
Macroinvertebrates	☐ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	S W	☒ Formalin			4
Phytoplankton	☐ PKD-QN-C ☐ DTY-QN-C	W	☐ Lugol's			
Periphyton	☐ PRN-QL-C ☐ DTM-QL-C ☐ PRN-QN-C ☐ DTM-QN-C	W	☐ Formalin			
AGP	☐ AA-AGP ☐ AA-LIM-NUT	W	☐ Ice			
Metals	☒ W-ICP ☐ W-FIAS ☒ W-ICPMS ☐ W-ICP-Tr	S W	☒ HNO ₃	NA1105100	☒ <2	1
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO ₃ ☐ .45 um Filter		☒ <2	
Mercury	☐ W-HG-AF	W				
Base/Neutral / Acid Extractable	☐ W-BNA ☐ W-AE ☐ W-BN ☐ W-PAH ☐ W-FL-PRO ☐ W ☐ Other: _____	W	☐ Ice			
Pesticides	☐ W-PEST-CL ☐ W-PCB ☐ W-PEST-NP ☐ W-PSCL-PCB ☐ W-NP-AA-SF ☐ W-PC-AA-SF ☐ W-PSHRB-NP ☐ W-SLFN-UREA ☐ W-SULFN-LC ☐ Other: _____ ☐ W-ACIDHERB ☐ W-CARB	W	☐ Ice			
Purgeables	☐ W-VOC-MS ☐ W-VOC-MS-A	W	☐ Ice			
Bioassay	Specify Test: _____	W	☐ Ice			
OTHER		W	☐ Other: _____			

Notes:

- (PCR-BACR, PCR-GFD, PCR-HF183)
 1 - (W-E8321-DI, W-E8321-MS)
 4 - (W-PSNP-TQ)
 ICE to preserve ALL

Contains: 1:1 HNO₃
 Lot No: NA:105100
 Expires: 06/07/22
 See Safety Data Sheet (SDS)

Contains: Conc. H₂SO₄
 Lot No.: SA1105060
 Expires: 04/30/22
 See Safety Data Sheet (SDS)

Use one line for each set of sample (as supplied by the laboratory) contain 3 sets. Use different water depth set for field duplicate or blank or

*Enter "S" for surface if collected at a depth less than or equal to 1 foot

*Matrix Codes (Insert prefix): SW = Surface Water GW = Groundwater DW = Drinking Water WW = Wastewater O = Other: _____

**PRESERVATIVES: 1 ml added unless otherwise noted

***Enter number of containers supplied by the laboratory for the test (e.g., 3 for volatile organics, etc.)

DEP Bureau of Laboratories Water Sample Collection Record

(Use with FDEP SOP-001/01 Form FD 9000-3 Physical/Chemical Characterization Field Sheet)

