

**FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION**

STRATEGIC MONITORING PLAN Field Sheet

July 2022

Meter
Passed End
of Day CCV
Yes / No

WIN Station Name:		BUTCHER PEN CR AT WESCONNETT				Sample Date:		9/19/2022	
WIN / Field ID:	20030760	ORG ID:	21FLA	ENR:	-	Latitude:	30.25983		
County:	Duval	WBID:	2322	STREAM		Longitude:	-81.74019		
Receiving Body of Water:		Cedar River				RQ-	2022-09-19-65		

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Jeremy Parrish	x		x		
Katherine Halbert		x		x	x

Sampling Equipment			
x	Sample Container	Carboy	
	Dipper	Van Dorn	
	Syringe	Pole	
Syringe Lot#		Filter Lot#	R1eb01329
Secchi Equipment ID:		D#4	
Collection Method			
x	Wading	Canoe/Kayak	
	From Shore	Electric Motor	
		Gasoline Motor	
Depth Measured With		Meter	

Water Level:	Normal
Flow:	Flowing
Matrix:	Fresh
Tide Stage:	Falling
High Tide:	600
Low Tide:	1215
Photos:	Yes
Meter ID:	Bruce

Time Zone	Time	Total Depth (m)	Sample Depth (m)	DO (mg/L)	DO (%SAT)	Temp. (°C)	pH	Secchi Disk (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)
EST	1030	0.4	0.3	4.9	59	24.9	7.04	0.4	292	0.14
								VOB (s)		

Biological Samples Collected:		HA LVS RPS								
SBIO Visit ID:	HA ID:	RPS ID:	Macrophyte ID:	LIMS Sample ID Entered Into The Macrophyte Module:						

Parameter Suite	Parameter Methods (LIMS Test Codes)			Preservation				
				Type	Lot#	Expiration Date	pH Check	
Microbiology	E. coli			ICE				
	Contract Lab	Diversified		ICE				
Chlorophyll	CHLSUITE-W			ICE				
Physical/Aggregate Nutrients	ALKALINITY, TURBIDITY, W-F, W-TSS			ICE				
	W-CL-IC, W-COLOR, W-SO4-IC, W-TDS			ICE				
Filtered Nutrients	W-PO4-F	Field Filtered 0.45 µm Filter		ICE				
Acid Preserved Nutrients	W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			ICE	H2SO4*	Sa2145160	6/3/23	H2SO4 pH<2
Metals	W-ICPMS	W-ICP	W-HARD	ICE	HNO3**	Na1105100	6/7/23	HNO3 pH<2
Organics (LC)								
Macroinvertebrates								
Organics (GC)					*2.0 ml of H2SO4 Used Unless Noted Otherwise **2.0 ml of HNO3 Used Unless Noted Otherwise			
Molecular								
Periphyton								
Phytoplankton								
BOD								
Other(s)								
Field Comments:								
Comments on COC: Microbiology sample(s) submitted to contract laboratory.								
Relinquish Date:	09/19/2022	Signature:						

LIMS EVENT ID: _____	WIN Import ID: _____
Enter Field Parameters, Verify Station ID In LIMS DMT: _____ (Initials/Date)	QC Station ID, Field Parameters In LIMS DMT: _____ (Initials/Date)
Save Field Sheets on Network: _____ (Initials/Date)	Migrate Data to WIN: _____ (Initials/Date)



DIVERSIFIED
ENVIRONMENTAL LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

Project Number:

(Lab Use Only)

3653 Regent Boulevard, Suite # 509
Jacksonville, FL 32224
P. (904) 807-9625 E. info@delilab.com
F. (904) 807-9627

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Company Name Florida Department of Environmental Protection										Container Information (Qty, Size, & Type)								Sample Matrix Codes:			
Address 8800 Baymeadows Way W Ste 100										NPW NPW NPW								A. Air P. Petroleum B. Bulk S. Soil/Sludge W. Wipe O. Other PW. Potable Water NPW. Non-Potable Water			
City Jacksonville State FL Zip 32256																					
Attn. Jeremy Parrish Jeremy.M.Parrish@floridadep.gov										Container Preservation Codes								Sample Kit or Container Lot #			
Tel. E-mail or Fax DEP-Overflowmicro@dep.state.fl.us										6 6 6											
Project Name <u>Burber Pen</u>										Parameters								Preservation Codes:			
Project Number RQ-2022-09-19-65																		0. None 5. Na2S2O3 1. H2SO4 6. Crushed Ice (4C) 2. HNO3 7. C6H8O6 3. HCl 8. NH4Cl 4. NaOH 9. Other: (List)			
Project Location																		Thermal Preservation:			
Sampler Name/Signature <u>Jeremy Parrish</u>																		In Crushed Ice? ☒ Yes / ☐ No Cooler Temp: <u>0.5</u> °C Sample Cont. Temp: <u>3.3</u> °C			
Transfer #	Sample # (Lab Use Only)	Sample Identification	Date Sampled	Time Sampled	Sample Matrix Code	Specific Cond. (Field)	Comp	Grab	E. Coli - Quantitray	Enterococci - Quantitray	Coliform, Fecal - MF 3 Dilutions										
1		26030760	9/16/22	1030	NPW	292		X	X												
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
0																					
Special Instructions:										Transfer Numbers		Relinquished By		Date / Time		Received By		Date / Time			
										1		Jeremy Parrish		9/19/22 1340		Negen Rix		9/19/22 13:42			



Certification #E821059

Lab General Form 059, Rev. #1, Rev. Date: 02/07/22, Effective Date: 02/07/22.

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

SAMPLING AGENCY:		STORET STATION NUMBER: 2013 07 60	DATE (MM/DD/YY): 9/19/22	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Arenal	LOCATION: Bitcher Peace Desert	FIELD ID/NAME:	

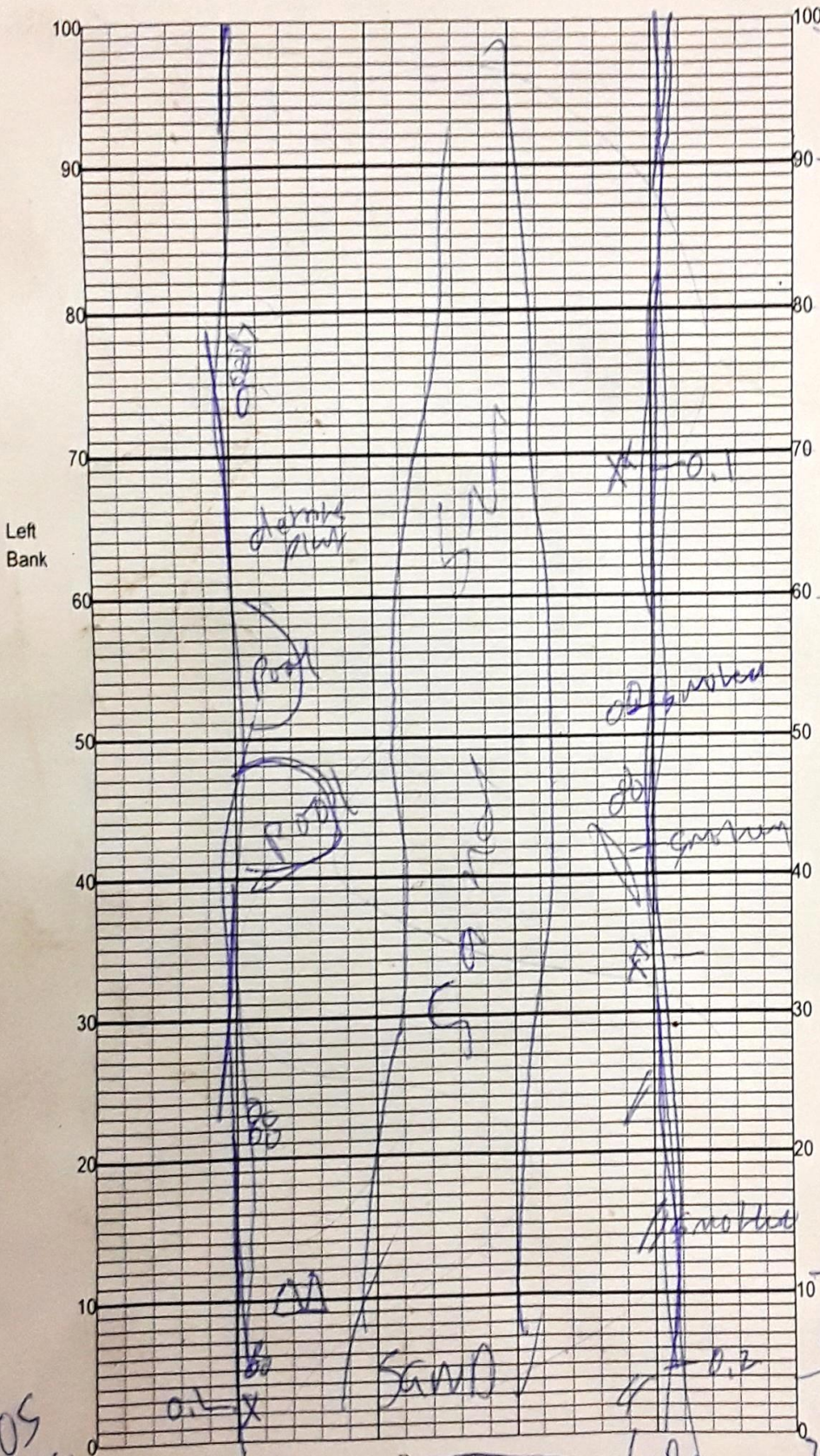
Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh 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 2	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 1	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 5	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 11	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 19	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 or straightening 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 18	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 woody 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 woody root zone with raw, eroded areas.
Right Bank 4 Left Bank 4	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 18 m	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 9 Left Bank 9	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 9 Left Bank 9	10 9	8 7 6	5 4	3 2 1
Secondary Score 62				

TOTAL SCORE

81

Date: 9/19/22	Analyst: Jerry Pur	Signature: Jerry Pur
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DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet



Location: Burton & Nesconet
 Date: 9/19/22
 Sampler: JP

100 m: Latitude	_____
Longitude	_____
0 m: Latitude	_____
Longitude	_____
Substrates: Code key, draw proportionate habitat abundance.	
☒ Snags	<u><1</u>
☒ Roots/undercut banks	<u><1</u>
☒ Leaf Packs (or mats)	<u><1</u>
☒ Aquatic Macrophytes	<u><1</u>
☒ <u>Rocks</u>	<u><1</u>
☐	_____
☐ Pools	total # observed = _____ # range expected = _____

Average width	<u>9</u> m
Average depth	<u>0.5</u> m
Velocity measured at	<u>10</u> meter mark.
WQ & chemistry taken at	<u>75</u> 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: (0.5)
1/1 snag 0.2 + 0.15 to 1.5
XX root 0.1 + 0.05 to 0.1 to 0.1
000 leaf 0.15 + 0.15 + 0.5 to 0.6
XX plant 0.3
(0.3)

Length of grid represents 100 m of stream (not linear meters).
 (Horizontal scale is double vertical scale, draw proportionately).

Total area 900 190 = 9m width 0.3 + 0.3 < 2

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY Rural STORET # 20030760 LONGITUDE _____
 DATE 9/19/22 TIME 1030 SAMPLING AGENCY _____
 SITE NAME Burthenpoles wet connect
 FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

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) ☐
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>29m</u> m wide <u>0.05</u> m/s <u>0.5</u> m deep		
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>18</u> Right Bank: <u>18</u>				Hydrologic Modification Score (per FT 3101) ☐		
High Water Mark: <u>0.6</u> + <u>0.5</u> = <u>1.1</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		
Artificially Channelized: ☒ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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 Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: _____ Mid: <u>0.3</u> <u>24.9</u> <u>7.04</u> <u>4.9</u> <u>59</u> <u>292</u> <u>0.14</u> <u>0.4</u> Bottom: <u>0.4</u> _____ Meter ID: _____			
Woody Debris (Snags) <u>1</u> Undercut Banks / Roots <u>1</u> Leaf Packs or Mat <u>1</u> Aquatic Vegetation <u>1</u> Rock or Shell Rubble <u>1</u> Sand _____ Mud / Muck / Silt _____ Other _____ Other _____		Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐ Water 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 ☐	
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: ☐ The antecedent hydrologic conditions have been met to my best knowledge.			

SAMPLING TEAM

J Pansh K Halbert

SIGNATURE

Jery Pansh

DATE:

9/19/22

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

RPS 99619

Site: <u>Butcher Pen we scomett</u>					County: <u>Dund</u>		Date: <u>9/19/22</u>		Investigators: <u>J Pansh</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>20030760</u>
0	1	N	✓	94	60	1	N	✓	94	Secchi depth <u>VPB</u>
	2	N	✓			2	N	✓		Estimated? <u>0.4</u>
	3	N	✓			3	N	✓		# points ranked 4-6 <u>0</u>
	4	N	✓			4	N	✓		total points assessed <u>95</u>
	5	N	✓			5	N	✓		% points ranked 4-6 <u>0</u>
	6	N	✓			6	N	✓		
	7	N	✓			7	N	✓		
	8	N	✓			8	N	✓		
	9	N	✓			9	N	✓		
10	1	N	✓	85	70	1	N	✓	94	Check accompanying data collected at same site/date.
	2	N	✓			2	N	✓		Algal mat sample
	3	N	✓			3	N	✓		Linear Veg Survey
	4	N	✓			4	N	✓		Habitat Assessment
	5	N	✓			5	N	✓		SCI/Biorecon
	6	N	✓			6	N	✓		Water sample
	7	N	✓			7	N	✓		
	8	N	✓			8	N	✓		
	9	N	✓			9	N	✓		
20	1	N	✓	94	80	1	N	✓	94	RQ- <u>2022-09-19-65</u>
	2	N	✓			2	N	✓		
	3	N	✓			3	N	✓		
	4	N	✓			4	N	✓		
	5	N	✓			5	N	✓		
	6	N	✓			6	N	✓		
	7	N	✓			7	N	✓		
	8	N	✓			8	N	✓		
	9	N	✓			9	N	✓		
30	1	N	✓	94	90	1	N	✓	96	Algal Thickness Rank
	2	N	✓			2	N	✓		N rough, no algae, slimy, algae up to 1mm
	3	N	✓			3	N	✓		3 >1mm - 6mm
	4	N	✓			4	N	✓		4 >6mm - 20mm
	5	N	✓			5	N	✓		5 >20mm - 10 cm
	6	N	✓			6	N	✓		6 >10 cm
	7	N	✓			7	N	✓		
	8	N	✓			8	N	✓		
	9	N	✓			9	N	✓		
40	1	N	✓	94	100	1	N	✓	96	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.
	2	N	✓			2	N	✓		
	3	N	✓			3	N	✓		
	4	N	✓			4	N	✓		
	5	N	✓			5	N	✓		
	6	N	✓			6	N	✓		
	7	N	✓			7	N	✓		
	8	N	✓			8	N	✓		
	9	N	✓			9	N	✓		
50	1	N	✓	93		1	N	✓		Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.
	2	N	✓			2	N	✓		
	3	N	✓			3	N	✓		
	4	N	✓			4	N	✓		
	5	N	✓			5	N	✓		
	6	N	✓			6	N	✓		
	7	N	✓			7	N	✓		
	8	N	✓			8	N	✓		
	9	N	✓			9	N	✓		
					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%.					

Waterbody: <u>Birden Pond Wesconett</u>	Date: <u>9/19/22</u>	County: <u>Duval</u>	Storet Number: <u>2030160</u>
Analyst: <u>J Parish</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.

Revision Date: March 1, 2014