FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

STRATEGIC MONITORING PLAN FIELD SHEET

January 2022

Meter Passed End of Day CCV
Yes / No

WIN Station Name: Double Bayou 800m upstream from Lake Wimico **Date:** 4/25/2022

WIN/Field ID: G2TLHR0003 **WBID:** 1262 **ENR:** - **Latitude:** 29.79101

County: GULF **Org ID:** 21FLTLHR **Longitude:** -85.10768

Receiving Body of Water: Lake Wimico **RQ-** 2022-01-03-58

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
[x] Jonathan Woods	x		x		
[x] Jade Burtchett		x		x	x
[ ]					
[ ]					

Sampling Equipment

- [x] Sample Container
- [ ] Dipper
- [ ] Syringe
- [ ] Carboy
- [ ] Van Dorn
- [ ] Pole

Depth measured with: Sonar

Secchi Equipment ID:

Collection Method

- [ ] **Wading**
- [ ] **From Shore**
- [ ] **Other** _____
- [ ] **Canoe/Kayak**
- [ ] **Electric Motor**
- [x] **Gasoline Motor**

Water Level: [X] Normal [ ] Low [ ] High [ ] Dry [ ] Pooled [ ] Flooded

Meter ID# 21K100690

Photos: No **Flow:** FLOW **Tide:** RISING **Tide Times:** High: 1427 Low: 724

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

SBIO ID Numbers:

Notes:

Duplicate Sample

Time Zone: EST **Time:** _____ **Field ID:** N/A (WIN ID_DUP)

WIN DMT Activity ID: _____

Blank

Time Zone: _____ **Time:** _____ **Field ID:** _____ (Blank Type_DDMMYYYY)

DI Source: _____ **Location:** _____

DI Type: _____ **Equipment ID:** _____

DI Container (Name/ID): **DI Container Type:**

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)

Scan/Save Field Sheets _____ (Initials/Date) **Migrate Data to WIN:** _____ (Initials/Date) **Verify Data In WIN:** _____ (Initials/Date)

RQ-2022-01-03-58
Customer: TLH-DIST
Project ID: STRATEGIC MONITORING PLAN

Collected By: Jonathan Woods, Jade Burtchett
Field Report Prepared By: Jonathan Woods
Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID: G2TLHR0003

Location: Double Bayou 800m upstream from Lake Wimico

Comments:

Matrix: Fresh

(Check one) [X] GRAB [ ] COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C⁰)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPTh)
4/25/2022	1225 EST	2.74	31.9	22.6	6.62	0.3	1.6 [ ] VOB (S)	4	111.7	0.05
							Central Lab please use top row for login purposes			
	1228 EST	2.39	27.6	22.2	6.52	3.5			111.2	0.05

Parameter Suite	Parameter Methods			Preservation	pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)	[x] W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP			x [ ] Ice x [ ] H_2SO_4*	[ ] <2	1	A
	Lot #	1108030	Exp:	12/1/22			
Metals (P-500ML)	[x] W-ICPMS [x] W-ICP [x] W-HARD			x [ ] Ice [ ] HNO_3*	x [ ] <2	1	A
	Lot #	1105100	Exp:	6/7/22			
Filtered Nutrients (P125ML)	[x] W-PO4-F [x] Field Filtered 0.45 µm Filter			x [ ] Ice		1	A
	Filter Lot #	17347262		Syringe Lot #	1091364		
BOD (BP-1L)	[ ] OV-BODUNIN			[ ] Ice			
Chlorophyll (BP-1L)	[x] CHLSUITE-W			x [ ] Ice		1	A
Physical/Aggregate (Fresh) (P-1L)	x [ ] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS			x [ ] Ice		1	A
Physical/Aggregate (Marine) (P-1L)	[ ] Alkalinity / W-BR-IC / W-F / W-TSS / TURBIDITY			[ ] Ice			
Macroinvertebrates (PJ-2L)	[ ] MI-FW-QLDC			[ ] Formalin			
Periphyton (PT-50ML)	[ ] ALGAE-ID			[ ] Ice			
Microbiology (Contract Lab Bottle)	x [ ] E Coli [ ] F Coli [ ] Enterococci [ ] Contract Lab			[x] Ice		1	A
Molecular (QPCR-P-500ML)	[ ] PCR-HF183 [ ] PCR-BacR [ ] PCR-DG3 [ ] PCR-GULL2 [ ] PCR-GFD [ ]			[ ] Ice			
Tracers (BG-500ML)	[ ] W-E8321-DI [ ] W-E8321-MS			[ ] Ice	MCAA Exp.		
Pesticides (BG-500ML) (BG-1L)	x W-E8321-DI x WE8321-MS x W-PSNP-TQ [ ] W-CT-CL-R			[x] Ice	MCAA Lot#	5 or 3	A
	[ ] W-PCL-TQ-R	W-CARB-AA (5 ml of MCAA** Buffer Solution)	[ ] W-TR-SQ-R				
	[ ] W-PCB-TQ-R						
Phytoplankton/Periphyton	[ ] DTY-QN-C [ ] PKD-QN-C			[ ] Ice			

Name:	Signature:	Date:
Jonathan Woods Jade Burtchett		04/25/2022

*2.0 ml of Preservative used unless noted otherwise.
**MCAA: Monochloroacetic acid buffer solution

84032

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

SAMPLE ID
ORG ID 21FLTLHR
LATITUDE
COUNTY Gulf
STORET # G2TLHR0003
LONGITUDE
DATE 04/25/22
TIME
SAMPLING AGENCY 8034
SITE NAME Double Bayou 800m upstream Lake Wimico
FIELD ID/NAME G2TLHR0003
RECEIVING BODY OF WATER Lake Wimico

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)
100							

Landscape Development Intensity Index (LDI)

Local Watershed Erosion (select one) : ☑ None ☐ Slight ☐ Moderate ☐ Heavy

Local Watershed NPS Pollution : ☑ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : 714 Right Bank : 714

Hydrologic Modification Score (per FT 3101)

Typical Width (m) Depth (m)/Velocity (m/sec) Transect
20 m wide

0.2 m/s	0.2 m/s	0.2 m/s
1.2 m deep	4.0 m deep	1.0 m deep

High Water Mark: 0.5 + 4.0 = 4.5
(m) (above present water level) (present depth) (above bed)

Artificially Impounded ☐ Yes ☑ No

Artificially Channelized : ☑ No ☐ Mostly recovered, more sinuous ☐ 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

	None	Slight	Moderate	Severe
Sand Smothering:	☒	☐	☐	☐
Silt Smothering:	☐	☒	☐	☐
Algae Smothering:	☐	☒	☐	☐

SUBSTRATE TYPE

Assessment Tool: ☐ SCI ☑ RPS ☑ LVS ☐ LCI ☑ BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	5.15		
Undercut Banks / Roots			
Leaf Packs or Mat	0.075		
Aquatic Vegetation	1.4		
Rock or Shell Rubble..			
Sand.....			
Mud / Muck / Silt			
Other	93.43		
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)
Top :							
Mid:							
Bottom							

SECCHI (M) ✓ ☐ VOB

TOTAL DEPTH 4.0

Meter ID: 21K100690

Water Odors Normal ☑ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐

Water Surface Oils Normal ☑ Sheen ☐ Globs ☐ Slick ☐ 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

	Not Obs.	Rare	Common	Abundant
Periphyton:	☐	☒	☐	☐
Fish:	☐	☐	☒	☐
Aquatic Plants:	☐	☒	☐	☐
Iron/Sulfur Bacteria:	☒	☐	☐	☐

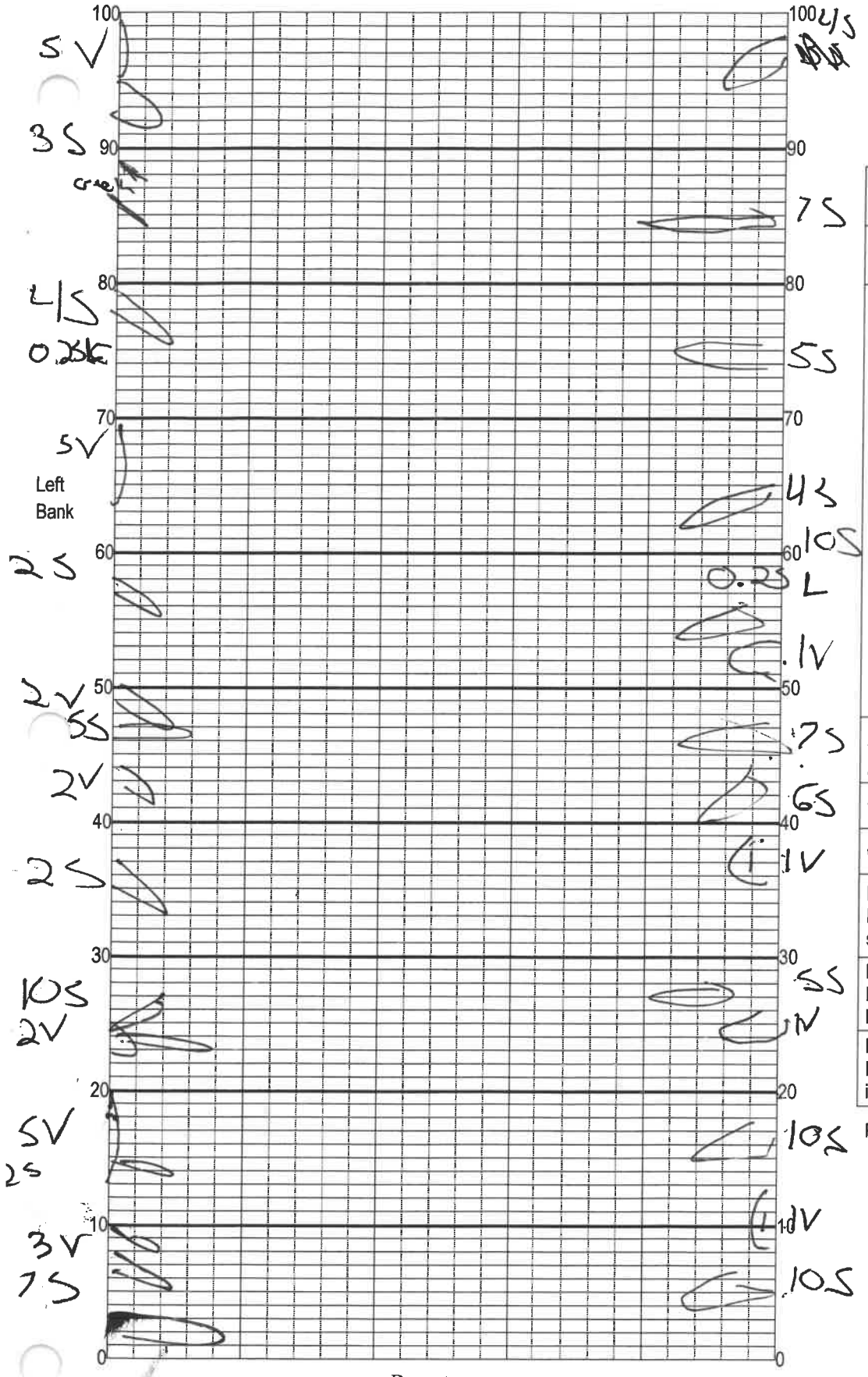
System Type: Stream ☑ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐

AMBIENT FIELD CONDITIONS / NOTES:

☑ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM J. Burtchett, J. Woods
SIGNATURE : Jude Burtchett
DATE : 04/25/22

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).

G2TL HRG003

Location: Double Bayou

Date: 04/25/22

Sampler: J. Burtchett, J. Woods

100 m: Latitude	
Longitude	
0 m: Latitude	
Longitude	

Substrates: Code key, draw proportionate habitat abundance.

		%
S	Snags	5.15
	Roots/undercut banks	
L	Leaf Packs (or mats)	0.025
V	Aquatic Macrophytes	1.4
	Pools — total # observed = ____ # range expected = ____	

Average width 20 m

Average depth 4 m

Velocity measured at 0 meter mark. 0.2

WQ & chemistry taken at 0 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:

103 S = 5.15
28 V = 1.4
0.5 L = 0.025

62-160.800, F.A.C

Revision Date: January 2017

17342

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

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
21FLTLHR		G2TLH20003	04/25/22	Gulf
REMARKS:	COUNTY: Gulf	LOCATION: Double Bayou 800m upstream Lake Wimico		FIELD ID/NAME: G2TLH20003

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 6	Four or more major productive habitats present [snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock] 20 19 18 17 16	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags) 15 14 13 12 11	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed 10 9 8 7 6	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered 5 4 3 2 1
Substrate Availability 5	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 14	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 16 Primary Score 43	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 **Artificial Channelization** 20	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 8 7 6	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks. 5 4 3 2 1
Bank Stability Right Bank 10 Left Bank 10	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 10 Left Bank 10	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 10 Left Bank 10 Secondary Score 80	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

123 **TOTAL SCORE**

Date: 04/25/22	Analyst: J. Burtchett, J. Woods	Signature: Jack Burtchett

12172 LIMS 2321846

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

Waterbody: Double Bayou	Date: 4/25/22	County: Gulf	Storet Number: GATLHR0003
Analyst: Woods / Burtchett		Signature: [illegible]	

Comments:

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 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Alternanthera philoxeroides											
Bacopa caroliniana											
Bacopa monneri											
Bidens mitis											
Boehmeria cylindrica											
Centella asiatica											
Ceratophyllum demersum											
Chara											
Cicuta maculata											
Cladium jamaicense	D✓	D✓	D✓	D✓	D✓	D✓	D✓	D✓	D✓	D✓	
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum				✓							
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata											
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna											
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
If no Dominant or Co-Dominant were selected, indicate with "X"											
Indicate % cover macrophytes per section											
0-5% Macrophyte Coverage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
>5 and ≤10% Macrophyte Coverage											
>10 and ≤25% Macrophyte Coverage											
>25 and ≤50% Macrophyte Coverage											
> 50% Macrophyte Coverage											

HERBACEOUS SPECIES	Meter Mark 0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	Specimen collected (check)
Micranthemum glomeratum											
Micranthemum umbrosum											
Myriophyllum aquaticum											
Najas guadelupensis											
Nuphar luteum						✓			✓		
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides											
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontedaria cordata	✓					✓			✓	✓	
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana											
Sagittaria lancifolia											
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Typha											
Vallisneria americana											
Zizania aquatica											

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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site:	County:	Date:	Investigators:
Double Bayou 800m upstream Lake Winico	Gulf	04/25/22	Burtchett, Woods

STORET Station Number: G2TCHP0003

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					2			
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
10	1				70	1			
	2					2			
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
20	1				80	1			
	2					2			
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
30	1				90	1			
	2					2			
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
40	1				100	1			
	2					2			
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
50	1								
	2								
	3								
	4								
	5			0					
	6								
	7								
	8								
	9								

Secchi depth	
Estimated?	
# points ranked 4-6	
total points assessed	
% points ranked 4-6	

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	
Habitat Assessment	
SCI/Biorecon	
Water sample	
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%.