



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PLAN FIELD SHEET

January 2020

Meter Passed End
of Day CCV
Yes / No

WIN Station Name: Camp Branch @ US90 **Date:** 8/5/2021
WIN/Field ID: G3TLHR0005 **WBID:** 251 **ENR:** - **Latitude:** 30.78
County: HOLMES **Org ID:** 21FLTLHR **Longitude:** -85.65
Receiving Body of Water: Choctawhatchee - St. Andrew **RQ:** 2021-08-02-69

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
☒	Jonathan Woods		x		x	x
☒	Paul Blair	x		x		
☐						
☐						

Sampling Equipment	
☒ Sample Container	☐ Carboy
☐ Dipper	☐ Van Dorn
☒ Syringe	☐ Pole
Depth measured with: Secchi	
Secchi Equipment ID: #1	
Collection Method	
☒ Wading	☐ Canoe/Kayak
☐ From Shore	☐ Electric Motor
☐ Other _____	☐ Gasoline Motor

Water Level: ☒ Normal ☐ Low ☐ High ☐ Dry ☐ Pooled ☐ Flooded						Meter ID# 153484					
Photos: NO	Flow: FLOW			Tide:		Tide Times: High: Low:					
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_DDDMMYYY)
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: QC Station ID, Field Parameters In LIMS DMT:
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets Migrate Data to WIN: Verify Data In WIN:
(Initials/Date) (Initials/Date) (Initials/Date)



RQ-2021-08-02-69

Customer: WQAP

Project ID: SMP

Collected By: Jonathan Woods, Paul Blair

Field Report Prepared By: Jonathan Woods

Sampling Agency: FDEP

Place Label Here

WIN ID/Field ID:



G3TLHR0005

Location: Camp Branch @ US90

Comments:

Matrix: Fresh

(Check one)

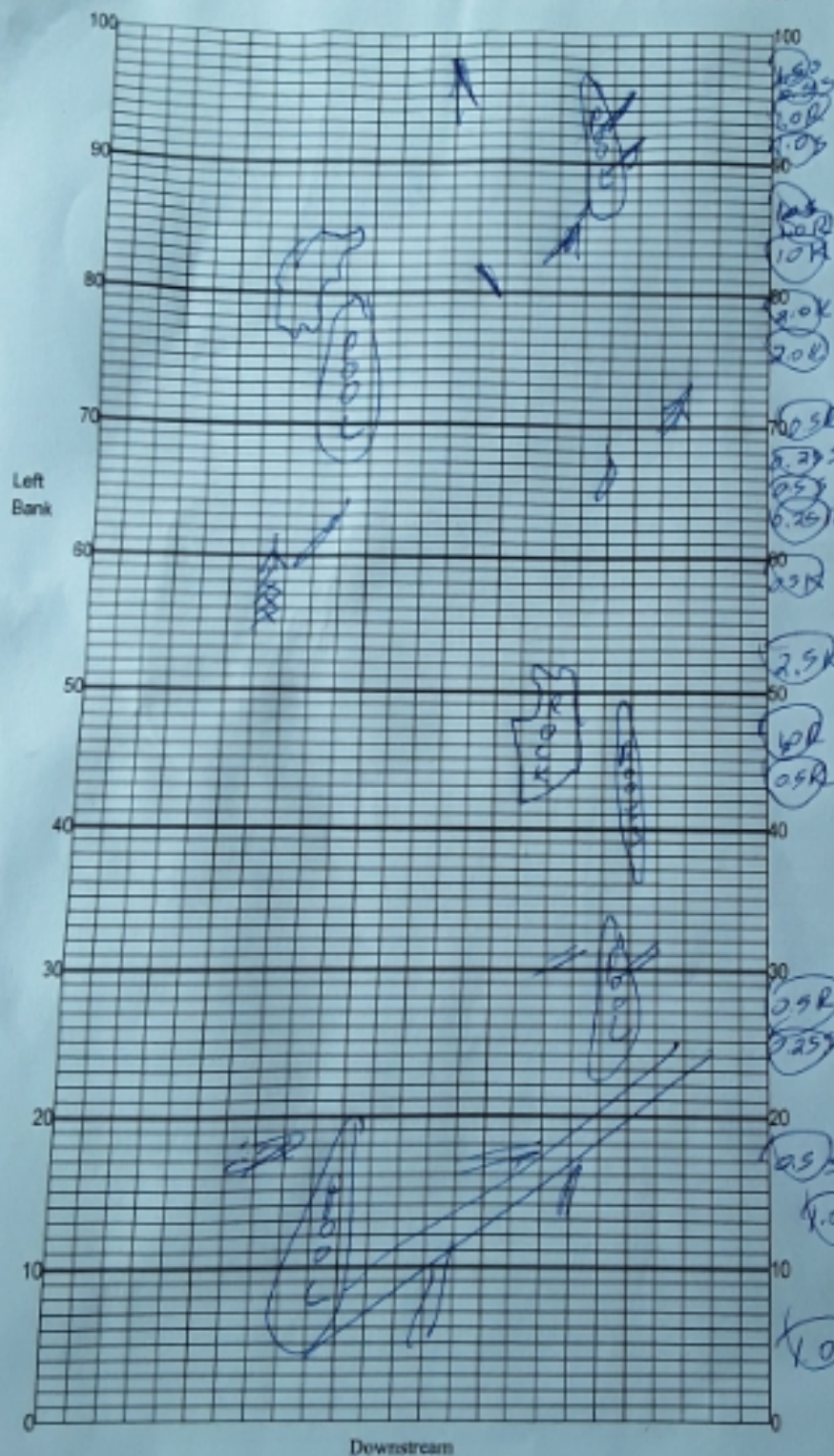
☒ GRAB☐ COMPOSITE

Date	Time	DO (mg/L)	DO (%SAT)	Temp. (C°)	pH	Sample Depth (m)	Secchi Disk (m)	Total Depth (m)	Sp COND (µmhos/cm)	Salinity (PPT _h)
	1200 EST	7	84.9	25.1	6.9	0.1	0.2 ☒ VOB (S)	0.2	122.4	0.06
8/5/2021										
	EST									
Parameter Suite		Parameter Methods				Preservation		pH Check	# Bottles sent to Lab	Bottle Group
Preserved Nutrients (P-500ML)		☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP				☒ Ice ☒ H2SO4*		☒ <2	1	A
		Lot #	1115060	Exp:		4-30-22				
Metals (P-500ML)		☐ W-ICPMS ☐ W-ICP ☐ W-HARD				☐ Ice ☐ HNO3*		☐ <2		
		Lot #		Exp:						
Filtered Nutrients (P125ML)		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☒ Ice			1	A
		Filter Lot #	N/A							
		Syringe Lot #	0079900							
Chlorophyll (BP-1L)		☒ CHLSUITE-W				☒ Ice			1	A
Physical/Aggregate (Fresh) (P-1L)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS				☒ 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 Lot #			☐ Formalin				
Periphyton (PT-50ML)		☐ ALGAE-ID				☐ Ice				
Microbiology (Contract Lab Bottle)		☒ E Coli ☐ F Coli ☐ Enterococci ☐ Contract Lab				☒ Ice			2	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				
Pesticides (BG-500ML) (BG-1L)		W-E8321-DI	W-E8321-MS	W-PSNP-TQ	W-CT-CL-R	☐ Ice				
Phytoplankton/Periphyton		W-PCL-TQ-R	W-CARB-AA (5 ml of MCAA** Buffer Solution)	DTY-QN-C	PKD-QN-BV	☐ Ice				
Name: Jonathan Woods Paul Blair					Signature:				Date:	

*2.0 ml of Preservative used unless noted otherwise.

**MCAA: Monochloroacetic acid buffer solution

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: G3TLHR0005
Date: 8/5/21
Sampler: Woods

100 m: Latitude _____
Longitude _____
0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.

☐ S	Snags	2.5
☐ R	Roots/undercut banks	1.75
☐ L	Leaf Packs (or mats)	
☐ A	Aquatic Macrophytes	
☐ K	Rock	2.66
☐		
☐		
☐	total # observed =	
☐	# range expected =	

Average width 3.0 m

Average depth 0.3 m

Velocity measured at 50 meter mark.

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:

4.03 6.91%

$V = 0.33 \text{ m/s}$

$S = 7.5$

$R = 4.25$ $S = 5.25$

$K = 8$

Revision Date: January 2017

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: G3TLHR0005					County: Holmes		Date: 08/05/2021		Investigators: Paul Blair	
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: G3TLHR0005
0	1	N	NO	90	60	1	N	NO	42	
	2	N	NO							
	3	N	NO							
	4	N	NO							
	5	N	NO							
	6	N	NO							
	7	N	NO							
	8	N	NO							
	9	N	NO							
10	1	N	NO	85	70	1	N	NO		
	2	N	NO							
	3	N	NO							
	4	N	NO							
	5	N	NO							
	6	N	NO							
	7	N	NO							
	8	N	NO							
	9	N	NO							
20	1	N	NO	64	80	1	N	NO	88	
	2	N	NO							
	3	N	NO							
	4	N	NO							
	5	N	NO							
	6	N	NO							
	7	N	NO							
	8	N	NO							
	9	N	NO							
30	1	N	NO	50	90	1	N	NO		
	2	N	NO							
	3	N	NO							
	4	N	NO							
	5	N	NO							
	6	N	NO							
	7	N	NO							
	8	N	NO							
	9	N	NO							
40	1	N	NO	80	100	1	N	NO	96	
	2	N	NO							
	3	N	NO							
	4	N	NO							
	5	N	NO							
	6	N	NO							
	7	N	NO							
	8	N	NO							
	9	N	NO							
50	1	N	NO		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 densimeter 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	N	NO							
	3	N	NO							
	4	N	NO							
	5	N	NO							
	6	N	NO							
	7	N	NO							
	8	N	NO							
	9	N	NO							

Secchi depth	0.2
Estimated?	NO

# points ranked 4-6	0
total points assessed	99
% points ranked 4-6	0

Check accompanying data collected at same site/date.	
Algal mat sample	
Linear Veg Survey	X
Habitat Assessment	X
SCI/Biorecon	
Water sample	X
RQ-2021-08-02-69	

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

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

SAMPLE ID	ORG ID	LATITUDE
COUNTY Holmes	STORET # G3TLHR0005	LONGITUDE
DATE 08/05/2021	TIME 12:00	SAMPLING AGENCY TLHROC
SITE NAME G3TLHR0005		
FIELD ID/NAME G3TLHR0005		RECEIVING BODY OF WATER Holmes Creek

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) :								Landscape Development Intensity Index (LDI)
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)	
15	15	40	20	10	5			
Local Watershed Erosion (select one) : ☐ None ☒ Slight ☐ Moderate ☐ Heavy								Typical Width (m) Depth (m)/Velocity (m/sec) Transect 3 m wide
Local Watershed NPS Pollution : ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy								
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank : 18 Right Bank : 6				Hydrologic Modification Score (per FT 3101)				0.33 m/s 0.33 m/s 0.33 m/s
High Water Mark: 0 + 0.2 = 0.2 (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☒ Yes ☐ No				0.1 m deep 0.2 m deep 0.1 m deep
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 ☒ 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 <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>% Coverage</th> <th># Times Sampled</th> <th>INVERT</th> <th>PERI</th> </tr> </thead> <tbody> <tr> <td>Woody Debris (Snags)</td> <td> 2.5 </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Undercut Banks / Roots</td> <td> 1.75 </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Leaf Packs or Mat</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Aquatic Vegetation</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Rock or Shell Rubble..</td> <td> 2.66 </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Sand</td> <td> 93.08 </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Mud / Muck / Silt</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Other</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Other</td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				% Coverage	# Times Sampled	INVERT	PERI	Woody Debris (Snags)	2.5				Undercut Banks / Roots	1.75				Leaf Packs or Mat					Aquatic Vegetation					Rock or Shell Rubble..	2.66				Sand	93.08				Mud / Muck / Silt					Other					Other					WATER QUALITY <table border="1" style="width:100%; border-collapse: collapse;"> <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> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td>Mid:</td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </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:				Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)	Top :									Mid:									Bottom								
	% Coverage	# Times Sampled	INVERT	PERI																																																																																							
Woody Debris (Snags)	2.5																																																																																										
Undercut Banks / Roots	1.75																																																																																										
Leaf Packs or Mat																																																																																											
Aquatic Vegetation																																																																																											
Rock or Shell Rubble..	2.66																																																																																										
Sand	93.08																																																																																										
Mud / Muck / Silt																																																																																											
Other																																																																																											
Other																																																																																											
	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)																																																																																			
Top :																																																																																											
Mid:																																																																																											
Bottom																																																																																											
Water Odors ☐ Normal ☒ Sewage ☐ Petroleum ☐ Chemical ☐ Other			Water Surface Oils ☐ Normal ☒ Sheen Globs Slick Other																																																																																								
Water Sample Taken? ☒ Yes ☐ No			Color Tannic Green (Algae)																																																																																								
Sample Preserved? ☒ Yes ☐ No			Clear ☒ Other (Specify)																																																																																								
Lot Number: 1105060 Exp: 4-30-22																																																																																											
Algae Sample Taken? ☐ Yes ☒ No			Clarity Clear ☒ Slightly Turbid																																																																																								
Sample Preserved? ☐ Yes ☐ No			Turbid Opaque																																																																																								
Lot Number: Exp:																																																																																											
System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify)																																																																																											
ABUNDANCE <table border="1" style="width:100%; border-collapse: collapse;"> <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:																																																																	
	Not Obs.	Rare	Common	Abundant																																																																																							
Periphyton:																																																																																											
Fish:																																																																																											
Aquatic Plants:																																																																																											
Iron/Sulfur Bacteria:																																																																																											
AMBIENT FIELD CONDITIONS / NOTES: 																																																																																											
A The antecedent hydrologic conditions have been met to my best knowledge.																																																																																											
SAMPLING TEAM Paul Blair / Jon Woods			SIGNATURE :		DATE : 08/05/2021																																																																																						

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

SAMPLING AGENCY: TLHROC		STORET STATION NUMBER: G3TLHR0005	DATE (MM/DD/YY): 08/05/2021	RECEIVING BODY OF WATER: Holmes Creek
REMARKS:	COUNTY: Holmes	LOCATION:		FIELD ID/NAME: G3TLHR0005

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components Substrate Diversity <u>12</u>	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 <u>7</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>20</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>17</u> ----- Primary Score <u>56</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 Artificial Channelization <u>15</u>	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 or straightening 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 <u>8</u> Left Bank <u>8</u>	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. 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 woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>4</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>9</u> Left Bank _____ ----- Secondary Score <u>54</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

110

TOTAL SCORE

Date: 08/05/202	Analyst: Paul Blair	Signature:
-----------------	---------------------	------------

WIN 63TLHR0005

Store Number:

Signature: _____

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1m² 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										Specimen collected (check)		HERBACEOUS SPECIES	Meter Mark										Specimen 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	
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"																								