FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

PAGE ____ OF ____

Data Qualified? Yes / No

STORET Station Name: ~~GITLHR0008~~ Little River @ Waccasa Date: 3-24-16 (mm/dd/yyyy)

STORET Station ID: GITLHR0008 Latitude: 30.3387611 (Decimal Degrees)

WBID: 3428 RQ - 2016-03-14-56 ORG ID: 21FLTLHR Longitude: -83.9850583 (Decimal Degrees)

Receiving Body of Water: Waccasa River Field ID: GITLHR0008 County: Jefferson

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Chris Green	✓		✓		
Colby Marshall				✓	✓
Blake Spencer		✓			

Sampling Equipment

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

Equipment ID ____

Collection Method

- [ ] Wading
- [ ] From Shore
- [ ] Other (note below) ____

Via Boat
- [ ] Canoe/Kayak
- [ ] Electric Motor
- [x] Gasoline Motor

Water Level: Dry / Low / (Normal) / High / Flooded

Matrix: (Fresh) / Marine / DI

Meter ID#

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	13:34	0.3	0.7	6.8	74	7.4	NA	0.75	312	20.2
CEN										

Biological Samples Collected: None (HA) SCI (LVS) (RPS) LVI Other ____

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	[x] W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	[x] Ice [x] H_2SO_4	5259020	@ 9/16/16	[x] <2
Metals	[ ] W-ICPMS [ ] W-ICP	[ ] Ice [ ] HNO_2			[ ] <2
Filtered Nutrients	[x] W-PO4-F [x] Field Filtered 0.45 µm Filter	[ ] Ice			
Chlorophyll	[x] CHLSUITE-W	[ ] Ice			
BOD	[x] BOD-UNIN	[ ] Ice			
Physical/Aggregate (Kit A/C)	[x] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	[ ] Ice			
Physical/Aggregate (Kit B/D)	[ ] Alkalinity / W-F / W-TSS / TURBIDITY	[ ] Ice			
Macroinvertebrates	[ ] MI-FW-QLDC	[ ] Formalin			
Microbiology	[ ] E Coli [ ] F Coli [ ] Entero [ ] QPCR	[ ] Ice			
Periphyton	[ ] ALGAE-ID	[ ] Ice			
Pesticides	[ ] W-PSNP-TQ [ ] W-AHERB-AA [ ] W-PYR-AA-R [ ] W-PC-AA-SF [ ] W-UHERB-AA [ ] W-GLYPH	[ ] Ice [ ] Other			

Place Preservative Sticker(s) Here (If Available)

Notes:

Place Label Here (If Available)

Signature:

Date: 3-24-16

Field Parameters Entered into LIMS: CM 5/12/16 (Initials/Date)

Field Parameters QC in LIMS: AE 5/12/16 (Initials/Date)

Date Migrated to STORET: CM 5/16/16 (Initials/Date)

Field Sheets Scanned/Saved: CG 7/21/16 (Initials/Date)

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

SAMPLE ID _____ ORG ID 21FLTLHR LATITUDE 30.3387611

COUNTY Jefferson STORET # GITLHR0008 LONGITUDE -83.9850583

DATE 3-24-16 TIME 11:00 am SAMPLING AGENCY DEP 8034

TE NAME Little River @ Waccissa

FIELD ID/NAME GITLHR0008 RECEIVING BODY OF WATER Waccissa 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)
95				5			

Landscape Development Intensity Index (LDI) _____

Local Watershed Erosion (select one) : [X] None [ ] Slight [ ] Moderate [ ] Heavy

Local Watershed NPS Pollution : [X] No evidence [ ] Slight [ ] Moderate [ ] Heavy

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank : >18m Right Bank : >18m

Hydrologic Modification Score (per FT 3101) _____

High Water Mark: 0.1 (m) + 0.7 (above present water level) = 0.8 (present depth) (above bed)

Artificially Impounded [ ] Yes [X] No

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

14 m wide

0.125 m/s	0.125 m/s	0.125 m/s
0.5 m deep	0.7 m deep	0.5 m deep

Artificially Channelized : [X] No [ ] Some recovery [ ] Mostly recovered, more sinuous [ ] Recent, severe

Canopy Cover % [X] Open [ ] Lightly Shaded (11-45%) [ ] Heavily Shaded [ ] Moderate Shaded (46-80%)

SEDIMENT / SUBSTRATE

Sediment Oils [X] Absent [ ] Slight [ ] Moderate [ ] Profuse

Sediment Odors [X] Normal [ ] Sewage [ ] Petroleum [ ] Chemical [ ] Anaerobic [ ] Other (Specify) :

Smothering of Substrates

	None	Slight	Moderate	Severe
Sand Smothering:	[X]	[ ]	[ ]	[ ]
Silt Smothering:	[X]	[X]	[ ]	[ ]
Algae Smothering:	[X]	[ ]	[ ]	[ ]

SUBSTRATE TYPE

Assessment Tool: [ ] SCI [X] RPS [X] LVS [ ] LCI [ ] BioRecon

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	0.9		
Undercut Banks / Roots	0		
Leaf Packs or Mat	0		
Aquatic Vegetation	73.5		
Rock or Shell Rubble..			
Sand.....	25.6		
Mud / Muck / Silt			
Other			
Other			

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	[ ]	[X]	[ ]	[ ]
Fish:	[ ]	[ ]	[X]	[ ]
Aquatic Plants:	[ ]	[ ]	[ ]	[X]
Iron/Sulfur Bacteria:	[X]	[ ]	[ ]	[ ]

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.3	20.2	7.4	6.8	74	312	/	0.7
Mid:								[X] VOB
Bottom								TOTAL DEPTH
								0.7

Meter ID: 12 YSI 600 XLM

Water Odors Normal [X] Petroleum [ ] Sewage [ ] Chemical [ ] Other [ ]

Water Surface Oils Normal [X] Sheen [ ] Globs [ ] Slick [ ] Other [ ]

Water Sample Taken? [X] Yes [ ] No

Sample Preserved? [X] Yes [ ] No

Lot Number: 5259020 Exp: 9/16/16

Color Tannic [ ] Green (Algae) [ ] Clear [X] Other (Specify) [ ] _____

Algae Sample Taken? [ ] Yes [X] No

Sample Preserved? [ ] Yes [X] No

Lot Number: _____ Exp: _____

Clarity Clear [X] Slightly Turbid [ ] Turbid [ ] Opaque [ ]

System Type: Stream [X] Lake [ ] Wetland [ ] Estuary [ ] Other(Specify) [ ] _____

AMBIENT FIELD CONDITIONS / NOTES:

[X] The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM Chris Green / Colby Marshall / Blake Spencer

SIGNATURE : [signature] DATE : 3-24-16

Request Number: RQ-2016-03-14-56

SMP

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Nov 10, 2015

Customer: WQAP

Project ID: SMP

Requester: Chris Green

Collected By: Chris Green/Colby Marshall

Field Report Prepared By: C. Green

Sampling Agency: DEP 8034

Location: Little River @ ~~Waciss~~ Wacissa	☐ Comp ☒ Grab	Collection (comp begin or grab) Date 3-24-16 Time 13:34	(Eastern) Central	Composite end Date Time	Bottle Group(s) (See pg 2): A
Field ID: GITLHR0008	Matrix (type, e.g., Salt, Fresh, etc): Fresh		Diss. Oxygen 6.8/74 ☒ mg/L ☒ % sat	Total Res. Chlorine (mg/L): —	
STORET #: GITLHR0008	Temp (C): 20.2	pH: 7.4	Sample Depth: 0.3 ☐ ft ☒ m	Sp. Conductance (umho/cm): 312	
Latitude ☐ dd ☐ dms / Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments			
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date Time	Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)	
Latitude ☐ dd ☐ dms / Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments			
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date Time	Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)	
Latitude ☐ dd ☐ dms / Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments			
Location	☐ Comp ☐ Grab	Collection (comp begin or grab) Date Time	Eastern Central	Composite end Date Time	Bottle Group(s)
Field ID	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen ☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)	
STORET #	Temp (C)	pH	Sample Depth ☐ ft ☐ m	Sp. Conductance (umho/cm)	
Latitude ☐ dd ☐ dms / Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments			

Relinquished By:	Date/Time	Shipping Method	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
Green	3-24-16/15:00	Hand						

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

Waterbody: Little River @ Wacissa	Date: 3-24-16	County: Jefferson	Storet Number: 21TLHR0008
Analyst: Chris Green / Colby Marshall / Blake Spencer		Signature:	
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											
Colocasia esculenta											
Commelina diffusa											
Commelina virginica											
Crinum americanum											
Diodia virginiana											
Eichhornia crassipes											
Eleocharis (wispy viviparous)											
Hydrilla verticillata				X			X				
Hydrocotle											
Hygrophila polysperma											
Hymenocallis											
Lachnanthes caroliniana											
Landoltia punctata											
Lemna	X	X	X	X	X	X	X	X	X	X	
Limnophila sessiflora											
Ludwigia leptocarpa											
Ludwigia palustris											
Ludwigia peruviana											
Ludwigia repens											
Luziola fluitans											
~~Cod~~											
Cabomba Caroliniana C	C	X	C	X	C	X	X	X		C	
Nymphaea Odorata	X	C	C	D	X	D	D	X		D	
Limnobium Spongia	X	X	X	X	X	X	X	X	X	X	
unknown 1	X	X	X	X	X	X	X	X	X	X	
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	X	X	X	X	X	X	X	X	X	X	

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	X	C	C	X	X	X	X	X	X	X	
Nuphar luteum											
Orontium aquaticum											
Panicum hemitomon											
Panicum repens											
Panicum rigidulum											
Pistia stratioides	C	X	X	X	X	X	X	X	X	X	
Polygonum glabra											
Polygonum hydropiperoides											
Polygonum punctatum											
Pontederia cordata	X	X		X	X	X	X	X			
Potamogeton illinoensis											
Ruellia simplex											
Sacciolepis striata											
Sagittaria kurziana			C	X	C	X		X			
Sagittaria lancifolia	X						X	X	X	X	
Sagittaria latifolia											
Salvinia minima											
Samolus parviflora											
Saururus cernuus											
Sparganium americanum											
Typha											
Vallisneria americana	X		C	C				X	X	D	
Zizania aquatica	X	X	X	X	X	X	X	X	X	X	
polygonum Galbata						X		X	X	X	

unknown 1 = Cicuta maculata

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site:	County:	Date:	Investigators:
Little River @ Wacissa	Jefferson	3-24-16	Chris Green

STORET Station Number: GITLHR0008

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1		N	
	2		N	
	3		N	
	4		N	
	5		N	24
	6		N	
	7		N	
	8		N	
	9		N	
10	1		N	
	2		N	
	3		N	
	4		N	
	5		N	0
	6		N	
	7		N	
	8		N	
	9		N	
20	1		N	
	2		N	
	3		N	
	4		N	
	5		N	0
	6		N	
	7		N	
	8		N	
	9		N	
30	1		N	
	2		N	
	3		N	
	4		N	
	5		N	1
	6		N	
	7		N	
	8		N	
	9		N	
40	1		N	
	2		N	
	3		N	
	4		N	
	5		N	43
	6		N	
	7		N	
	8		N	
	9		N	
50	1		N	
	2		N	
	3		N	
	4		N	
	5		N	0
	6		N	
	7		N	
	8		N	
	9		N	

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1		N	
	2		N	
	3		N	
	4		N	
	5		N	87
	6		N	
	7		N	
	8		N	
	9		N	
70	1		N	
	2		N	
	3		N	
	4		N	
	5		N	96
	6		N	
	7		N	
	8		N	
	9		N	
80	1		N	
	2		N	
	3		N	
	4		N	
	5		N	0
	6		N	
	7		N	
	8		N	
	9		N	
90	1		N	
	2		N	
	3		N	
	4		N	
	5		N	33
	6		N	
	7		N	
	8		N	
	9		N	
100	1		N	
	2		N	
	3		N	
	4		N	
	5		N	94
	6		N	
	7		N	
	8		N	
	9		N	

Secchi depth	0.75
Estimated?	✓

# 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	✓
Habitat Assessment	✓
SCI/Biorecon	
Water sample	✓
RQ-	R 2016-03-14-56

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

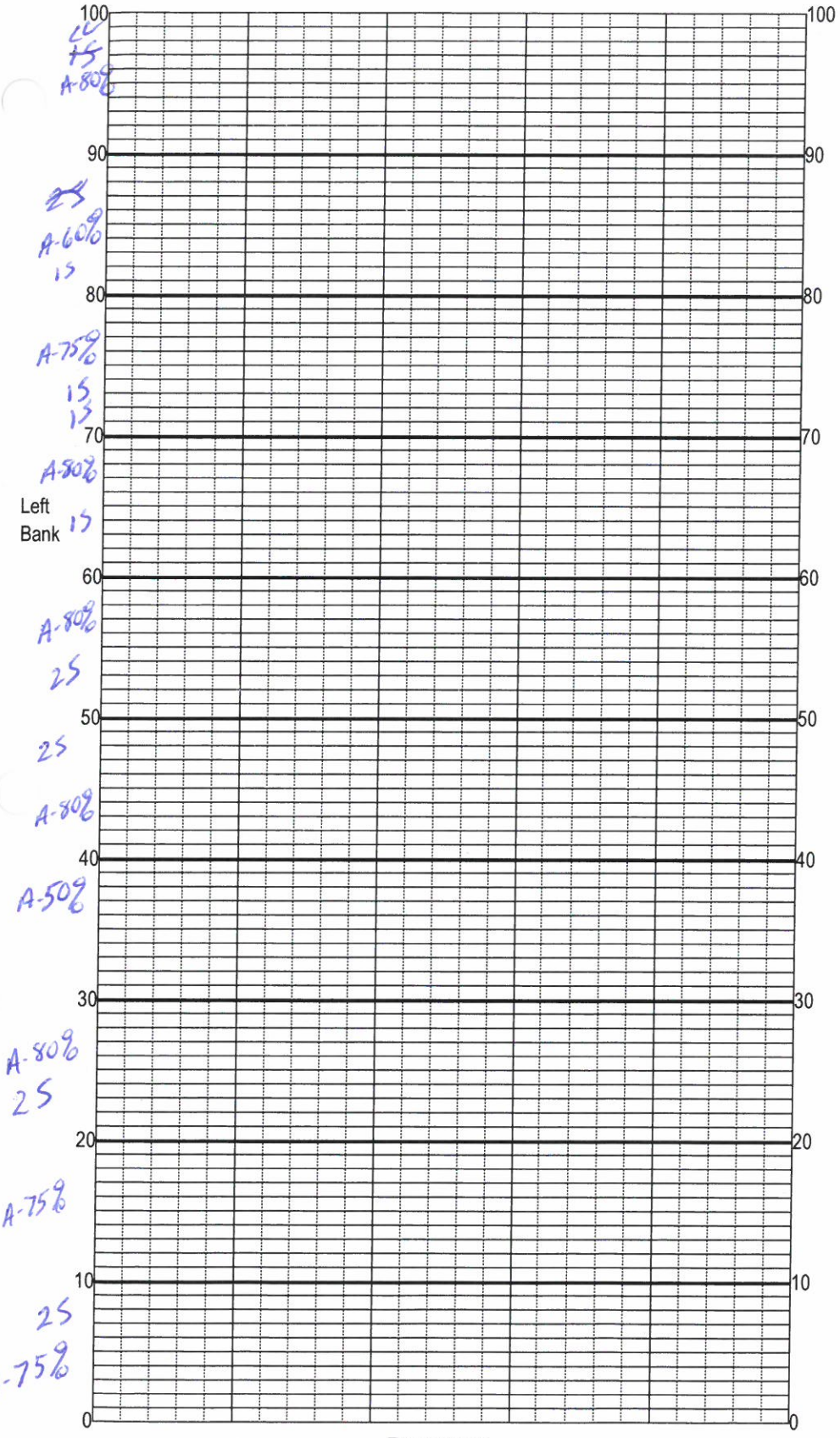
Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

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 9000-4 Stream/River Habitat Assessment Sketch Sheet



Downstream

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

14m

Location: Little River

Date: 3-24-16

Sampler: Chris Green

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.		%
S	Snags	0.9
V	Roots/undercut banks	
L	Leaf Packs (or mats)	
A	Aquatic Macrophytes	73.5
	Pools	total # observed = 6 # range expected = 2

Average width 14 m

Average depth _____ m

Velocity measured at 50 meter mark. 8 sec.

WQ & chemistry taken at 0 meter mark.

Habitat Smothering: 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 Natural
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

S - 12
A -

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

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
FDEP 8034		GITLHR0008	3-24-16	Wacissa River
REMARKS:	COUNTY: Jefferson	LOCATION: Little River @ Wacissa		FIELD ID/NAME: GITLHR0008

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 10	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 19	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 11	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 19 Primary Score 59	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 8 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 78	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

137 **TOTAL SCORE**

Date:	Analyst:	Signature:
3-24-2016	Chris Green	