

Field ID:



G1NE0531 08022017

OF ENVIRONMENTAL PROTECTION RING PROGRAM FIELD SHEET

March 2017

PAGE 1 OF 1

Data Qualified?

Yes / No

Ichetucknee R
@US Hwy 27

STORET



21030050

Date: 8/2/2017

(mm/dd/yyyy)

WBID: 3519

Latitude: 29.9534

(Decimal Degrees)

County: Columbia RQ - 2017-07-31-02

ORG ID: 21FLA

Longitude: 82.7856

(Decimal Degrees)

Receiving Body of Water:

Field ID: See Label

Sampling Team Members		WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment					
J. Parrish							☒ Sample Container	☐ Van Dorn	☐ Pole			
B. Davis							☐ Carboy	☐ Syringe				
							☐ Dipper	☐ Other				
							Equipment ID OrthoKit # 7					
Collection Method												
☐ Wading							☒ Via Boat					
☐ From Shore							☒ Canoe/Kayak					
☐ Other (note below)							☐ Electric Motor					
							☐ Gasoline Motor					
Water Level: Dry / Pooled / Low / <u>Normal</u> / High / Flooded							Matrix: <u>Fresh</u> / Marine / DI					
Meter ID# <u>VGI # 3</u>		Photos: Yes / <u>No</u>					Tide Falling: Yes / No / <u>NA</u>					
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	1130	0.3	1.5	6.8	77.0	7.58	0.16	VOR	335	22.1		
CEN				6.7				1.55				

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

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Acid Lots	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H ₂ SO ₄			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO ₃			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
Physical/Aggregate (Fresh)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Marine)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococci ☐ qPCR	☐ Ice			
Tracers	☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA	☐ Ice			
Pesticides	☐ W-PSNP-TQ ☐ W-AHERB-AA ☐ W-PYR-AA-R	☐ Ice			
	☐ W-PCL-SQ-R ☐ W-UHERB-AA ☐ W-GLYPH ☐ W-SUC-AA-R	☐ Other			

Contains 1 L Sulfuric Acid
Lot No. SA7153030
Expires 06/12/18
See Safety Data Sheet (SDS)

Place

Here

Notes:

Place Label Here
(If Available)Signature: Jeremy Carr

Date: 8/2/17

Field Parameters Entered into LIMS: JP 8/4/17

(Initials/Date)

Field Parameters QC in LIMS:

Date Migrated to STORET:

(Initials/Date)

Field Sheets Scanned/Saved: NF 8/1/17

(Initials/Date)

(Initials/Date)

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

AR 77792

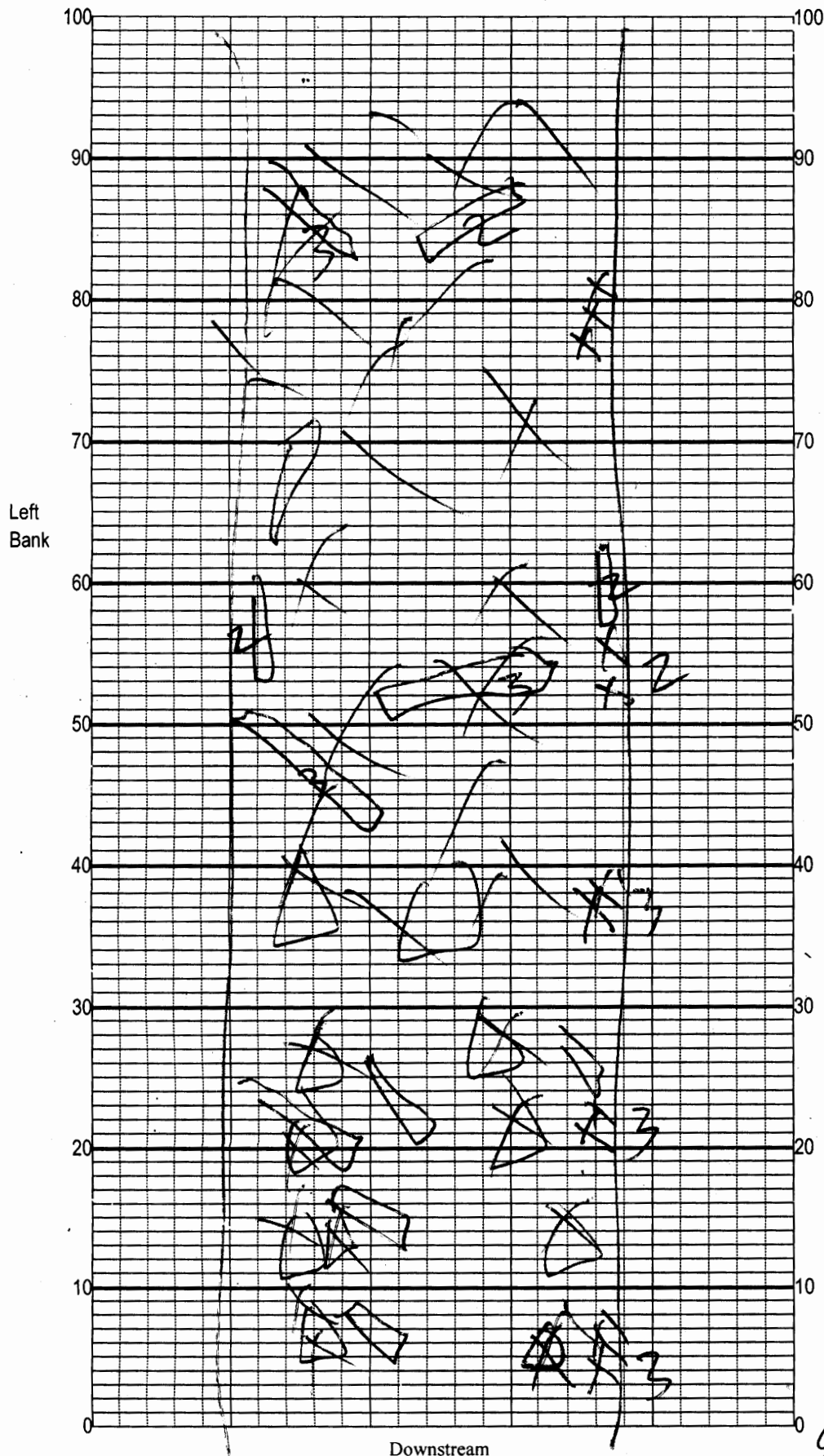
SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 21030050	DATE (MM/DD/YY): 8/2/17	RECEIVING BODY OF WATER:
REMARKS:	COUNTY: Columbia	LOCATION: Ichenwee 27	FIELD ID/NAME:	

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 <u>11</u>	20 19 18 17 16	15 14 13 12 <u>11</u>	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>13</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 <u>13</u> 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 <u>20</u> 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 state occurring: > 1 m/sec 0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>15</u> Primary Score <u>59</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. <u>15</u> 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 <u>20</u>	<u>20</u> 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 <u>9</u> Left Bank <u>9</u>	10 <u>9</u>	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 <u>10</u> Left Bank <u>10</u>	<u>10</u> 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 <u>9</u> Left Bank <u>9</u> Secondary Score <u>76</u>	10 <u>9</u>	8 7 6	5 4	3 2 1

135 TOTAL SCORE

Date: <u>8/2/17</u>	Analyst: <u>Jerry Carr</u>	Signature: <u>Jerry Carr</u>
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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: Idleness @ 27
Date: 8/2/17
Sampler: J. Smith

100 m: Latitude _____	
Longitude _____	
0 m: Latitude _____	
Longitude _____	
Substrates: Code key, draw proportionate habitat abundance. %	
☐ Snags	<u>2</u>
☐ Roots/undercut banks	<u>1</u>
☐ Leaf Packs (or mats)	_____
☐ Aquatic Macrophytes	<u>20</u>
☐ _____	_____
☐ _____	_____
☐ Pools	total # observed = _____ # range expected = _____
Average width <u>18</u> m	
Average depth <u>2</u> m	
Velocity measured at <u>0.815</u> meter mark.	
WQ & chemistry taken at <u>0</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:

<2 M of Macrophytes was observed while doing the LVS? YES or NO

Δ plants = 20%

Roots = 1%

Grass = 2%

97792 ✓ (WR)

Store Number: 29030050

Signature: 

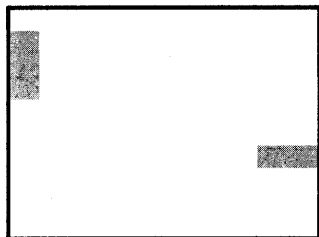
Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only if 1 m² of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

RF 8/7/17

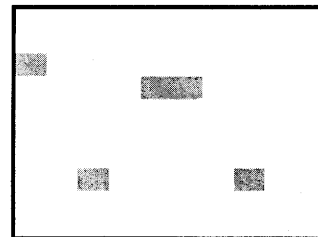
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

Percent Cover Categories for macrophytes in a 10 m segment of a stream 5 m wide

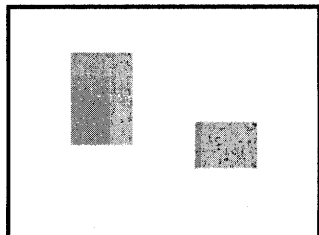
5% Macrophyte Coverage



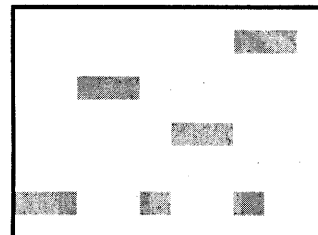
5% Macrophyte Coverage



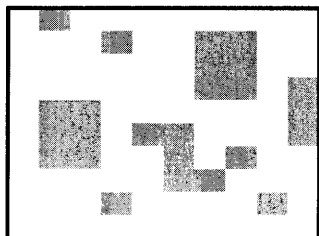
10% Macrophyte Coverage



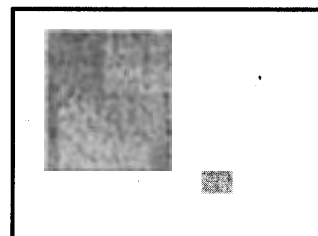
10% Macrophyte Coverage



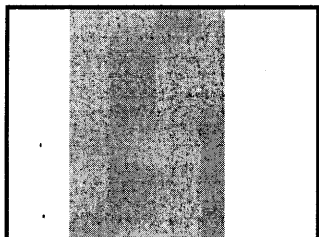
25% Macrophyte Coverage



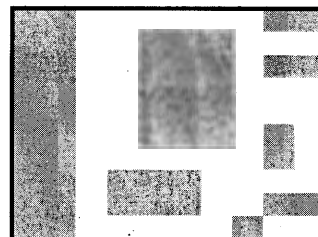
25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage



77792 ✓
DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY Columbia STORET # 21030050 LONGITUDE _____
 DATE 8/2/17 TIME 1130 SAMPLING AGENCY _____
 SITE NAME Ichenhale @ 27
 FIELD ID/NAME _____ RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

Meter ID: _____

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 _____ m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>218</u> Right Bank: <u>218</u>				Hydrologic Modification Score (per FT 3101) ☐		_____ m/s _____ m/s _____ m/s _____ m deep _____ m deep _____ m deep			
High Water Mark: <u>0.4</u> + <u>2</u> = <u>2.4</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☐ No		Canopy Cover % ☐ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☒ Moderate Shaded (46-80%)			
Artificially ☒ No ☐ Mostly recovered, more sinuous Channelized: ☐ Some recovery ☐ Recent, severe									

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								
Woody Debris (Snags) <u>2</u> <u>Na</u> Undercut Banks / Roots <u>1</u> <u>Na</u> Leaf Packs or Mat <u>20</u> <u>Na</u> Aquatic Vegetation <u>20</u> <u>Na</u> Rock or Shell Rubble <u>20</u> <u>Na</u> Sand <u>20</u> <u>Na</u> Mud / Muck / Silt <u>20</u> <u>Na</u> Other <u>20</u> <u>Na</u> Other <u>20</u> <u>Na</u>			Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMH/CM) Salinity (PPT) SECCHI (M) Top: <u>0.3</u> <u>22.1</u> <u>7.58</u> <u>6.7</u> <u>77</u> <u>335</u> <u>0.16</u> <u>1.5</u> Mid: _____ Bottom: <u>2</u> System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) _____								
			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:	☐	☒	☐	☐

AMBIENT FIELD CONDITIONS / NOTES:

Hydrologic Disturbance Scoring ☒ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-8 ☐ 9-10
☐ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM Jeremy Lantz Brian Long SIGNATURE: [Signature] 8/2/17

77792 ✓

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Ichetucknee @ 27</u>					County: <u>Columbia</u>					Date: <u>8/2/17</u>					Investigators: <u>JP/BP</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>21030050</u>																
0	1	N	✓	50	60	1	N	✓	80	Secchi depth <u>1.5</u> Estimated? <u>No</u> # points ranked 4-6 <u>11</u> total points assessed <u>99</u> % points ranked 4-6 <u>11%</u>																
	2	N	✓																							
	3	N	✓																							
	4	N	✓																							
	5	N	✓																							
	6	N	✓																							
	7	N	✓																							
	8	N	✓																							
	9	N	✓																							
10	1	N	✓	60	70	1	N	✓	40	Check accompanying data collected at same site/date: Algal mat sample <u>No</u> Linear Veg Survey <u>✓</u> Habitat Assessment <u>✓</u> SCI/Biorecon <u>No</u> Water sample <u>Yes</u> RQ- <u>2017-07-31-02</u>																
	2	N	✓																							
	3	N	✓																							
	4	N	✓																							
	5	N	✓																							
	6	N	✓																							
	7	N	✓																							
	8	N	✓																							
	9	N	✓																							
20	1	N	✓	75	80	1	N	✓	80	<table border="1"> <thead> <tr><th colspan="2">Algal Thickness Rank</th></tr> </thead> <tbody> <tr><td>N</td><td>rough, no algae, slimy, algae up to 1mm</td></tr> <tr><td>3</td><td>>1mm - 6mm</td></tr> <tr><td>4</td><td>>6mm - 20mm</td></tr> <tr><td>5</td><td>>20mm - 10 cm</td></tr> <tr><td>6</td><td>>10 cm</td></tr> </tbody> </table>					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
	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																								
	2	N	✓																							
	3	N	✓																							
4	N	✓																								
5	N	✓																								
6	N	✓																								
7	N	✓																								
8	N	✓																								
9	N	✓																								
30	1	N	✓	76	90	1	N	✓	50	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%.																
	2	N	✓																							
	3	N	✓																							
	4	N	✓																							
	5	N	✓																							
	6	N	✓																							
	7	N	✓																							
	8	N	✓																							
	9	N	✓																							
40	1	N	✓	76	100	1	N	✓	90																	
	2	N	✓																							
	3	N	✓																							
	4	N	✓																							
	5	N	✓																							
	6	N	✓																							
	7	N	✓																							
	8	N	✓																							
	9	N	✓																							
50	1	N	✓	90		1	N	✓																		
	2	N	✓																							
	3	N	✓																							
	4	N	✓																							
	5	N	✓																							
	6	N	✓																							
	7	N	✓																							
	8	N	✓																							
	9	N	✓																							

CALIBRATION AND VERIFICATION LOG (FDEP SOP FT 1000-FT 1500, FD 1000-FD 4000)

Boldly "X" this box if there is qualified data on this name.

Meter VLF # 3 RQ- 2017-07-31-02 Project Ichetucknee

- Notes: (1) Numbers ≤ 4 , are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
 (2) Always wait for meter to stabilize before recording any readings.
 (3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: Lab Calibration or Calibration/Verification on Site Lab

Temperature (Quarterly) FT 1400

Date of Last Temperature Verification 5/31/17

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	J.P. Smith	8/2/17	715	23.4	8.5	851	80.0	31.8	-	P	L
ICV	J	2	717	23.5	8.50	844	100	31.8	-	P	L
CCV	B = Vc	8/2/17	1507	22.8	8.61	6.89	80.0	24.7	-	F	L
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.

DO Acceptance criteria from Table ± 0.3 mg/L.

Rapid-Pulse Sensors: DO Gain Range 0.7 to 1.4; DO Charge Range 25-75.

Optical: DO gain range 0.85 to 1.15; DO charge N/A.

Steady-state & Galvanic Sensors: DO Gain & Charge N/A.

Spec. Cond. FT 1200	Name	Date	Time CT-ET	Lot #	Expir. Date	Standard μ mhos/cm	Meter Reading μ mhos/cm	Pass / Fail	Lab / Field
Calibr.	J.P. Smith	8/2/17	720	17031513	3/18	1000	1000	P	L
ICV	J	2	723	61472017	12/17	147	144	P	L
CCV	B = Vc	8/2/17	1510	17031513	3/18	1000	996	P	L
CCV									

Report specific conductance as a whole number with no decimal figure.

Conductivity Acceptance criteria $\pm 5\%$

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	J.P. Smith	8/2/17	724	1607412	1/18	7.0	7.00	29.4	P	L
Calibr.	J		725	2702743	1/19	4.0	4.00	128.2	P	L
Calibr.	J		726	2611998	5/18	10.0	10.00	183.5	P	L
ICV	J		727	1607412	1/18	7.0	7.01	28.1	P	L
CCV	B = Vc	8/2/17	1512	2611998	5/18	10	10.06	-187.6	P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ± 0.2 SU;

mV pH7 Range 0 ± 50 ;

mV pH 4 Range $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly)

Date of Last Depth Verification 5/31/17

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air	J.P. Smith	8/2/17	730	0.000	0.00	P	L

ICV acceptance criteria $\pm 5\%$ or ± 0.05 m, whichever is greater

NE 8/7/17