



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

February 2016

A-KIT

PAGE 1 OF 1

Data Qualified?
Yes / No

STORET Station Name: Withlacoochee River

Date: 04/11/2016
(mm/dd/yyyy)

STORET Station ID: G4SW0044

Latitude: 28°35'42" N
(Decimal Degrees)

WBID: 1329E RQ- 2016-04-11-35

ORG ID: 21FLTPA

Longitude: 82°13'20" W
(Decimal Degrees)

Receiving Body of Water: Gulf of Mexico

Field ID: GSW0044

County: Hernando

Sampling Team Members				WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment			
<u>ASHLEY Salmeron</u> <u>Judy Ashton</u> <u>Stephen Cingerman</u>									☒ Sample Container ☐ Carboy ☐ Dipper Equipment ID:	☐ Van Dorn ☒ Syringe ☐ Other	☐ Pole	
									Collection Method			
									☐ Wading ☐ From Shore ☐ Other (note below)	☒ Via Boat ☒ Canoe/Kayak ☐ Electric Motor ☒ Gasoline Motor		

Water Level: Dry / Low / Normal / High / Flooded
 Meter ID# 61 Jon Photos: Yes / No
 Matrix: Fresh / Marine / DI
 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°)
<u>EST</u>	<u>1105</u>	<u>0.3</u>	<u>3.0</u>	<u>7.1</u>	<u>80</u>	<u>7.1</u>	<u>0.09</u>	<u>0.6</u>	<u>186</u>	<u>21.6</u>
<u>CEN</u>		<u>2.5</u>		<u>7.0</u>	<u>81</u>	<u>7.1</u>	<u>0.09</u>		<u>186</u>	<u>21.5</u>

Biological Samples Collected: None HA SCI LVS RPS LVI Other

Parameter Suite	Parameter Methods	Preservation	Acid Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4			☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter	☒ Ice			
Chlorophyll	☒ CHLSUITE-W	☒ Ice			
BOD	☒ BOD-UNIN	☒ Ice			
Physical/Aggregate (Kit A)	☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CL-IC / W-COLOR / W-SO4-IC / W-TDS	☒ Ice			
Physical/Aggregate (Kit B)	☐ Alkalinity / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLOC	☐ Formalin			
Microbiology	☐ E Coli ☐ F Coli ☐ Enterococcus ☐ 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			

Contains
1:1
Sulfuric Acid
SA-5259020
EXP: 09/16/16
Warning!
See MSDS

Flow rate 0.17 m/s

Notes:
Apple snail eggs present

RQ-2016-04-11-35
Date: 04/11/16
Time:



Signature: Judy Ashton

Date: 4/11/16

Field Parameters Entered into LIMS: _____ (Initials/Date)
 Date Migrated to STORET: _____ (Initials/Date)
 Field Parameters QC in LIMS: _____ (Initials/Date)
 Field Sheets Scanned/Saved: _____ (Initials/Date)

DEP-SOP-001/01: Form FD 9000-3 (9/19/12)
PHYSICAL/CHEMICAL CHARACTERIZATION FIELD SHEET

SAMPLE ID _____ ORG ID 21 FLTPA LATITUDE 28°05'42 N
 COUNTY Hernando STORET # 648W0044 LONGITUDE 82°13'26 W
 DATE 04/11/2016 TIME 1125 SAMPLING AGENCY FDEP
 SITE NAME Withlacoochee River
 FIELD ID/NAME 648W0044 RECEIVING BODY OF WATER Gulf of Mexico

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) ☐ <u>100</u> ☐ ☐ ☐ ☐ ☐ ☐ ☐							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/s ☐ m/s ☐ m/s ☐ m deep ☐ m deep ☐ 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) <u>1</u>			
High Water Mark: <u>1.0</u> + <u>3.0</u> = <u>4.0</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☐ No			
Artificially ☒ No ☐ Mostly recovered, more sinuous Channelized: ☐ 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 Sand Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐ Algae Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐
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SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon <u>HA</u> % Coverage ☐ # Times Sampled ☐ # Times Sampled				WATER QUALITY							
Woody Debris (Snags) <u>0.3</u> Undercut Banks / Roots ☐ Leaf Packs or Mat ☐ Aquatic Vegetation ☐ Rock or Shell Rubble ☐ Sand ☐ Mud / Muck / Silt ☐ Other ☐ Other ☐				Top: <u>0.3</u> Mid: <u>2.5</u> Bottom: <u>2.5</u> Meter ID: <u>Lil Jon</u>	Depth (M) <u>0.3</u> Temp. (°C) <u>21.6</u> pH (SU) <u>7.1</u> D.O. (MG/L) <u>7.1</u> D.O. (%) <u>80</u> Cond. (UMHO/CM) <u>186</u> Salinity (PPT) <u>0.09</u> SECCHI (M) <u>0.6</u>	VOB ☐ SITE DEPTH <u>3.0 m</u>					
Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐				Water Surface Oils Normal ☒ Sheen ☐ Globbs ☐ Slick ☐ Other ☐				Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐			
Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____				Algae Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____				Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐			
System Type: Stream ☐ Lake ☐ Welland ☐ Estuary ☒ Other (Specify) ☒ <u>River</u>				WEATHER CONDITIONS / NOTES: <u>partly cloudy, sunny, low 80's</u> <u>recent rain, water level high, only habitat - snags</u> <u>too deep, apple snail eggs present</u> ☐ The antecedent hydrologic conditions have been met to my best knowledge.							

ABUNDANCE Absent Rare Common Abundant Periphyton: ☒ ☐ ☐ ☐ Fish: ☐ ☐ ☒ ☐ Aquatic Plants: ☒ ☐ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐				SAMPLING TEAM <u>A. Salmeron, J. Ashton, S. Clingerman</u>				SIGNATURE: <u>[Signature]</u>		DATE: <u>4/11/2016</u>	
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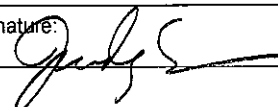
DEP-SOP-001/01: Form FD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

SUBMITTING AGENCY CODE: _____ SUBMITTING AGENCY NAME: _____		STORET STATION NUMBER: <u>645W0044</u>	DATE (MM/DD/YY): <u>4-11-16</u>	RECEIVING BODY OF WATER: <u>GOA</u>
REMARKS: _____	COUNTY: <u>HERNANDO</u>	LOCATION: <u>WILTLACOCHEE</u>	FIELD ID/NAME: <u>645W0044</u>	

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>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 <u>3</u> 2 1
Substrate Availability <u>3</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 <u>3</u> 2 1
Water Velocity <u>13</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 <u>13</u> 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 <u>3</u> 2 1
Habitat Smothering <u>30</u> ----- Primary Score <u>12</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 <u>3</u> 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 in the past (>25 yrs) but mostly recovered. <u>15</u> 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>9</u> <u>9</u> Left Bank	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. 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 <u>9</u> <u>10</u> Left Bank	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> <u>10</u> Left Bank ----- Secondary Score <u>71</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

90

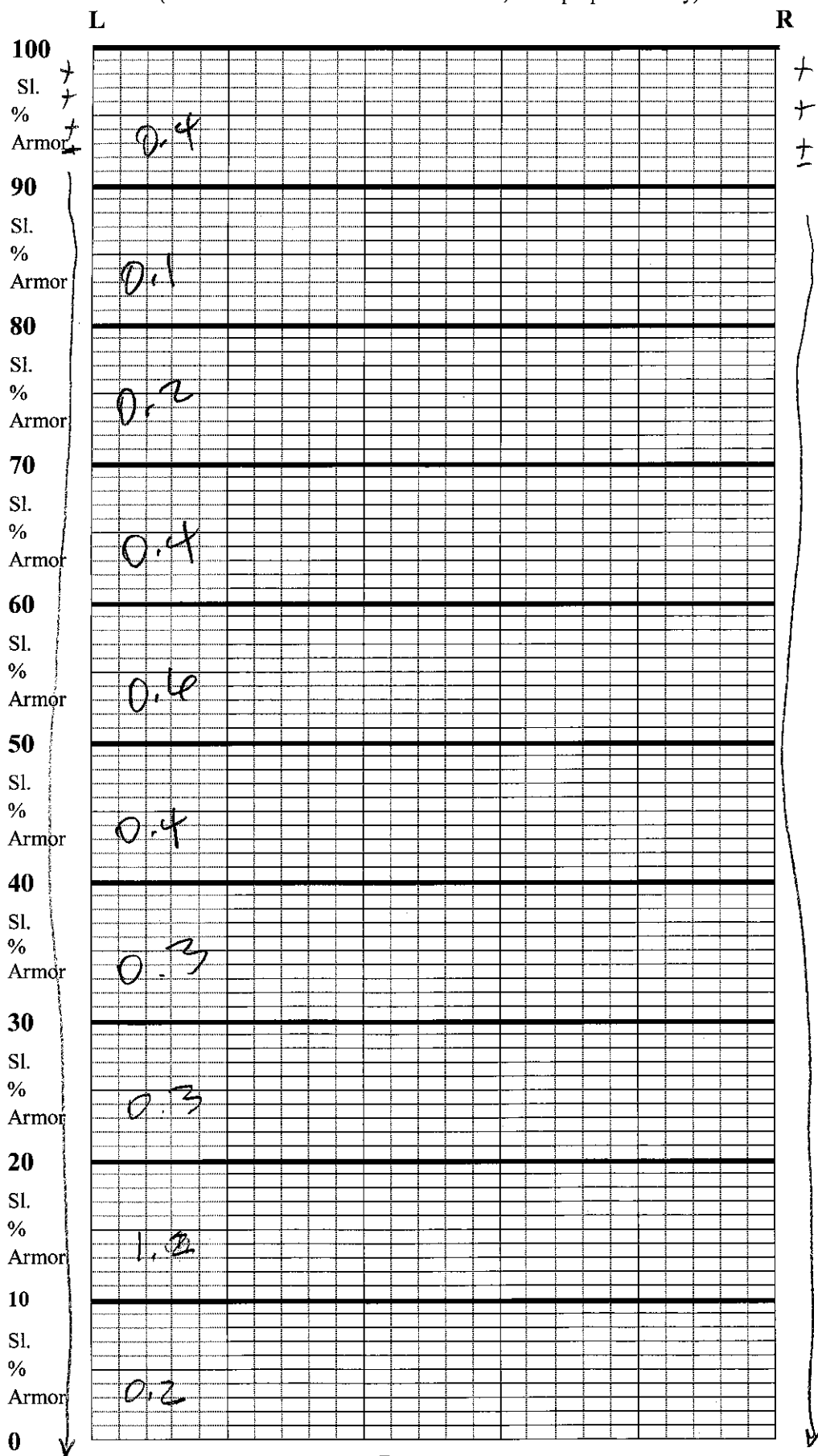
TOTAL SCORE

Date: <u>4-11-16</u>	Analyst: <u>Shirley Ashworth</u>	Signature: 
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Stream/River Habitat Sketch Sheet, Form FD 9000-4 (March 07, 2013)

Length of grid represents 100 m of stream (not linear meters).

(Horizontal scale is double vertical scale, draw proportionately).

Location: WITTLACODDHE R.64500044Date: 4-11-16

Samplers: _____

Substrates: Code key, draw proportionate habitat abundance. %



Snags

0.3



Roots/undercut banks



Leaf Packs (or mats)



Macrophytes



Total observed



Pools Range expected

Velocity measured at 0m meter mark.WQ & chemistry taken at 0m 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.

1 sec per 1 m	1m/s	sec	m/s
2	0.5	12	0.08
3	0.33	13	0.076
4	0.25	14	0.071
5	0.2	15	0.066
6	0.16	16	0.062
7	0.14	17	0.058
8	0.12	18	0.055
9	0.11	19	0.052
10	0.1	20	0.052
11	0.09	21	0.047
22	0.045	NO	FLOW

Prod. hab	1	2	3	4	5
Sweeps (Maj)	10	7	5	4	3
Sweeps (Min)	10	6	5	4	5

G 45W0044

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Wipacococree R.</u>					County: <u>Hannover</u>		Date: <u>4-11-16</u>		Investigators:	
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>G45W0044</u>
0	1	N		0	60	1	N		0	Secchi depth <u>0.6</u> Estimated? <u></u> # points ranked 4-6 <u>0</u> total points assessed <u>0</u> % points ranked 4-6 <u>0</u>
	2		Y							
	3									
	4									
	5									
	6									
	7									
	8		Y							
	9	N								
10	1	N		0	70	1	N		0	Check accompanying data collected at same site/date. Algal mat sample <u></u> Linear Veg Survey <u></u> Habitat Assessment <u></u> SCI/Biorecon <u></u> Water sample <u></u> RQ <u>2016-04-11-35</u>
	2		Y							
	3									
	4									
	5									
	6									
	7		Y							
	8		Y							
	9	N								
20	1	N		0	80	1	N		0	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		Y							
	3									
	4									
	5									
	6									
	7		Y							
	8		Y							
	9	N								
30	1	N		0	90	1	N		0	
	2		Y							
	3									
	4									
	5									
	6									
	7		Y							
	8		Y							
	9	N								
40	1	N		0	100	1	N		0	
	2		Y							
	3									
	4									
	5									
	6									
	7		Y							
	8		Y							
	9	N								
50	1	N		0		1	N			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		Y							
	3									
	4									
	5									
	6									
	7		Y							
	8		Y							
	9	N								

Waterbody: WITTLACOCUEE R	Date: 4-11-16	County: HERNANDO	Storet Number: 64520044
Analyst: L. ASHBY, ASHLEY SAMUELSON, S. CHANDLER		Signature: [Signature]	
Comments: 2M ² VEL			

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.

[illegible]

SCI w/ACID

Customer: SW-DIST

Project ID: SMP

Requester: Judy Ashton

Field Report Prepared By:

Collected By: J. Ashon, A. Spence, S. Cunningham

Sampling Agency:

Judy Ashton

False

Location	RQ-2016-04-11-35 Date: 04/11/16 Time:		 G4SW0044 G4SU0044		☐ Comp ☒ Grab		Collection (comp begin or grab) Date 04/11/2016 Time 1125		Eastern Central		Composite end Date Time		Bottle Group(s) (See pg 2)	
Field ID					Matrix (type, e.g., Salt, Fresh, etc) FRESH		Diss. Oxygen 7.1		☒ mg/L ☒ % sat		Total Res. Chlorine (mg/L)		A	
STORET #					Temp (C) 21.6		pH 7.1		Sample Depth 0.3		Sp. Conductance (umho/cm) 186			
Latitude	☐ dd ☐ dms		Longitude		Salinity (ppt) 0.09		Comments							
Location	Withkooshee River				☐ Comp ☒ Grab		Collection (comp begin or grab) Date 04/11/2016 Time 1400		Eastern Central		Composite end Date Time		Bottle Group(s)	
Field ID					Matrix (type, e.g., Salt, Fresh, etc) FRESH		Diss. Oxygen 35.0		☒ mg/L ☒ % sat		Total Res. Chlorine (mg/L)		A	
STORET #					Temp (C) 19.8		pH 4.1		Sample Depth 0.3		Sp. Conductance (umho/cm) 104			
Latitude	☐ dd ☐ dms		Longitude		Salinity (ppt) 0.05		Comments							
Location					☐ Comp ☐ Grab		Collection (comp begin or grab) Date		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		Sp. Conductance (umho/cm)			
Latitude	☐ dd ☐ dms		Longitude		Salinity (ppt)		Comments							
Location					☐ Comp ☐ Grab		Collection (comp begin or grab) Date		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		Sp. Conductance (umho/cm)			
Latitude	☐ dd ☐ dms		Longitude		Salinity (ppt)		Comments							
Location					☐ Comp ☐ Grab		Collection (comp begin or grab) Date		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		Sp. Conductance (umho/cm)			
Latitude	☐ dd ☐ dms		Longitude		Salinity (ppt)		Comments							

Relinquished By:	Date/Time	Shipping Method	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
<i>Stephen [Signature]</i>	04/11/16 1700	FedEx						

Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	ALKALINITY						
	TURBIDITY						
	W-CL-IC						
	W-COLOR						
	W-F						
	W-SO4-IC						
	W-TDS						
	W-TSS						
Group: A	Bottle Type:	P-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	BOD-UNIN						
Group: A	Bottle Type:	BP-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	CHLSUITE-W						
Group: A	Bottle Type:	P-500ML	# of Bottles: 1	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	2
	W-NH3						
	W-NO2NO3						
	W-S-A-TP						
	W-TKN						
	W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: 1	Preservative:	ICE-FLTR	Enter Number of Bottles Sent to Lab	2
	W-PO4-F						
Group: B	Bottle Type:	PJ-2L	# of Bottles: 2	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	2
	MI-FW-QLDC						