RQ-2019-08-05-89

Field Personnel processing steps

☐ New Field IDs created (when using a new station) Date: _____ initials: _____ ☒ NA

☐ Create entry in SMPStationCreationFile if new station is used

\\Fldep1\wqap\NW ROC\TMDL\WIN_Station Creation

☒ Date sampled Date: 8/7/19 initials: MK

~~☐ Update MAT~~ Date: _____ initials: _____

☑ Update "SMP Tracker" Date: 8/7/19 initials: MK

☐ Photos put into archive Date: _____ initials: _____ ☐ NA

☑ RQ Sheet – from LIMS (display/print request)

☑ Calibration Log for YSI used

☑ Field Sheets initialed/dated @ "Scan/Save Field Sheets" then scanned and saved into:

Scans_ToBeProcessed Date: 8/8/19 initials: MM

☑ Update "Data Tracker"

\\publicfiles\pubfds\DEAR\WQAPmonitoring\StrategicMonitoring\2019\21FLPNS

Ready for folder system (top)

LIMS processing (to be completed by LIMS data personnel) (MC)

☐ Field parameters entered into LIMS Date: _____ initials: _____

☐ Digital RQ packet put into

SMP 2019/Data/Scanned Field Sheets Date: _____ initials: _____

☐ Digital field Sheets put into archive Date: _____ initials: _____

☐ Date submitted for QA/QC Date: _____ initials: _____

☐ Update "Data Tracker"

Database processing (Cheryl)

☐ Field parameters QA/QC in LIMS Date: _____ initials: _____

☐ Lab results put into archive (CB) Date: _____ initials: _____

☐ Data migrated to WINS Date: _____ initials: _____

☐ Update "Data Tracker"

Notes:

RQ-2019-08-05-89

Date of Request: 22-JUL-2019
Created By: KING_M On: 22-JUL-2019
Modified By: JASROTIA_P On: 23-JUL-2019
Customer: NW-DIST
Project: SMP
Division: Division of Environmental Assessment and Restoration
District: Northwest District NWROC
Sampling Event: Bioassessment

Send Coolers To:

Phone: 850-595-0605
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Michael King

Send Final Report To:

160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

Program Module Number:
Priority: 3
Event Status: R
Criminal Investigation: NO
Chemistry Request Reviewed By: WATTS_J On: 23-JUL-2019
Biology Request Reviewed By: JASROTIA_P On: 23-JUL-2019
Sampling Kit Required: NO Ship on:
Sampling Kit Shipped:
Sampling Kit Packed By:
Preservatives Needed: NO
Date to Receive Samples: 05-AUG-2019
Received By: SHAIK_A On: 08-AUG-2019

Report Type: Final Only
FTP Data: NO
QC Report: YES
Date Log: NO
Authorization Log: NO

Comments: WBID 100 167A 350

Group A: Nutrients, Metals, Tracers, Q-PSNP-TQ

Group B: SCI, Algae_ID

Packing notes:
Please send labels

Bottle Group A (Water) With 3 Samples:

Bottle Type: P-1L Number of Bottles: 3 Preserved With: ICE

ALKALINITY Total Alkalinity	Template: DEFAULT	(SM 2320 B-97) Alkalinity in aqueous matrices as mg CaCO3/L
TURBIDITY Turbidity	Template: DEFAULT	(EPA 180.1 Rev. 2.0) Turbidity in aqueous matrices
W-CL-IC Chloride	Template: DEFAULT	(EPA 300.0 Rev. 2.1) Chloride in aqueous matrices
W-COLOR Color (true)	Template: DEFAULT	(SM 2120 B) True Color measured at 450 nm
W-F Fluoride	Template: DEFAULT	(SM 4500 F-C-97) Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)
W-SO4-IC Sulfate	Template: DEFAULT	(EPA 300.0 Rev. 2.1) Sulfate in aqueous matrices
W-TDS TDS	Template: DEFAULT	(SM 2540 C-97) Total Dissolved Solids in aqueous matrices
W-TSS TSS	Template: DEFAULT	(SM 2540 D-97) Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample

Bottle Type: BP-1L Number of Bottles: 3 Preserved With: ICE

CHLSUITE-W Chlorophyll-a, Corrected	Template: DEFAULT	(SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

Bottle Group A (Water) With 3 Samples:

Bottle Type: BP-1L Number of Bottles: 3 Preserved With: ICE

CHLSUITE-W Template: DEFAULT (SM 10200 H (mod.)) Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry

- Chlorophyll-a, Uncorrected
- Phaeophytin-a

Bottle Type: TEST HAS NO Number of Bottles: 3 Preserved With: ICE

NW-UWF-ECQ Template: DEFAULT (SM 9223 B Quanti-Tray) E. coli by Colilert-18/QT by UWF in Pensacola

- Escherichia Coli-Quanti-Tray

Bottle Type: BG-500ML Number of Bottles: 3 Preserved With: ICE

W-E8321-DI Template: DEFAULT (EPA 8321B) Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

- *Acesulfame K
- *AMPA
- *Endothall
- *Glufosinate
- *Glyphosate
- *Sucralose

W-E8321-MS Template: DEFAULT (EPA 8321B) Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS

- *Acetaminophen
- *Acetamiprid
- *Afidopyropen
- *Benzovindiflupyr
- *Carbamazepine
- *Clothianidin
- *Dinotefuran
- *Fluridone
- *Hydrocodone
- *Ibuprofen
- *Imazapyr
- *Mandestrobin
- *Naproxen
- *Primidone
- *Pyraclostrobin
- *Thiamethoxam
- *Tolfenpyrad
- *Triclopyr
- 2,4-D
- Bentazon
- Diuron
- Fenuron
- Imidacloprid
- Linuron
- MCPP

Bottle Type: P-500ML Number of Bottles: 3 Preserved With: HNO3

W-ICP Template: (EPA 200.7 Rev. 4.4) Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects

- Barium
- Calcium
- Iron
- Magnesium
- Potassium
- Sodium
- Zinc

W-ICPMS Template: (EPA 200.8 Rev. 5.4) Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

- *Boron
- Aluminum
- Antimony
- Arsenic
- Cadmium
- Chromium
- Copper

Bottle Group A (Water) With 3 Samples:

Bottle Type: P-500ML Number of Bottles: 3 Preserved With: HNO3

W-ICPMS Template: (EPA 200.8 Rev. 5.4) Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects

- Lead
- Nickel
- Selenium
- Silver
- Thallium

Bottle Type: P-500ML Number of Bottles: 3 Preserved With: ICE And H2SO4

W-NH3 Template: DEFAULT (EPA 350.1 Rev. 2.0) Ammonia in aqueous matrices as mg N/L

- Ammonia-N

W-NO2NO3 Template: DEFAULT (EPA 353.2 Rev. 2.0) Nitrite/Nitrate in aqueous matrices as mg N/L

- NO2NO3-N

W-S-A-TP Template: DEFAULT (EPA 365.1 Rev. 2.0) Total Phosphorus in aqueous matrices as mg P/L

- Total-P

W-TKN Template: DEFAULT (EPA 351.2 Rev. 2.0) Total Kjeldahl Nitrogen in aqueous matrices

- Kjeldahl Nitrogen

W-TOC Template: DEFAULT (SM 5310 B-00) Nonpurgeable Organic Carbon in aqueous matrices

- Organic Carbon

Bottle Type: P-125ML Number of Bottles: 3 Preserved With: FILTER-ICE

W-PO4-F Template: DEFAULT (EPA 365.1 Rev. 2.0) Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L

- O-Phosphate-P

Bottle Type: BG-1L Number of Bottles: 8 Preserved With: ICE

W-PSNP-TQ Template: DEFAULT (EPA 8270E) Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS

- *Dimethenamid
- *Dithiopyr
- *Fipronil Desulfinyl
- *Oxadiazon
- *Prodiamine
- *Tebuconazole
- Acetochlor
- Alachlor
- Ametryn
- Atrazine
- Atrazine Desethyl
- Azinphos Methyl
- Bromacil
- Butylate
- Chlorpyrifos Ethyl
- Chlorpyrifos Methyl
- Cyanazine
- Demeton
- Diazinon
- Disulfoton
- EPTC
- Ethion
- Ethoprop
- Fenamiphos
- Fipronil
- Fipronil Sulfide
- Fipronil Sulfone
- Fonofos
- Hexazinone
- Malathion
- Metalaxyl
- Metolachlor
- Metribuzin
- Mevinphos
- Molinate
- Norflurazon
- Parathion Ethyl

Bottle Group A (Water) With 3 Samples:

Bottle Type: BG-1L Number of Bottles: 8 Preserved With: ICE

W-PSNP-TQ Template: DEFAULT (EPA 8270E) Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS

- Parathion Methyl
- Pendimethalin
- Phorate
- Prometon
- Prometryn
- Simazine
- Terbufos
- Terbuthylazine

Bottle Group B (Biological) With 3 Samples:

Bottle Type: PJ-2L Number of Bottles: 6 Preserved With: Formalin

MI-FW-QLDC Template: DEFAULT (SOP-IZ06) No. Taxa of FW macroinverts, qual samp, 20 dipnets.

- *Macroinvert-FW-Qual-DipnetX20-#Taxa-Rep2
- *Stream Condition Index (SCI)

Bottle Type: PT-50ML Number of Bottles: 3 Preserved With: ICE

ALGAL_ID Template: DEFAULT (SOP-AB05) Qualitative assessment of algal taxa present without counts

- *Dominant sample taxon

* - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

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

Boldly "X" this box if there are qualified data on this page.

Meter ID: 154179 RQ- 2018-08-05-89 Project: SMP Biology

Notes: (1) Always wait for meter to stabilize before recording any readings.
(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification _____

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.											P / F	L / F
ICV											P / F	L / F
CCV	NM	8/7/19	0700	24.9	764	8.3	8.35	104.1			(P) / F	(L) F
CCV	NM	8/7	1650	25.6	764	8.17	8.19	101.5			(P) / F	(L) F

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 (Pro DSS 0.75 to 1.50); 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 µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	NM	8/7/19	0705	19011GA	1/20	1000	1000	P / F	(L) F
ICV	↓	↓	0708	19061BA	6/20	100	104	(P) / F	(L) F
CCV	NM	8/7	1655	19061B4	6/20	100	103	(P) / F	(L) F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	NM	8/7/19	0710	2811803	10/20	7.	25.6	7.0		P / F	(L) F
Calibr.	↓	↓	0712	2902818	1/21	4.		4.0		P / F	(L) F
Calibr.			0714	4904E09	9/20	10.		10.0		P / F	(L) F
ICV	↓	↓	0720	2902818	1/21	4.0		3.88	DS.1	(P) F	(L) F
CCV	NM	8/7	1658	4904E09	9/20	10.0		10.13		(P) / F	(L) F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50;
If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? (YES) / NO / NA (not surf. water project)
If **YES**, complete daily Calibr. & ICV below and list date of last quarterly depth verification: _____
If **NO**, what will be used? (circle one) **Secchi Disk Line / Sonar** Unique ID: _____; Date of last verification: 6/13/19

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	NM	8/7/19	0630	0.0	0.0	P / F	L / F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.

COMMENTS:

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

Boldly "X" this box if there are qualified data on this page.

Meter ID: 154179 RQ- 2019-08-05-88 Project: CMP

Notes: (1) Always wait for meter to stabilize before recording any readings.
(2) Report all digits displayed. Do not round before reporting measurements. (See special instructions for depth).
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification 6/13/19

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp °C	Baro-meter mmHg	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.											P / F	L / F
ICV											P / F	L / F
CCV	NM	8/6/19	0620	25.4	764	8.2	8.29	100.5		/	(P) F	(L) F
CCV	↓	↓	1500	24.9	764	8.3	8.35	104.1			(P) F	(L) F

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 (Pro DSS 0.75 to 1.50); 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 µmhos/cm	Meter Reading µmhos/cm	Pass / Fail	Lab / Field
Calibr.	NM	8/6/19	0635	A01KA	1/20	1000	1000	(P) F	(L) F
ICV	↓	↓	0640	1906184	6/20	100	104	(P) F	(L) F
CCV	↓	↓	1505	1901KA	1/20	1000	975	(P) F	(L) F
CCV								P / F	L / F

Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Temp °C	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	NM	8/6/19	0645	281803	10/20	7.	25.6	7.0		(P) F	(L) F
Calibr.	↓	↓	0648	290818	1/21	4.	25.6	4.0		(P) / F	(L) / F
Calibr.			0650	4904E09	10/20	10.	25.6	10.0	-224.3	(P) F	(L) F
ICV			0700	290818	1/21	4.0	25.6	3.88	195.1	(P) F	(L) F
CCV	↓	↓	1510	4904E09	10/20	10.0	24.4	9.95	-229.0	(P) F	(L) F
CCV										P / F	L / F

pH Acceptance criteria ± 0.2 SU; mV pH 7 Range 0 ± 50; mV pH 4 Range +180 ± 50; mV pH 10 Range -180 ± 50;
If mV are recorded: slope from 7 to 10 _____, slope from 4 to 7 _____ (both must be between 165 and 180 mV)

Does meter have a depth sensor that will be used to measure total depth & sample depth? (YES) / NO / **NA** (not surf. water project)
If **YES**, complete daily Calibr. & ICV below and list date of last quarterly depth verification: 6/13/19
If **NO**, what will be used? (circle one) **Secchi Disk Line / Sonar** Unique ID: _____; Date of last verification: _____

Depth Sensor (Daily Calibration & ICV)	Name	Date	Time CT-ET	Calibrated Value (0.00 or Offset), meters	ICV Value, meters	Pass / Fail	Lab / Field
Pressure mode in air	NM	8/6/19	0705	0.0	0.0	(P) F	(L) F

Report two decimal places. Round numbers ≤ 4 down, ≥ 5 up. ICV acceptance criteria ± 5 % or ± 0.05m, whichever is greater.

COMMENTS:

Request Number: RQ-2019-08-05-89

Bioassessment

Florida Department of Environmental Protection
Central Laboratory Submittal Form

last revised Jan 25, 2018

Customer: NW-DIST

Project ID: SMP

Requester: Michael King

Collected By: Nathan Mulky / Mike King

Field Report Prepared By: N. Mulky

Sampling Agency: NWROC

Location: Caney Creek	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 8/7/19 Time 1045	Eastern Central	Composite end Date	Time	Bottle Group(s) (See pg 2) A/B					
Field/WIN ID G4NW0397 Location: Above HWY 2A	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 6.49	☐ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
	Temp (C) 24.0	pH 5.74	Sample Depth 0.2	☐ ft ☑ m	Sp. Conductance (umho/cm) 32.6						
☐ dd ☐ dms	Salinity (ppt)	Comments macro inverts included									
Field/WIN ID G4NW0382 Location: Gum Creek	☐ Comp ☑ Grab	Collection (comp begin or grab) Date 8/7/19 Time 1345	Eastern Central	Composite end Date	Time	Bottle Group(s) A/B					
	Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 8.11	☑ mg/L ☐ % sat	Total Res. Chlorine (mg/L)						
	Temp (C) 25.1	pH 5.47	Sample Depth 0.3	☐ ft ☑ m	Sp. Conductance (umho/cm) 25.8						
☐ dd ☐ dms	Salinity (ppt)	Comments macro inverts included									
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)						
WIN/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)						
WIN/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	Number of Coolers Shipped:	Received By:	Date/Time
Nathan Mulky	8/7/19	Fed Ex	2		

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified? Yes / No

WIN Station Name: Caney Creek above Hwy 2A **Date:** 8/7/19 (mm/dd/yyyy)

WIN/ Field ID: G4NW0397 **WBID:** 100 **Latitude:** 30.881510 (Decimal Degrees)

County: Walton **ORG ID:** 21FLPNS **Longitude:** -86.219620 (Decimal Degrees)

Receiving Body of Water: Big Swamp Creek **RQ-2019-** 08-05-89

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Mike King			✓		
Nathan Mickey		✓		✓	✓

Sampling Equipment
- ☑ Sample Container ☐ Van Dorn ☐ Pole
- ☐ Carboy ☑ Syringe
- ☐ Dipper ☐ Other
- Depth Measured with
- Equipment ID

Collection Method
- ☑ Wading ☐ Canoe/Kayak
- ☐ From Shore ☐ Electric Motor
- ☐ Other ☐ Gasoline Motor

Water Level: Dry/ Pooled/ (Low) / Normal / High / Flooded **Meter ID#** 154179 **Matrix:** (Fresh) / Marine / DI

Photos: (Yes) / No **Flow:** No Flow / Intestital / (Flowing) / NA **Tide:** Rising/ Falling/ Slack/ (NA) **Tide Times:** High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTh)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1045	0.3	0.2	VOB	6.49	77.1	5.74	0.01	32.6	24.0
(CEN)										

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

SBIO ID Numbers: SBIO-ID: 80141 HA-ID: 16190 RPS-ID: 9431 Macrophyte-ID: 12 m² LIMS#: 2109676

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☑ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☑ Ice ☐ H_2SO_4	SA9010030	4/10/20	☑ <2
Metals	☑ W-ICPMS ☑ W-ICP	☑ Ice ☐ HNO_3	NA8344050	12/10/19	☑ <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-BR-IC / W-F / W-TSS / TURBIDITY	☐ Ice			
Macroinvertebrates	☐ MI-FW-QLDC	☐ Formalin			
Periphyton	☐ ALGAE-ID	☐ Ice			
Microbiology	☑ E Coli ☐ F Coli ☐ Enterococci	☑ Ice			
Molecular	☐ PCR-FILTER ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-HF183 ☐ PCR-DG3 ☐ PCR-GFD	☐ Ice			
Tracers	☐ W-E8321-DI ☐ W-E8321-MS	☐ Ice			
Pesticides	☑ W-PSNP-TQ ☐ W-CT-CL-R ☑ W-E8321-DI ☐ W-PCL-SQ-R ☐ WE8321-MS ☐ W-CARB-AA	☑ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C				

Place Preservative Sticker(s) Here (If Available)

Notes:

Field/WIN ID G4NW0397

Location: CANEY CREEK ABOVE HWY 2A

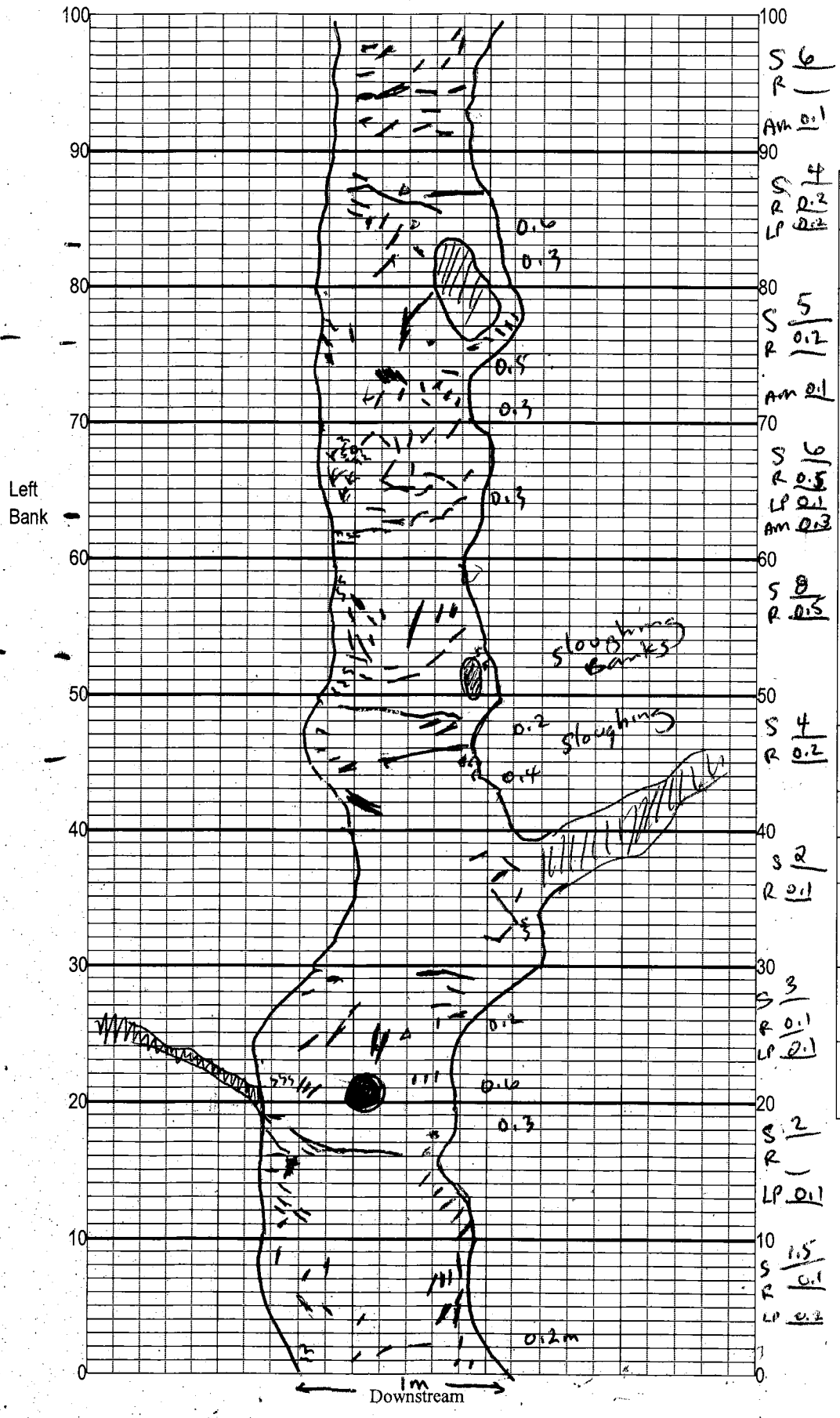
Signature: **Date:** 8/7/19

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)

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: CANEY CREEK Hwy 2A

Date: 8/7/19

Sampler: M. Icing / N. Mulkey

100 m: Latitude 30.88098
Longitude 86.21986

0 m: Latitude 30.88030
Longitude 86.21958

Substrates: Code key, draw proportionate habitat abundance. %

Snags	41.5 very silted	4
Roots/undercut banks	1.1	2
Leaf Packs (or mats)	0.4	0.4
Aquatic Macrophytes		
Pools	total # observed = 2 # range expected =	

Average width 1.0 m
Average depth 0.4 m

Velocity measured at 60 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:

scirpus
cinnamon fern
smartweed
lycopus
umbrella sedge
false nettle
rhyncospora
xyris
sparganium
bacopa

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: CANEY CREEK Hwy 2A | County: WALTON | Date: 8/7/19 | Investigators: M. Ickes

STORET Station Number: 21FLNW0397

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N		
	2			
	3			
	4			
	5			72
	6			
	7			
	8			
	9			
10	1	N		
	2			
	3			
	4			
	5			86
	6			
	7			
	8			
	9			
20	1	N		
	2			
	3			
	4			
	5			84
	6			
	7			
	8			
	9			
30	1	N		
	2			
	3			
	4			
	5			96
	6			
	7			
	8			
	9			
40	1	N		
	2			
	3			
	4			
	5			40
	6			
	7			
	8			
	9			
50	1	N		
	2			
	3			
	4			
	5			78
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N		
	2			
	3			
	4			
	5			76
	6			
	7			
	8			
	9			
70	1	N		
	2			
	3			
	4			
	5			80
	6			
	7			
	8			
	9			
80	1	N		
	2			
	3			
	4			
	5			72
	6			
	7			
	8			
	9			
90	1	N		
	2			
	3			
	4			
	5			88
	6			
	7			
	8			
	9			
100	1	N		
	2			
	3			
	4			
	5			70
	6			
	7			
	8			
	9			

Secchi depth	0.6
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- 2019-08-05-89	

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

SBIO ID 80141

RPS ID 9431

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 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
DEP NW ROC		64NW0397	08/07/19	Big Swamp Creek
REMARKS:	COUNTY: WALTON	LOCATION: Caney Creek abv Hwy 20		FIELD ID/NAME: 64NW0397

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 5	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 7	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 16	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 11 Primary Score 39	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 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 6 Left Bank 8	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 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 9 Left Bank 9 Secondary Score 72	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

111 **TOTAL SCORE**

Date: 8/7/19	Analyst: MIKE King	Signature:

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

SAMPLE ID 80141 ORG ID 21FLPNS LATITUDE 30.88098
COUNTY WALTON STORET # G4NW0397 LONGITUDE 86.21986
DATE 8/7/19 TIME 1045 SAMPLING AGENCY FDEP NW ROC
SITE NAME PANEY CREEK ABOVE HWY 2A
FIELD ID/NAME G4NW0397 RECEIVING BODY OF WATER Big Swamp Creek

RIPARIAN ZONE / STREAM FEATURES

WBID 100 RQ-2019-08-05-89 LIMS ID 2109676

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

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : >18 Right Bank : >18

Hydrologic Modification Score (per FT 3101) : 3-4

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

0.8 m/s	0.5 m/s	0.5 m/s
0.3 m deep	0.5 m deep	0.4 m deep

High Water Mark: 0.5 (m) + 0.6 (above present water level) = 1.1 (present depth) (above bed)

Artificially Impounded ☐ Yes ☑ No

Artificially Channelized : ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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)	4	10	
Undercut Banks / Roots	2	6	
Leaf Packs or Mat	<1	2	
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....	93	2	
Mud / Muck / Silt			
Other			
Other			

WATER QUALITY

	Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Top :	0.2	24.0	5.74	6.49	77.1	32.6	0.01	0.6
Mid:								☑ VOB
Bottom								TOTAL DEPTH
								0.6

Meter ID: 154179

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:
Area historically agriculture affected. Part of BMAP project in 1990's.

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

SAMPLING TEAM M. King / N. Muirhead

SIGNATURE :

DATE : 8/7/19

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified? Yes / (No)

WIN Station Name: Gum Creek **Date:** 8/1/19 (mm/dd/yyyy)

WIN/ Field ID: G4NW0382 **WBID:** 167A **Latitude:** 30.78473 (Decimal Degrees)

County: Walton **ORG ID:** 21FLPNS **Longitude:** -86.23354 (Decimal Degrees)

Receiving Body of Water: Shoal River **RQ-2019-** 08-05-89

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
MIKE KING	✓		✓	✓	
NATHAN MURKEY		✓		✓	✓

Sampling Equipment
- [x] Sample Container [ ] Van Dorn [ ] Pole
- [ ] Carboy [ ] Syringe
- [ ] Dipper [ ] Other
- Depth Measured with
- Equipment ID

Collection Method
- [x] Wading [ ] Canoe/Kayak
- [ ] From Shore [ ] Electric Motor
- [ ] Other [ ] Gasoline Motor

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded **Meter ID#** 154179 **Matrix:** Fresh / Marine / DI

Photos: Yes / No **Flow:** No Flow / Intestital / Flowing / NA **Tide:** Rising/ Falling/ Slack/ NA **Tide Times:** High Low

Time Zone	Time	Total Depth (m)	Sample Depth (m)	Secchi Disk (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (PPTh)	Sp COND (µmhos/cm)	Temp. (C°)
EST	1345	0.6	0.3	VOB	8.11	98.3	5.47	0.01	25.8	25.1
CEN										

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

SBIO ID Numbers: SBIO-ID: 80140 HA-ID: 16189 RPS-ID: 9430 Macrophyte-ID: <2m² LIMS#: 2109677

Parameter Suite	Parameter Methods	Preservation	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	SA9010030	4/10/20	[x] <2
Metals	[x] W-ICPMS [ ] W-ICP	[ ] Ice [x] HNO_3	NA8344050	12/10/19	[x] <2
Filtered Nutrients	[x] W-PO4-F [x] Field Filtered 0.45 µm Filter	[x] Ice			
Chlorophyll	[x] CHLSUITE-W	[x] 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-BR-IC / W-F / W-TSS / TURBIDITY	[ ] Ice			
Macroinvertebrates	[ ] MI-FW-QLDC	[ ] Formalin			
Periphyton	[ ] ALGAE-ID	[ ] Ice			
Microbiology	[x] E Coli [ ] F Coli [ ] Enterococci	[x] Ice			
Molecular	[ ] PCR-FILTER [ ] PCR-BacR [ ] PCR-GULL2 [ ] PCR-HF183 [ ] PCR-DG3 [ ] PCR-GFD	[ ] Ice			
Tracers	[ ] W-E8321-DI [ ] W-E8321-MS	[ ] Ice			
Pesticides	[x] W-PSNP-TQ [ ] W-CT-CL-R [ ] W-E8321-DI [ ] W-PCL-SQ-R [ ] W-E8321-MS [ ] W-CARB-AA	[ ] Ice			
Phytoplankton	[ ] DTY-QN-C [ ] PKD-QN-C	[ ] Ice			

Place Preservative Sticker(s) Here (If Available)

Notes: 2941

Field/WIN ID G4NW0382

Location: GUM CREEK

Signature: **Date:** 8/1/19

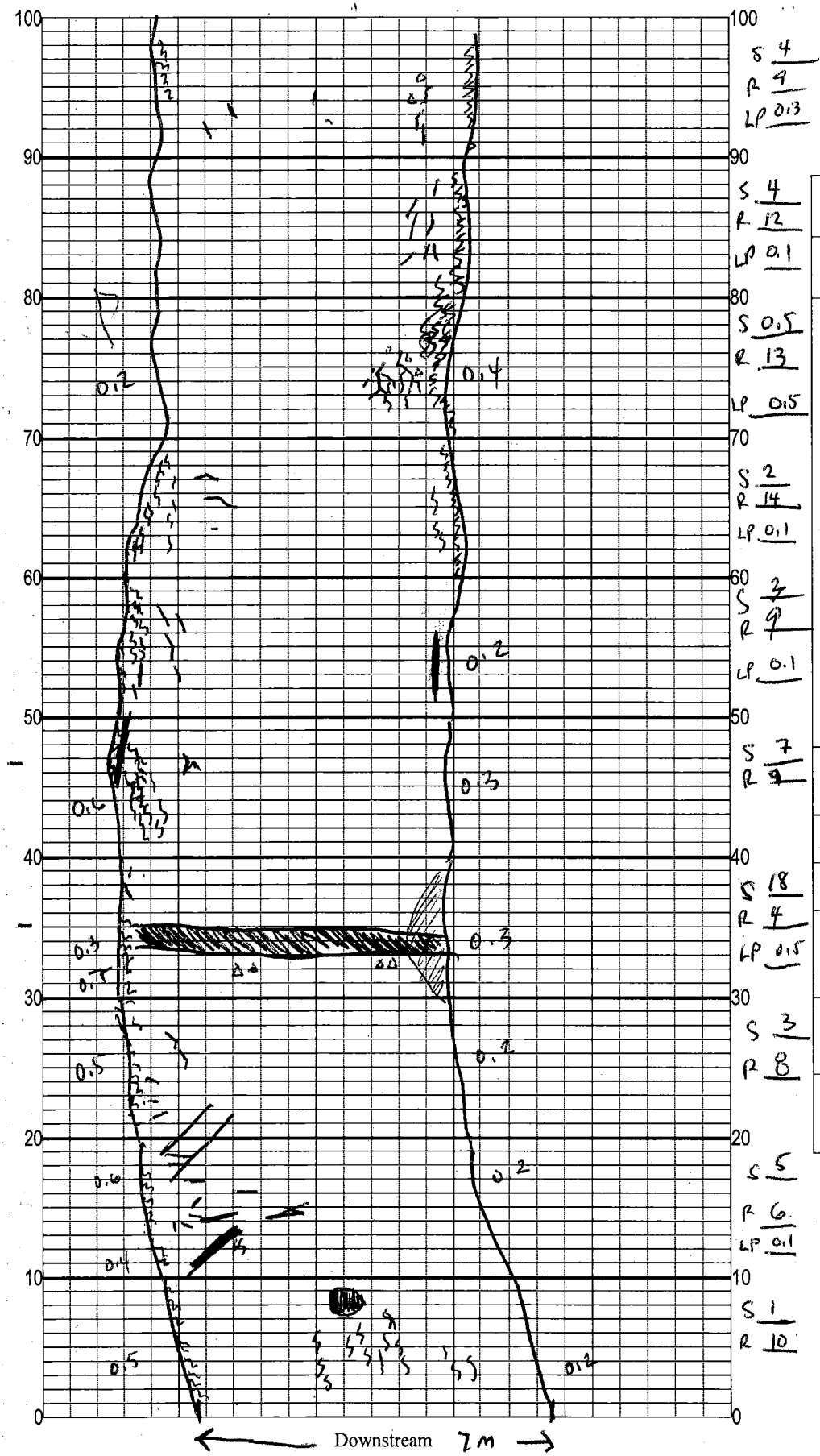
LIMS EVENT ID: **WIN Import ID:**

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)

DEP Form FD 9000-4 Stream/River Habitat Assessment Sketch Sheet

STORET G4NW0382



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

Location: Gum Creek

Date: 8/7/19

Sampler: M. King

100 m: Latitude 30.18467
Longitude 86.23251

0 m: Latitude 30.18467
Longitude 86.23339

Substrates: Code key, draw proportionate habitat abundance. 20m%

	Snags	47.5/7	6.8
SS	Roots/undercut banks		13.4
	Leaf Packs (or mats)	94/1 1.7/7	0.2
	Aquatic Macrophytes		
	Pools	total # observed = 1 # range expected = 1-2	

Average width 7 m
Average depth 0.4 m

Velocity measured at 20 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:

Xyris
red root
Holly
nyssa
Black titi
moss
Red titi
Red maple
carex
dicanthelium
Hypericum (broad leaf)

SBIO ID 80140

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Gum Creek | County: Walton | Date: 8/7/19 | Investigators: MIKE King N. Mulkey

STORET Station Number: G4NW0382

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	N	N	
	2			
	3			
	4			
	5			44
	6			
	7			
	8			
	9			
10	1	N		
	2			
	3			
	4			
	5			32
	6			
	7			
	8			
	9			
20	1	N		
	2			
	3			
	4			
	5			32
	6			
	7			
	8			
	9			
30	1	N		
	2			
	3			
	4			
	5			24
	6			
	7			
	8			
	9			
40	1	N		
	2			
	3			
	4			
	5			20
	6			
	7			
	8			
	9			
50	1	N		
	2			
	3			
	4			
	5			48
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N	N	
	2			
	3			
	4			
	5			36
	6			
	7			
	8			
	9			
70	1	N		
	2			
	3			
	4			
	5			40
	6			
	7			
	8			
	9			
80	1	N		
	2			
	3			
	4			
	5			48
	6			
	7			
	8			
	9			
90	1	N		
	2			
	3			
	4			
	5			40
	6			
	7			
	8			
	9			
100	1	N		
	2			
	3			
	4			
	5			80
	6			
	7			
	8			
	9			

Secchi depth	0.7
Estimated?	Y

# 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	<2m²
Habitat Assessment	✓
SCI/Biorecon	✓
Water sample	✓
RQ- 2019-08-05-89	

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

SBIO ID 80140

RPS ID 9430

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 9000-5 Stream/River Habitat Assessment Field Sheet

SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
DEP NW RPOC		G4NW0382	08/07/19	Shoal River
REMARKS:	COUNTY: Walton	LOCATION: Gum Creek		FIELD ID/NAME: G4NW0382

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 13	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 20	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 12 Primary Score 55	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 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 9 Left Bank 8	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful 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 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 77	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

132 **TOTAL SCORE**

Date: 8/7/19	Analyst: MIKE KING	Signature:

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

SAMPLE ID 80140 ORG ID 21FLPNS LATITUDE 30.78467
COUNTY WALTON STORET # G4NW0382 LONGITUDE 86.23339
DATE 8/7/19 TIME 1345 SAMPLING AGENCY FDEP NW ROC
SITE NAME GUM GREEK
FIELD ID/NAME G4NW0382 RECEIVING BODY OF WATER SHOAL RIVER

RIPARIAN ZONE / STREAM FEATURES WBID 167A RQ-2019-08-05-89 LIMS ID 2109677

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

Width of Riparian Vegetation (m) on Each Buffer Side
Left Bank : >18 Right Bank : >18

Hydrologic Modification Score (per FT 3101) : 1 - 2

High Water Mark: 3.0 (m) + 0.5 (above present water level) = 3.5 (present depth) (above bed)

Artificially Impounded ☐ Yes ☑ No

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

0.33 m/s	0.33 m/s	0.33 m/s
0.4 m deep	0.3 m deep	0.2 m deep

Artificially Channelized : ☑ No ☐ Some recovery ☐ Mostly recovered, more sinuous ☐ 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)	7	7	
Undercut Banks / Roots	13	7	
Leaf Packs or Mat	0.2	3	
Aquatic Vegetation			
Rock or Shell Rubble..			
Sand.....		3	
Mud / Muck / Silt			
Other			
Other			

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	25.1	5.47	8.11	98.3	25.8	0.01	0.76
Mid:								☑ VOB
Bottom								TOTAL DEPTH
								0.7

Meter ID: 154179

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
M. King N. Mulkey

SIGNATURE

DATE : 8/8/19

62-160.800, F.A.C.

Revision Date: January 2017