



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2019

Data Qualified?
Yes ☒ No ☐

WIN Station Name: Baker Creek @ Thonotosassa Rd

Date: 11/21/19
(mm/dd/yyyy)

WIN/ Field ID: G2SW0012

WBID: 1522C

Latitude: 28.04787

(Decimal Degrees)

County: Hillsborough

ORG ID: 21FLTPA

Longitude: -82.26797

(Decimal Degrees)

Receiving Body of Water: Hillsborough River

RQ-2019- 11-18-22

Sampling Team Members					WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
Matthew Bearden						X		X	X
Francisco Faria					X		X		

Sampling Equipment		
☒ Sample Container	☐ Van Dorn	☐ Pole
☐ Carboy	☒ Syringe	
☐ Dipper	☐ Other	
Depth Measured with: <u>Secchi</u> <u>Depth Finder</u>		
Equipment ID: <u>Secchi #1</u> <u>Saber #2</u>		

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

Water Level: Dry/ Pooled/ Low / Normal / High / Flooded
Photos: Yes ☒ No ☐ Flow: No Flow / Interstitial / Flowing / NA
Meter ID# Leia Matrix: Fresh / Marine / DI
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 (PPT)	Sp COND (umhos/cm)	Temp. (C°)
EST	1050	0.6	0.3	0.6	7.55	76.7	7.41	0.11	238.6	16.0

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

SBIO ID Numbers: SBIO-ID: 80497 HA-ID: 16397 RPS-ID: 9492 Macrophyte-ID: 11549 LIMS#: 2138794

Parameter Suite	Parameter Methods	Preservation	Lot#	Expiration	pH Check
Preserved Nutrients	☒ W-NH3 / W-NO2NO3 / W-TKN / W-TOC / W-S-A-TP	☒ Ice ☒ H2SO4	9803100	7/22/20	☒ <2
Metals	☐ W-ICPMS ☐ W-ICP	☐ Ice ☐ HNO3			☐ <2
Filtered Nutrients	☒ W-PO4-F ☒ Field Filtered 0.45 um Filter	☒ Ice			
Chlorophyll	☒ CHL-SUITE-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 ☐ W-E8321-MS ☐ W-CARB-AA	☐ Ice			
Phytoplankton	☐ DTY-QN-C ☐ PKD-QN-C	☐ Ice			

Notes: SBIO Approved
C-Kit, E.coli, T & M (HF-183 & BacR)

WIN/Field ID: G2SW0012
Baker Creek @ Thonotosassa Rd

Signature: MH B/L Date: 11/21/19

LIMS EVENT ID: 2019-11-22-01 WIN Import ID: 16203
Enter Field Parameters, Verify Station ID In LIMS DMT: SM 12/04/2019 QC Station ID, Field Parameters In LIMS DMT: SM 01/07/2020
Scan/Save Field Sheets SM 01/21/2020 Migrate Data to WIN: SM 01/07/2020 Verify Data In WIN: SM 01/21/2020
(Initials/Date) (Initials/Date) (Initials/Date)

DEP Form FD 9000-5 Stream/River Habitat

Site Name: Baker Creek @ Thonotosassa Rd

SAMPLING AGENCY: <u>SW ROC</u>		STORET STAT	
REMARKS:	COUNTY: <u>Hillsborough</u>	LOCATION: <u>Baker Creek @ Thonotosassa Rd</u>	FIELD ID/NAME: <u>G2SW0012</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>810</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 <u>10</u> 9 <u>8</u> 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>7</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 17 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 <u>7</u> 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>3</u> ----- Primary Score <u>21 MB 13</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>MB 86</u>	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging or straightening in the past (>25 yrs) but mostly recovered. 15 14 13 12 11	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area. 10 9 <u>8</u> 7 <u>6</u>	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>4</u> Left Bank <u>9</u>	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the woody root zone with few raw, eroded areas. 10 <u>9</u>	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 <u>4</u>	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the woody root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank <u>9</u> Left Bank <u>9</u>	Width of vegetation greater than 18 m 10 <u>9</u>	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>6</u> Left Bank <u>8</u> ----- Secondary Score <u>MB 53 51</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. <u>8</u> <u>6</u> <u>MB</u>	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

TOTAL SCORE

Date: <u>11/21/19</u>	Analyst: <u>M. Bearden / F. Faria</u>	Signature: <u>[Signature]</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: _____

Date: _____

Sampler: _____

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance. %

☐ Snags _____

☐ Roots/undercut banks _____

☐ Leaf Packs (or mats) _____

☐ Aquatic Macrophytes _____

☐ _____

☐ _____

☐ Pools total # observed = _____
range expected = _____

Average width _____ m

Average depth _____ m

Velocity measured at _____ meter mark.

WQ & chemistry taken at _____ 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:



Date: 11-21-19

County:

Storet Number:

Signature:

Site Name: Baker Creek @ Thonotosassa Rd

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.

HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)				
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100					
<i>Alternanthera philoxeroides</i>	X		X					X	X	X		<i>Micranthemum glomeratum</i>															
<i>Bacopa caroliniana</i>												<i>Micranthemum umbrosum</i>															
<i>Bacopa monnieri</i>												<i>Myriophyllum aquaticum</i>	X	X	X	X	X	X	X	X	X	X					
<i>Bidens mitis</i>												<i>Najas guadelupensis</i>															
<i>Boehmeria cylindrica</i>												<i>Nuphar luteum</i>	X	X		X		X		X		X					
<i>Centella asiatica</i>												<i>Orontium aquaticum</i>															
<i>Ceratophyllum demersum</i>												<i>Panicum hemitomon</i>															
<i>Chara</i>												<i>Panicum repens</i>															
<i>Cicuta maculata</i>												<i>Panicum rigidulum</i>															
<i>Cladium jamaicense</i>												<i>Pistia stratioides</i>	X		X	X	X	X	X	X							
<i>Colocasia esculenta</i>			X		X	X	X	X	X	X		<i>Polygonum glabra</i>															
<i>Commelina diffusa</i>												<i>Polygonum hydropiperoides</i>															
<i>Commelina virginica</i>												<i>Polygonum punctatum</i>															
<i>Crinum americanum</i>								X				<i>Pontedaria cordata</i>															
<i>Diodia virginiana</i>												<i>Potamogeton illinoensis</i>															
<i>Eichhornia crassipes</i>		X	X	X	X	X	X	X	X	X		<i>Ruellia simplex</i>															
<i>Eleocharis (wispy viviparous)</i>												<i>Sacciolepis striata</i>				X	X										
<i>Hydrilla verticillata</i>												<i>Sagittaria kurziana</i>															
<i>Hydrocotyle</i>						X			X			<i>Sagittaria lancifolia</i>															
<i>Hygrophila polysperma</i>												<i>Sagittaria latifolia</i>															
<i>Hymenocallis</i>												<i>Salvinia minima</i>		X		X		X	X								
<i>Lachnanthes caroliniana</i>												<i>Samolus parviflora</i>															
<i>Landoltia punctata</i>												<i>Saururus cernuus</i>															
<i>Lemna</i>												<i>Sparganium americanum</i>															
<i>Limnophila sessiflora</i>												<i>Typha</i>															
<i>Ludwigia leptocarpa</i>												<i>Vallisneria americana</i>															
<i>Ludwigia palustris</i>												<i>Zizania aquatica</i>															
<i>Ludwigia peruviana</i>	X	X	X	X			X		X			Grass collected				X	X	X		X							
<i>Ludwigia repens</i>												<i>Ludwigia octovalvis</i>															
<i>Luziola fluitans</i>												<i>Polygonum sp</i>				X	X										
<i>Brachiaria mutica</i>				X	X	X		X				<i>Taxodium dis</i>															
												<i>spiro-poly landoltia</i>			X												
												<i>Azola</i>															
												<i>Thalia</i>		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																											

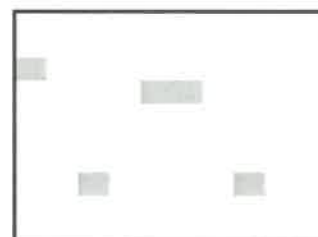
FDEP FORM FD 9000-32 LINEAR VEGETATION SURVEY FIELD SHEET

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

5% Macrophyte Coverage



5% Macrophyte Coverage



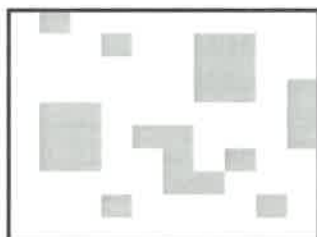
10% Macrophyte Coverage



10% Macrophyte Coverage



25% Macrophyte Coverage



25% Macrophyte Coverage



50% Macrophyte Coverage



50% Macrophyte Coverage





Site Name: Baker Creek @ Thonotosassa Rd

Rapid Periphyton Survey Field Sheet

Date:

11-21-19

Investigators:

M. BEARDEN

STORET Station Number:

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	
0	1	N			60	1	N			
	2					2				
	3					3				
	4					4				
	5			0		5				9
	6					6				
	7					7				
	8					8				
	9					9				
10	1				70	1				
	2					2				
	3					3				
	4					4				
	5			1		5				0
	6					6				
	7					7				
	8					8				
	9					9				
20	1				80	1				
	2					2				
	3					3				
	4					4				
	5			0		5				0
	6					6				
	7					7				
	8					8				
	9					9				
30	1				90	1				
	2					2				
	3					3				
	4					4				
	5			0		5				0
	6					6				
	7					7				
	8					8				
	9					9				
40	1				100	1				
	2					2				
	3					3				
	4					4				
	5			7		5				0
	6					6				
	7					7				
	8					8				
	9					9				
50	1					1				
	2					2				
	3					3				
	4					4				
	5			3		5				
	6					6				
	7					7				
	8					8				
	9					9				

 Secchi depth 0.6
 Estimated? N

 # points ranked 4-6 0
 total points assessed 29
 % 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-2019-11-18-22

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

*If you can see the secchi on the bottom, but you cannot see or reach surrounding substrate use "X"

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

*Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densimeter quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

Field ID/WIN

G2SW0012

rsical/Chemical Characterization Field Sheet

Site Name: Baker Creek @ Thonotosassa Rd

LATITUDE _____

LONGITUDE _____

SAMPLING AGENCY FDEP

FIELD ID/NAME _____

RECEIVING BODY OF WATER _____

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category):							Landscape Development Intensity Index (LDI)
Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
		30	30	40			
Local Watershed Erosion (select one): ☐ None ☐ Slight ☒ Moderate ☐ Heavy							Typical Width (m) Depth (m)/Velocity (m/sec) Transect 15m 15 m wide
Local Watershed NPS Pollution: ☐ No evidence ☐ Slight ☒ Moderate ☐ Heavy							
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>>18m</u> Right Bank: <u><18m</u>				Hydrologic Modification Score (per FT 3101)			
High Water Mark: <u>0.3</u> + <u>0.5</u> = <u>0.8</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☒ Yes ☐ No			
Artificially ☐ NO ☐ Mostly recovered, more sinuous				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%)			
Channelized: ☐ Some recovery ☒ Recent, severe				☐ Heavily Shaded ☐ Moderate Shaded (46-80%)			

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse		Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify):		Smothering of Substrates Sand Smothering: None ☒ Slight ☐ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☒ Algae Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐						
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon			WATER QUALITY							
			Depth (M)	Temp. (°C)	pH (SU)	D.O. (MG/L)	D.O. Sat (%)	Cond. (UMHO/CM)	Salinity (PPT)	SECCHI (M)
Woody Debris (Snags)			Top:							0.6
Undercut Banks / Roots			Mid:							☒ VOB
Leaf Packs or Mat			Bottom	0.3	14.0	7.41	7.55	76.7	238.6	0.11
Aquatic Vegetation			Meter ID:		TOTAL DEPTH 0.6					
Rock or Shell Rubble..			Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐		Water Surface Oils Normal ☒ Sheen ☐ Globs ☐ Slick ☐ Other ☐					
Sand.....			Water Sample Taken? ☒ Yes ☐ No		Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐					
Mud / Muck / Silt			Sample Preserved? ☒ Yes ☐ No		Clarity Clear ☒ Slightly Turbid ☐ Turbid ☐ Opaque ☐					
Other			Lot Number: _____ Exp: _____							
Other			Algae Sample Taken? ☐ Yes ☐ No							
			Sample Preserved? ☐ Yes ☐ No							
			Lot Number: _____ Exp: _____							
ABUNDANCE			System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other(Specify) ☐							
Periphyton: ☐ Not Obs. ☐ Rare ☒ Common ☐ Abundant			AMBIENT FIELD CONDITIONS / NOTES:							
Fish: ☐ Not Obs. ☐ Rare ☒ Common ☐ Abundant										
Aquatic Plants: ☐ Not Obs. ☐ Rare ☒ Common ☐ Abundant										
Iron/Sulfur Bacteria: ☒ Not Obs. ☐ Rare ☐ Common ☐ Abundant			☐ The antecedent hydrologic conditions have been met to my best knowledge.							
SAMPLING TEAM M. BEARSON			SIGNATURE:				DATE: 11-21-19			

Florida Department of Environmental Protection

Central Laboratory Submittal Form

Bear Creek HA

last revised Jan 25, 2018

Customer: SW-DIST

Requester: Judy Ashton

Field Report Prepared By:

Project ID: SMP

Collected By:

Sampling Agency:

Location		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 11/21/19 Time 1045		Eastern Central	Composite end Date Time		Bottle Group(s) (See pg 2) A+B
Field ID/WIN G5SW0102		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 5.47	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/ Site Name: Bear Creek @ Beacon		Temp (C) 17.5	pH 5.59	Sample Depth 0.3	☐ ft ☒ m	Sp. Conductance (umho/cm) 841		
Latitude ☐ dd ☐ dms		Salinity (ppt) ☐ dd ☐ dms		Comments E. COLI DROPPES UP 2 AEL				
Location		☐ Comp ☒ Grab	Collection (comp begin or grab) Date 11/21/19 Time 1050		Eastern Central	Composite end Date Time		Bottle Group(s) A
Field ID/WIN G2SW0012		Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen 7.55	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)		
WIN/ Site Name: Baker Creek @ Thonotosassa Rd		Temp (C) 16.0	pH 7.41	Sample Depth 0.3	☐ ft ☒ m	Sp. Conductance (umho/cm) 238.4		
Latitude ☐ dd ☐ dms		Salinity (ppt) 0.11 ☐ dd ☐ dms		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) ☐ dd ☐ dms		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) ☐ dd ☐ dms		Comments		

Relinquished By:

Date/Time

Shipping Method

Number of Coolers Shipped:

Received By:

Date/Time

J. Ashton

11-21-19 1000

FED EX

1

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:	BP-1L	# of Bottles: 1	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
	CHLSUITE-W						
Group: A	Bottle Type:	P-120ML-WC-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	1
	SW-AEL-ECQ						
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:	FILTER-ICE	Enter Number of Bottles Sent to Lab	2
	W-PO4-F						