

Enter Field Parameters, Verify Station ID in LIMS DMT: JD 11/27/18 QC Station ID, Field Parameters in LIMS DMT: ESD 11/27/18
(Initials/Date) (Initials/Date)
Scan/Save Field Sheets JD 11/27/18 Migrate Data to WIN: _____ Verify Data in WIN: _____
(Initials/Date) (Initials/Date) (Initials/Date)

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

79036

SAMPLE ID _____ ORG ID _____ LATITUDE _____
 COUNTY _____ STORET # 20030115 LONGITUDE _____
 DATE 11-13-2018 TIME 1110 SAMPLING AGENCY _____
 SITE NAME Santa E River @ 225/1475
 FIELD ID/NAME _____ RECEIVING BODY OF WATER Suwannee

RIPARIAN ZONE / STREAM FEATURES

Meter ID: Y51 # 3

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 4 m wide ☐ m/s <u>.25</u> m/s ☐ m/s
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>7.8</u> Right Bank: <u>18</u>			Hydrologic Modification Score (per FT 3101) ☐				
High Water Mark: <u>0.8</u> + <u>.20</u> = <u>1.0</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

	% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u>1</u>	<u>7</u>	
Undercut Banks / Roots	<u>.47</u>	<u>7</u>	
Leaf Packs or Mat	<u>.017</u>		
Aquatic Vegetation			
Rock or Shell Rubble			
Sand		<u>6</u>	
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:								<u>0.3</u>
Mid:	<u>0.3</u>	<u>20.0</u>	<u>7.15</u>	<u>7.1</u>	<u>79.8</u>	<u>105</u>	<u>0.05</u>	<u>0.3</u>
Bottom:								<u>6.3</u>

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) _____

Water Odors Normal ☐ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐	Water Surface Oils Normal ☐ Sheen ☐ Globbs ☐ 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

B. Davis / A. Kalmbacher SIGNATURE: [Signature] 11-13-2018

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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Santa Fe @ 225/1475 County: Alachua Date: 11-13-2018 Investigators: R. Davis / A. K. Ambacher

STORET Station Number:

20030115

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	N		
	3					3	N		
	4					4	X		
	5			96		5	X		92
	6					6	X		
	7					7			
	8					8	N		
	9					9	N		
10	1	N			70	1	N		
	2					2	X		
	3					3			
	4					4			
	5			94		5			96
	6					6			
	7					7			
	8					8	X		
	9					9	N		
20	1	N			80	1	N		
	2					2			
	3					3			
	4					4			
	5			81		5			96
	6					6			
	7					7			
	8					8			
	9					9			
30	1	N			90	1	N		
	2					2			
	3					3			
	4					4			
	5			96		5			92
	6					6			
	7					7			
	8					8			
	9					9			
40	1	N			100	1	N		
	2					2			
	3					3			
	4					4			
	5			93		5			94
	6					6			
	7					7			
	8					8			
	9					9			
50	1	N							
	2	N							
	3	N							
	4	N							
	5	X		60					
	6	X							
	7								
	8								
	9								

Secchi depth
Estimated?

points ranked 4-6
total points assessed
% points ranked 4-6

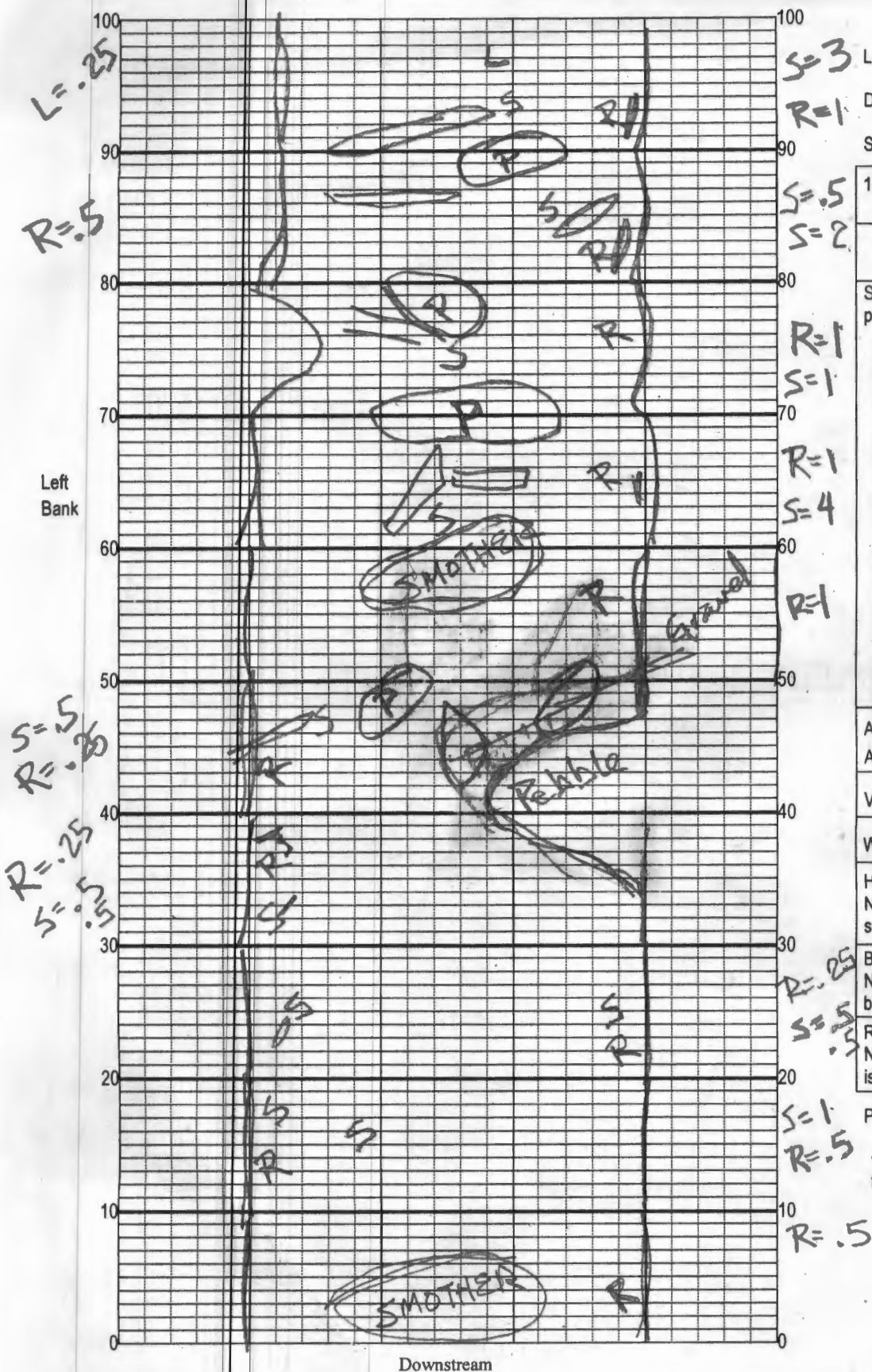
Check accompanying data collected at same site/date.
Algal mat sample
Linear Veg Survey
Habitat Assessment
SCI/Biorecon
Water sample
RQ-

Algal Thickness Rank

N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.
Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.
Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.
Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.

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



Location: Santa Fe R @ ^{225/}1475

Date: 11-13-2018

Sampler: Davis/Kalmbacher

100 m: Latitude _____
Longitude _____
0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.	%
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100

S	Snags	1
R	Roots/undercut banks	.47
L	Leaf Packs (or mats)	.017
	Aquatic Macrophytes	
P	total # observed =	3
	Pools	
	# range expected =	2

Average width 3.5 m

Average depth 0.2 m

Velocity measured at 10 meter mark.

WQ & chemistry taken at 10 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

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

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

SAMPLING AGENCY: NE ROC		STORET STATION NUMBER: 24030115	DATE (MM/DD/YY): 11-13-2018	RECEIVING BODY OF WATER: SUNAWANNEE R
REMARKS:	COUNTY: Alachua	LOCATION: Santa Fe R @ 225/1475	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 7	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability 3	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 15	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 37	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	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 12	20 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 3 Left Bank 5	10 9	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 10 Left Bank 6	10 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 10 Left Bank 10	10 9	8 7 6	5 4	3 2 1
Secondary Score 56				

93

TOTAL SCORE

Date: 11-13-2018	Analyst: B. Davis / A. K. Imbacher	Signature: [Signature]
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DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody:	Date: 11-13-18	County:	Storet Number:
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Signature: _____

Analyst:		Signature:
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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.

Less than 1 sq. m

Polygonum
Polygonum
Pontederia
Potamogeton
Ruellia simp
Sacciolepis
Sagittaria ku
Sagittaria la
Sagittaria la
Salvinia min
Samolus pa
Saururus ce
Sparganium
Typha

SCI Santa Fe

Central Laboratory Submittal Form

last revised Jan 25, 2018

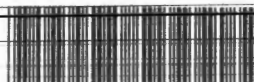
Customer: NE-DIST

Requester: Jeremy M. ParrishField Report Prepared By: A. Kalmbacher

Project ID: SMP

Collected By: B. DavisSampling Agency: FDEP / NE ROC

WIN / Field ID:



21030115

SANTA FE RIVER @ CR 225 / 1475

☐ Comp	Collection (comp begin or grab)	☒ Eastern	Composite end	Bottle Group(s) (See pg 2)
☒ Grab	Date <u>11-13-2018</u> Time <u>1110</u>	Central	Date _____ Time _____	
Matrix (type, e.g., Salt, Fresh, etc)		Diss. Oxygen <u>7.1</u>	☒ mg/L ☐ % sat	Total Res. Chlorine (mg/L)
Temp (C) <u>20.0</u>	pH <u>7.15</u>	Sample Depth <u>0.15</u>	☐ ft ☒ m	Sp. Conductance (umho/cm) <u>105</u>

A

Latitude ☐ dd ☐ dms	Longitude ☐ dd ☐ dms	Salinity (ppt) <u>0.05</u>	Comments	
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____	Eastern Central
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
Latitude ☐ dd ☐ dms		Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____	Eastern Central
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
Latitude ☐ dd ☐ dms		Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____	Eastern Central
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
Latitude ☐ dd ☐ dms		Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments
Location		☐ Comp ☐ Grab	Collection (comp begin or grab) Date _____ Time _____	Eastern Central
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
Latitude ☐ dd ☐ dms		Longitude ☐ dd ☐ dms	Salinity (ppt)	Comments

Relinquished By: <u>A. Kalmbacher</u>	Date/Time <u>11-13-2018</u>	Shipping Method <u>Fed Ex</u>	Number of Coolers Shipped: <u>1</u>	Received By: _____	Date/Time _____
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Group: A	Bottle Type:	P-1L	# of Bottles: <u>2</u>	Preservative:	ICE	Enter Number of Bottles Sent to Lab <u>1</u>
ALKALINITY						
TURBIDITY						
W-CL-IC						
W-COLOR						
W-F						
W-SO4-IC						
W-TDS						
W-TSS						
Group: A	Bottle Type:	BP-1L	# of Bottles: <u>2</u>	Preservative:	ICE	Enter Number of Bottles Sent to Lab <u>1</u>
CHLSUITE-W						
Group: A	Bottle Type:	P-250ML-WI-THI	# of Bottles: <u>2</u>	Preservative:	ICE	Enter Number of Bottles Sent to Lab <u>1</u> <i>↳ Sent to contract lab</i>
NE-ALS-ECQ						
Group: A	Bottle Type:	P-500ML	# of Bottles: <u>2</u>	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab <u>1</u>
W-NH3						
W-NO2NO3						
W-S-A-TP						
W-TKN						
W-TOC						
Group: A	Bottle Type:	P-125ML	# of Bottles: <u>2</u>	Preservative:	FILTER-ICE	Enter Number of Bottles Sent to Lab <u>1</u>
W-PO4-F						
Group: B	Bottle Type:	PJ-2L	# of Bottles: <u>2</u>	Preservative:	Formalin	Enter Number of Bottles Sent to Lab <u>2</u>
MI-FW-QLDC						

