

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

SAMPLE ID _____ ORG ID 21FLWASP LATITUDE 30.43422
COUNTY MADISON STORET # 22040130 LONGITUDE -83.72214
DATE 11.3.15 TIME 1400 SAMPLING AGENCY FDEP AEA
SITE NAME AUCILLA RIVER
FIELD ID/NAME AUC 7 BRIDGE RECEIVING BODY OF WATER APALACHEE BAY

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)	<u>1.36</u>	
☐	☐	☐	☐	☐	☐	☐	☐		
Local Watershed Erosion (select one): ☒ None ☐ Slight ☐ Moderate ☐ Heavy								Typical Width (m) Depth (m)/Velocity (m/sec) Transect	
Local Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy								<u>7</u> m wide	
Width of Riparian Vegetation (m) on Each Buffer Side				Hydrologic Modification Score (per FT 3101)					
Left Bank: <u>>18</u>		Right Bank: <u>>18</u>		<u>1</u>					
High Water Mark: <u>1.0</u> + <u>0.5</u> = <u>1.5</u>				Artificially Impounded					
(m) (above present water level) (present depth) (above bed)				☐ 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 ☐
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SUBSTRATE TYPE

Assessment Tool: ☒ SCI ☒ RPS ☒ LVS☐ LCI ☐ BioRecon

% Coverage	INVERT # Times Sampled	PERI # Times Sampled
Woody Debris (Snags)	<u>9</u>	<u>11</u>
Undercut Banks / Roots	<u>1</u>	<u>11</u>
Leaf Packs or Mat	<u>3</u>	<u>11</u>
Aquatic Vegetation	<u>41</u>	<u>1</u>
Rock or Shell Rubble		
Sand	<u>86</u>	<u>11</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>0.10</u>	<u>22.9</u>	<u>7.20</u>	<u>4.42</u>	<u>51.1</u>	<u>308</u>		<u>0.5</u>
Mid:							☒ VOB
Bottom:							

Meter ID: YSI #8

Water Odors	Normal ☒ Petroleum ☐
Sewage ☐ Chemical ☐ Other ☐	

Water Sample Taken?	☒ Yes ☐ No
Sample Preserved?	☒ Yes ☐ No
Lot Number:	<u>SA-5113230</u> Exp: <u>4-23-16</u>

Algae Sample Taken?	☐ Yes ☒ No
Sample Preserved?	☐ Yes ☐ No
Lot Number:	
Exp:	

Water Surface Oils	Normal ☒ Sheen ☐
Globs ☐ Slick ☐ Other ☐	

Color	Tannic ☒ Green (Algae) ☐
Clear ☐ Other (Specify) ☐	

Clarity	Clear ☒ Slightly Turbid ☐
Turbid ☐ Opaque ☐	

ABUNDANCE

Not Obs. Rare Common Abundant

Periphyton:	☐	☒	☐	☐
Fish:	☐	☒	☐	☐
Aquatic Plants:	☐	☒	☐	☐
Iron/Sulfur Bacteria:	☒	☐	☐	☐

AMBIENT FIELD CONDITIONS / NOTES:

CLOUDY, RAINED ON TUE, 80F, CALM
TURBIDITY PLUME ENTERING RIVER @ BOAT RAMP - SEE PHOTOS
☒ The antecedent hydrologic conditions have been met to my best knowledge.

SAMPLING TEAM

Jackson, A. D. W. A. Franklin, N. FernandezSIGNATURE: J. JacksonDATE: 11.3.15

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

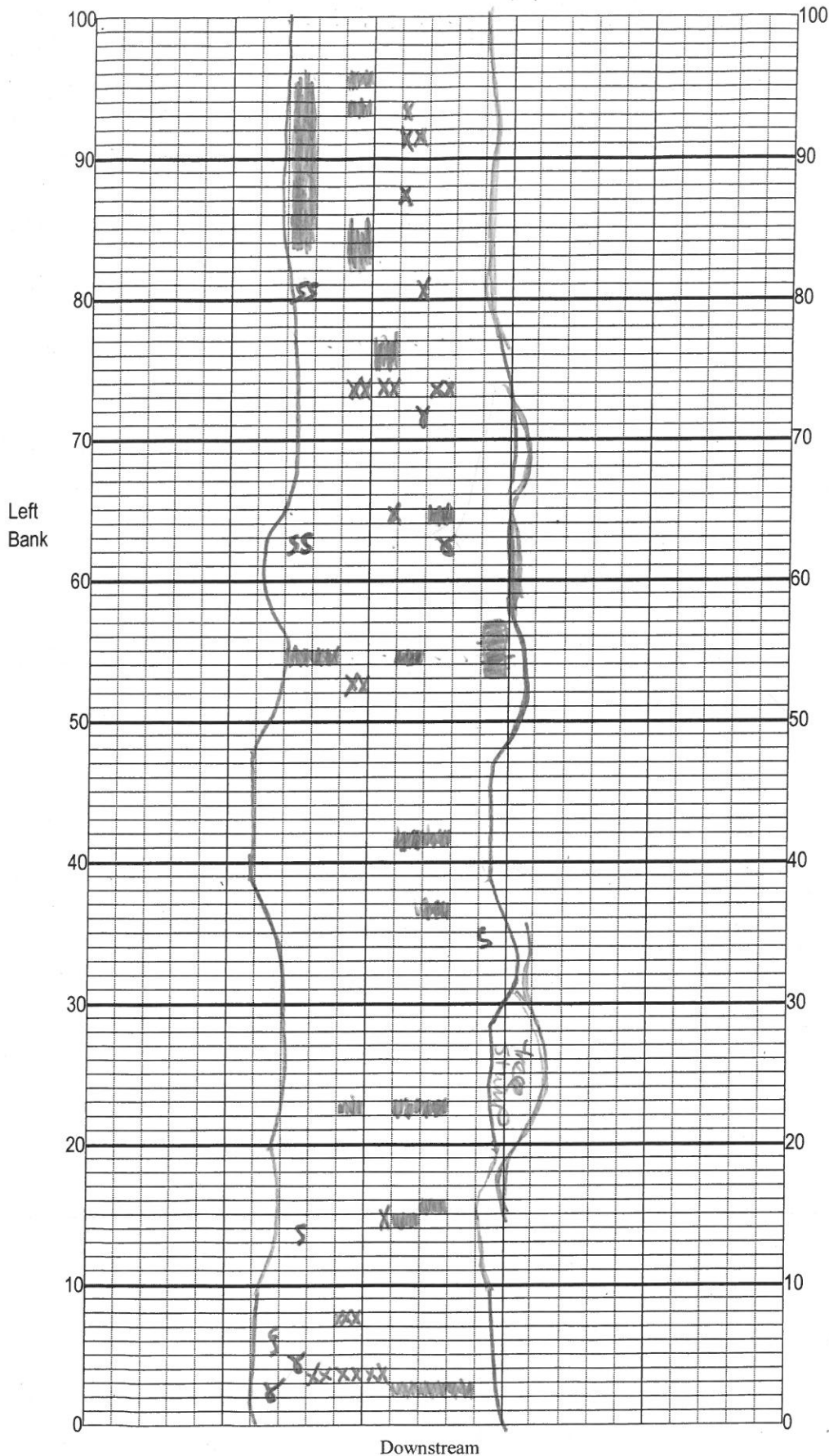
SAMPLING AGENCY: <u>FDPR NEQA</u>		STORET STATION NUMBER: <u>22040130</u>	DATE (MM/DD/YY): <u>11/3/15</u>	RECEIVING BODY OF WATER:
REMARKS: <u>SCREEF</u>	COUNTY: <u>MADISON</u>	LOCATION: <u>AUCILLA RIVER</u>	FIELD ID/NAME: <u>AUCILLA BRIDGE</u> <u>Aucilla River</u>	

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>12</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>8</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 <u>8</u> 7 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>04</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 <u>14</u> 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 <u>10</u> ----- Primary Score <u>44</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 3 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>20</u>	<u>20</u> 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Bank Stability Right Bank <u>10</u> <u>10</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. <u>10</u> 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>10</u> <u>10</u> Left Bank	Width of vegetation greater than 18 m <u>10</u> 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>10</u> <u>10</u> Left Bank ----- Secondary Score <u>80</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. <u>10</u> 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

124 **TOTAL SCORE**

Date: <u>11.3.15</u>	Analyst: <u>J Jackson</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: Ancilla River
Date: 11/3/15
Sampler: Jackson/FREDERICK

100 m: Latitude	_____
Longitude	_____
0 m: Latitude	_____
Longitude	_____
Substrates: Code key, draw proportionate habitat abundance. %	
	Snags <u>9</u>
	Roots/undercut banks <u>1</u>
	Leaf Packs (or mats) <u>2</u>
	Aquatic Macrophytes <u>41</u>

	Pools total # observed = <u>4-6</u> # range expected = _____
Average width <u>7</u> m	
Average depth <u>0.5</u> m	
Velocity measured at <u>30</u> 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:

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Aucilla River County: _____ Date: 11/3/15 Investigators: J Jackson

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: 22040130

0 1 2 3 4 5 6 7 8 9 60 1 2 3 4 5 6 7 8 9

10 1 2 3 4 5 6 7 8 9 70 1 2 3 4 5 6 7 8 9

20 1 2 3 4 5 6 7 8 9 80 1 2 3 4 5 6 7 8 9

30 1 2 3 4 5 6 7 8 9 90 1 2 3 4 5 6 7 8 9

40 1 2 3 4 5 6 7 8 9 100 1 2 3 4 5 6 7 8 9

50 1 2 3 4 5 6 7 8 9

Secchi depth 0.5
Estimated? _____

points ranked 4-6 5
total points assessed 87
% points ranked 4-6 6

Check accompanying data collected at same site/date.

Algal mat sample _____
Linear Veg Survey ☒
Habitat Assessment ☒
SCI/Biorecon ☒
Water sample ☒

RQ- 2015-10-26-56

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%.

Waterbody: Aucilla River	Date: 11/3/15	County: MADISON	Storet Number: 22040131
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Analyst: Jackson	Signature: [Signature]
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Comments: WAS RIGHT AT 2m² - BUT, SINCE THERE WERE EXOTICS, WANTED TO NOTE CURRENT ANTS

[illegible]

SITE NAME: Aucilla River DATE: 11/3/15 TIME 1400 EST CST DEPTH: 0.2 ft m FIELD ID: AUCABR11
 (military)

SAMPLING TEAM MEMBERS	WQ MEASUREMENTS	DOCUMENTATION	SAMPLE COLLECTION	PRESERVATION	PRESERVATION CHECK
J JACKSON	X				
A ONEAL			X	X	
A RANKIN			X		
N FREDERICK	X				

SAMPLING EQUIPMENT	
☒ Sample Container	☐ Tubing type: _____
☒ Pole	☐ Other: _____
☐ Pump ID#: _____	☐ Other: <u>etc</u>
WATER QUALITY MEASUREMENTS	
Instrument ID: <u>YSI #8</u>	
COLLECTION MODE	
Via Boat	
☐ Wading	☐ Canoe
☐ Diving	☐ Electric Motor
☒ From Shore	☐ Gasoline Motor
☐ Other: <u>ROCK W/ POLE FROM SHORE</u>	

Parameter Suite	Parameter(s)/Method	Matrix Code	Preservation**	Preservative Lot #	pH Check	# Bottles ...
Preserved Nutrients	☒ TKN ☒ TP ☒ NOx ☒ NH3 ☒ TOC ☐ Total N ☐ Other: _____	S W	☒ Ice ☒ H2SO4	SA3113230	☒ <2	1
Filtered Nutrients	☐ oP ☐ Other: _____	W	☐ Ice ☐ .45 um Filter			
Unpreserved Nutrients	☐ NO2 ☐ NO3 ☐ SO4 ☐ Other: _____	W	☐ Ice			
Physical/Aggregate Properties	☒ TDS ☒ TSS ☐ TS ☒ Turbidity ☒ Alk ☒ Color ☐ Other: _____	S W	☒ Ice			1
Chlorophyll	☒ CHL-PPTN-W	S W	☒ Ice			1
BOD	☐ BOD-INHB ☐ BOD-UNIN	W	☐ Ice			
Microbiology	MF: ☒ E coli ☐ T Coli ☒ F Coli ☐ Entero ☐ F Strep	W	☐ Ice			
Macroinvertebrates	☒ MI-FW-QLDC ☐ MI-FW-QLBR ☐ MI-FW-QNNC ☐ MI-MN-QNNC	S W	☒ Formalin			3
Phytoplankton	☐ PKD-QN-C ☐ DTY-QN-C	W	☐ Lugol's			
Periphyton	☐ PRN-QL-C ☐ DTM-QL-C ☐ PRN-QN-C ☐ DTM-QN-C	W	☐ Formalin			
AGP	☐ AA-AGP ☐ AA-LIM-NUT	W	☐ Ice			
Metals	☐ W-ICP ☐ W-FIAS ☐ W-ICPMS ☐ W-ICP-Tr	W	☐ HNO3		☐ <2	
Filtered Metals	☐ W-ICP-F ☐ W-FIAS-F ☐ W-ICPMS-F ☐ W-ICP-Tr-F	W	☐ HNO3 ☐ .45 um Filter		☐ <2	
Mercury	☐ W-HG-AF	W				
Base/Neutral / Acid Extractable	☐ W-BNA ☐ W-AE ☐ W-BN ☐ W-PAH ☐ W-FL-PRO ☐ W ☐ Other: _____	W	☐ Ice ☐ H2SO4		☐ <2	
Pesticides	☐ W-PEST-CL ☐ W-PCB ☐ W-PEST-NP ☐ W-PSCL-PCB	W	☐ Ice			
	☐ W-NP-AA-SF ☐ W-PC-AA-SF ☐ W-PSHRB-NP	W	☐ Ice			
	☐ W-SLFN-UREA ☐ W-SULFN-LC ☐ Other: _____	W	☐ Ice			
	☐ W-ACIDHERB	W	☐ Ice ☐ H2SO4			
Purgeables	☐ W-CARB	W	☐ Ice ☐ MCAA			
	☐ W-VOC-MS	W	☐ Ice			
	☐ W-VOC-MS-A	W	☐ Ice ☐ HCl			
Bioassay	Specify Test: _____	W	☐ Ice			
OTHER	<u>PCR-HF183</u> <u>W-SUC-AA-R</u>	S W	☐ Other: <u>ICE</u>			2

 Notes: _____

Use one line for each set of sample (as supplied by the laboratory) containers. Use separate sheet for field or laboratory duplicate or blank or different water depth

^Enter "S" for surface if collected at a depth less than or equal to 1 foot

*Matrix Codes (Insert prefix): SW = Surface Water GW = Groundwater DW = Drinking Water WW = Wastewater O = Other: _____

**PRESERVATIVES: 1 ml added unless otherwise noted

***Enter number of containers supplied by the laboratory for the test (e.g., 3 for volatile organics, etc.)

Florida Department of Environmental Protection

Central Laboratory Sample Submittal Form

Request Number: RQ-2015-10-26-56
SCI Reference sites

Event ID *

Requester: Larry Olney

Field Report Prepared By: J Jackson

Customer: BSSP

Project ID: SCIREF

PMAS:

Collected By: FDEP - AEGRA

Send Final Report To: Joy Jackson

Sampling Agency: FDEP

Lab ID *	ECONFINA RIVER									
Field ID	ECN010									
Matrix (include type e.g. Salt, Fresh, etc)			Temp (C)	22.4	pH	7.24	Collection (comp begin or grab)		Eastern Central	Bottle Group(s)**
Latitude			Longitude				Date	Time	Store Station Number	
							4-3-15	0945	6976	
							Diss Oxygen (mg/L)	4.10	NPDES Number	A/B
							Sample Depth	0.2	Salinity (PPT)	
									Sp Conductance (umho/cm)	

Lab ID *	AUCULA RIVER									
Field ID	AUC07BRIDG									
Matrix (include type e.g. Salt, Fresh, etc)			Temp (C)	22.9	pH	7.20	Collection (comp begin or grab)		Eastern Central	Bottle Group(s)**
Latitude			Longitude				Date	Time	Store Station Number	
							11-3-15	1400	22040130	
							Diss Oxygen (mg/L)	4.42	NPDES Number	A/B
							Sample Depth	0.2	Salinity (PPT)	
									Sp Conductance (umho/cm)	

Lab ID *										
Field ID										
Matrix (include type e.g. Salt, Fresh, etc)			Temp (C)		pH		Collection (comp begin or grab)		Eastern Central	Bottle Group(s)**
Latitude			Longitude				Date	Time	Store Station Number	
							Diss Oxygen (mg/L)		NPDES Number	
							Sample Depth		Salinity (PPT)	
									Sp Conductance (umho/cm)	

Lab ID *										
Field ID										
Matrix (include type e.g. Salt, Fresh, etc)			Temp (C)		pH		Collection (comp begin or grab)		Eastern Central	Bottle Group(s)**
Latitude			Longitude				Date	Time	Store Station Number	
							Diss Oxygen (mg/L)		NPDES Number	
							Sample Depth		Salinity (PPT)	
									Sp Conductance (umho/cm)	

Relinquished By	Date/Time	Shipping Method	Received By:	Date/Time	Relinquished By:	Date/Time	Received By:	Date/Time
Asbury Brad	11/3 9:21	hand-delivery	[Signature]	11/3 15	[Signature]	11/3 15	[Signature]	

* Shaded Areas for Lab use only.

** Please see reverse side for Bottle Group information.

last revised October 1, 2003

Group: A	Bottle Type: MI-FW-QLDC	PJ-2L	# of Bottles: 4	Preservative:	Formalin	Enter Number of Bottles Sent to Lab	6
Group: B	Bottle Type: ALKALINITY TURBIDITY W-COLOR W-TDS W-TSS	P-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
Group: B	Bottle Type: CHLSUITE-W	BP-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
Group: B	Bottle Type: ECOLI-18QT	P-250ML-WO-THI	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
Group: B	Bottle Type: FCOLI-MF	P-120ML-OC	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2
Group: B	Bottle Type: PCR-HF183	QPCR-P-250ML	# of Bottles: 4	Preservative:	ICE	Enter Number of Bottles Sent to Lab	4
Group: B	Bottle Type: W-NH3 W-NO2NO3 W-S-A-TP W-TKN W-TOC	P-500ML	# of Bottles: 2	Preservative:	ICE And H2SO4	Enter Number of Bottles Sent to Lab	2
Group: B	Bottle Type: W-SUC-AA-R	BG-1L	# of Bottles: 2	Preservative:	ICE	Enter Number of Bottles Sent to Lab	2