FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2017

Data Qualified? Yes / No

STORET Station Name: Butcher Pen Creek @ Wesconnett Rd **Date:** 5-1-17 (mm/dd/yyyy) 2017

STORET Station ID: 20030760 **WBID:** 2322 **Latitude:** 30.2846 (Decimal Degrees)

County: Duval **RQ -** 2017-04-24-28 **ORG ID:** 21 FLA **Longitude:** 81.7345 (Decimal Degrees)

Receiving Body of Water: Ortega R. **Field ID:**

Sampling Team Members	WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check
J. Parrish	X				
A. Kalmbacher		X	X	X	X

Sampling Equipment

- [x] Sample Container
- [ ] Van Dorn
- [ ] Pole
- [ ] Carboy
- [ ] Syringe
- [ ] Dipper
- [ ] Other

Equipment ID Ortho Kit # 2

Collection Method

- [x] Wading
- [ ] From Shore
- [ ] Other (note below)

Via Boat
- [ ] Canoe/Kayak
- [ ] Electric Motor
- [ ] Gasoline Motor

Water Level: Dry / Pooled / (Low) / Normal / High / Flooded

Matrix: (Fresh) / Marine / DI

Meter ID# YSI 3 **Photos:** Yes / (No)

Tide Failing: Yes / No / (NA)

Time Zone	Time	Sample Depth (m)	Total Depth (m)	DO (mg/L)	DO (%SAT)	pH	Salinity (ppt)	Secchi Disk (m)	Sp COND (µmhos/cm)	Temp. (C°)
~~EST~~ DST	1005	0.1	0.15	5.48	66.9	7.24	0.85	0.155	1682	24.6
CEN										

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

SBIO ID Numbers: SBIO-ID: RPS-ID: Macrophyte-ID: LIMS#:

Parameter Suite	Parameter Methods	Preservation	Acid 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			[x] <2
Metals	[ ] W-ICPMS [ ] W-ICP	[ ] Ice [ ] HNO_2			[ ] <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)	[x] Alkalinity / W-F / W-TSS / TURBIDITY / W-Cl-IC / W-COLOR / W-SO4-IC / W-TDS	[x] Ice			
Physical/Aggregate (Marine)	[ ] Alkalinity / W-F / W-TSS / TURBIDITY	[ ] Ice			
Macroinvertebrates	[ ] MI-FW-QLDC	[ ] Formalin			
Periphyton	[ ] ALGAE-ID	[ ] Ice			
Microbiology	[ ] E Coli [ ] F Coli [ ] Entero [ ] PCR-FILTER	[ ] Ice			
Tracers	[ ] W- SUCL [ ] W-UHERB-AA [ ] W-AHERB-AA	[ ] Ice			
Pesticides	[ ] W-PSNP-TQ [ ] W-AHERB-AA [ ] W-PYR-AA-R [ ] W-PCL-SQ-R [ ] W-UHERB-AA [ ] W-GLYPH	[ ] Ice [ ] Other			

Contains 1:1 Sulfuric Acid SA-6302030 EXP: 10/28/17 Warning! See SDS

Preservative Sticker(s) Here (If Available)

Notes:

Place Label Here (If Available)

Signature: [signature] **Date:** 5-1-2017

Field Parameters Entered into LIMS: [initials] 5/3/17 (Initials/Date) **Field Parameters QC in LIMS:** (Initials/Date)

Date Migrated to STORET: **Field Sheets Scanned/Saved:**

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

SAMPLE ID 77586 ORG ID _____ LATITUDE 30.2846 30 15 35.4
COUNTY Duval STORET # 20030760 LONGITUDE 81.7345 81 44 24.7
DATE 5/1/17 TIME 1005 SAMPLING AGENCY FDEP DEARNED
SITE NAME Butcher Pen @ Blanding / Wescoett
FIELD ID/NAME _____ RECEIVING BODY OF WATER Ortega River

RIPARIAN ZONE / STREAM FEATURES

Meter ID: YSI #3

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category) :

Forest/Natural	Silviculture	Field/Pasture	Agricultural	Residential	Commercial	Industry	Other (Specify)
				60	35		

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 : 4 Right Bank : 8

Hydrologic Modification Score (per FT 3101)

High Water Mark: 0.5 (m) + 0.1 (above present water level) = 0.6 (above bed) (present depth)

Artificially Impounded ☐ Yes ☑ No

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

m/s	0.1 m/s	m/s
m deep	0.1 m deep	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)	<1		
Undercut Banks / Roots	2.6		
Leaf Packs or Mat	<1		
Aquatic Vegetation	<1		
Rock or Shell Rubble..			
Sand.....			
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 :	0.1	24.6	7.24	5.48	66.9	1682	0.85	VCR
Mid:								TOTAL DEPTH
Bottom								0.1

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

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: 630205 Exp: 10/28/17

Color Tannic ☐ Clear ☐ Green (Algae) ☐ Other (Specify) ☑ Whitish Blue color

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

Clarity Clear ☑ Turbid ☐ Slightly Turbid ☐ Opaque ☐

ABUNDANCE

	Not Obs.	Rare	Common	Abundant
Periphyton:	☐	☐	☐	☑
Fish:	☐	☐	☑	☐
Aquatic Plants:	☐	☑	☐	☐
Iron/Sulfur Bacteria:	☐	☑	☐	☐

AMBIENT FIELD CONDITIONS / NOTES: Pt. Cloudy High 80's
Algal ID sample collected
2m Vegetation

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 D. Davis / J. Rohbacher SIGNATURE: J. Rohbacher 5-1-2017

62-160.800, F.A.C.

Revision Date: March 1, 2014

SWF 77588 RPS 8683

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Bitcher Pen Cik @ Wescott Rd | County: Duval | Date: 5-1-2017 | Investigators: Davis / Kalmbacher | STORET Station Number:

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	5	X	
	2	X	X	
	3		X	
	4		X	
	5		X	95
	6		X	
	7	N	X	
	8		X	
	9		X	
10	1	N	N	
	2			
	3	5		
	4	N		
	5			96
	6			
	7			
	8			
	9			
20	1	N		
	2			
	3			
	4			
	5			95
	6			
	7			
	8	5		
	9	5		
30	1	4		
	2	N		
	3			
	4			
	5			93
	6			
	7			
	8			
	9			
40	1	N		
	2	X		
	3	N		
	4			
	5			96
	6			
	7			
	8			
	9			
50	1	3		
	2	N		
	3			
	4			
	5			96
	6			
	7			
	8			
	9			

Transect (m)	Point 1=right	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
60	1	N	X	
	2	4	X	
	3	N	X	
	4	N	X	
	5	4	X	94
	6	N	N	
	7			
	8			
	9			
70	1	N		
	2			
	3			
	4			
	5			96
	6			
	7	X		
	8			
	9	N		
80	1	5 5		
	2			
	3			
	4			
	5	N N		60
	6			
	7			
	8	5 5		
	9			
90	1	5 5		
	2			
	3			
	4			
	5			90
	6	N N		
	7			
	8			
	9	5 5		
100	1	N N		
	2			
	3			
	4			
	5			74
	6			
	7	5 5		
	8	5		
	9	5		

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	N/A ✓
Water sample	

RQ-2017-04-24-28

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%.

SW 77588

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

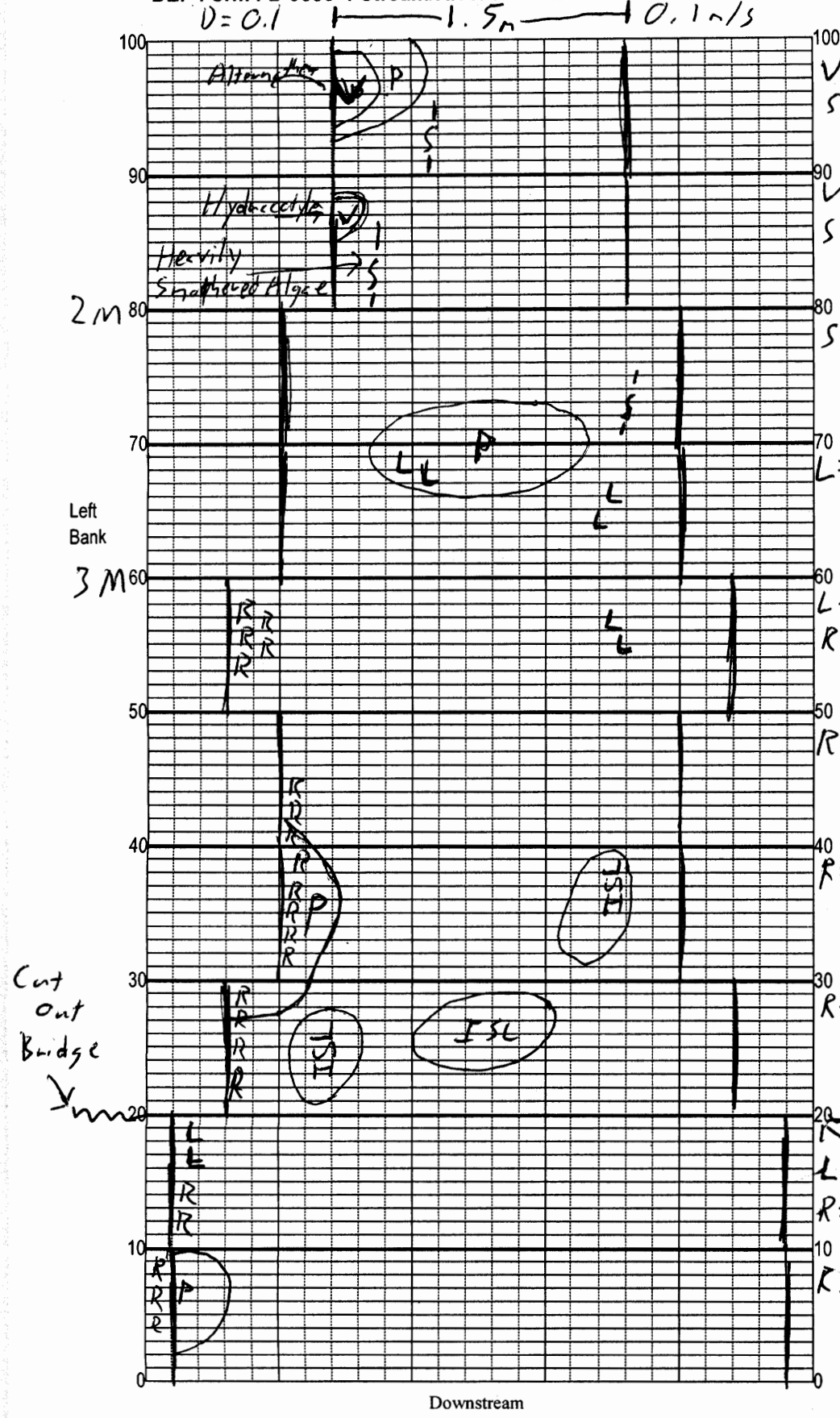
SAMPLING AGENCY:		STORET STATION NUMBER:	DATE (MM/DD/YY):	RECEIVING BODY OF WATER:
NE ROC		20030760	5-1-2017	Ortega River
REMARKS:	COUNTY: Duval	LOCATION: Butcher Pen @ Westconnett		FIELD ID/NAME:

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components **Substrate Diversity** 3	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 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 11	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 28	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** 6	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks. 20 19 18 17 16	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered. 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 5 Left Bank 5	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankful to top of bank. Bankfull is within or above the root zone with few raw, eroded areas. 10 9	Only meets 2 of the 3 requirements for optimal bank stability. 8 7 6	Only meets 1 of the 3 requirements for optimal bank stability. (5) 4	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas. 3 2 1
Riparian Buffer Zone Width Right Bank 5 Left Bank 3	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 activites 3 2 1
Riparian Zone Vegetation Quality Right Bank 6 Left Bank 4 Secondary Score 34	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

62 **TOTAL SCORE**

Date: 5-1-2017	Analyst: B. Davis / A. Kalbacher	Signature: A. Kalbacher

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



Location: Butcher Pen

Date: 5/1/17

Sampler: B Davis, A Kolnbacher

100 m: Latitude _____
Longitude _____

0 m: Latitude _____
Longitude _____

Substrates: Code key, draw proportionate habitat abundance.		%
S	Snags	<1
R	Roots/undercut banks	2.6
L	Leaf Packs (or mats)	<1
V	Aquatic Macrophytes	<1
P	Pools — total # observed = 4; # range expected = 4	

Average width 2.0 m

Average depth 0.1 m

Velocity measured at 100 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:

<2 M of Macrophytes was observed while doing the LVS? YES or (NO)

V = 1.5 x 200m = <1
S = 1.0 <1
R = 5.25 = 2.6%
L = 1.5 <1

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

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

PAGE _____ OF _____

SR#

CAS Contract

Project Name: SSO Invest. @ Fishing Cr	Project Number: RQ-2017-05-01-91
Project Manager: Jeremy Parrish	Email Address: Jeremy.Parrish
Company/Address: FDEP NED DEAR 8800 Baymeadows Way W Suite 100 Jacksonville FL 32256	
Phone #: 904-256-1700	FAX #
Sampler's Signature: Brian Davis	Sampler's Printed Name: Brian Davis

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

NUMBER OF CONTAINERS

Fecal

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	Fecal	REMARKS/ ALTERNATE DESCRIPTION
Fishing Cr @ Tinsuqua	20030615	5/1/17	1320	Fresh	1		

SPECIAL I NSTRUCTIONS/COMMENTS

5.6° C

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ **RUSH** (SURCHARGES APPLY)

_____ **STANDARD**

REQUESTED FAX DATE

_____

REQUESTED REPORT DATE

_____

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Specialized Forms / Custom Report

Edata ____ Yes ____ No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Brian Davis	Signature:	Signature	Signature	Signature	Signature
Printed Name: Brian Davis	Printed Name:	Printed Name	Printed Name	Printed Name	Printed Name
Firm: FDEP NED DEAR	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 5/1/17 1447	Date/Time: 5.1.17 1447	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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

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

Meter YSI # 3 RQ- 2017-04-24-28 Project LSJR West

Notes: (1) Numbers ≤4, are rounded down; numbers ≥ 5 are rounded up (e.g., 5.15 becomes 5.2).
(2) Always wait for meter to stabilize before recording any readings.
(3) For Calibrations, record calibrated meter reading. Do not record initial meter reading before calibration.

Circle/Fill In: (Lab Calibration) or Calibration/Verification on Site _____

Temperature (Quarterly) FT 1400 Date of Last Temperature Verification ~~03/04/2016~~ 2/9/17

DO DEP SOP FT 1500	Name	Date	Time CT-ET	Temp	D.O. Chart mg/L	Meter D.O. mg/L	% DO	Probe Charge	Probe Gain	Pass / Fail	Lab / Field
Calibr.	B-Dai	5/1/17	800	23.8	8.45	8.45	100	51.2	0.80359	P	L
ICV			803	23.9	8.45	8.43	99.8	51.2	0.80359	P	L
CCV	AKalmbacher	5-1-17	1500	24.9	8.27	8.54	103.2	52.3	0.80359	P	L
CCV											

Report DO mg/L with one decimal figure and DO % saturation as a whole number with no decimals.
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; 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.	B-Dai	5/1/17	806	161101A	11/17	1000	1000	P	L
ICV			808	161101B	5/17	100	101	P	L
CCV	AKalmbacher	5-1-17	1515	1298117	12/17	12,900	13,266	P	L
CCV									

Report specific conductance as a whole number with no decimal figure. Conductivity Acceptance criteria ± 5%

pH DEP SOP FT 1100	Name	Date	Time CT-ET	Lot #	Expir. Date	pH Buffer SU	Meter reading SU	mV	Pass / Fail	Lab / Field
Calibr.	B-Dai	5/1/17	813	2702C47	2/19	7.0	7.0	-16.3	P	L
Calibr.			816	2610F42	10/18	4.0	4.0	162.1	P	L
Calibr.			820	2611998	5/18	10.0	9.98	-189.7	P	L
ICV			825	2702C47	2/19	7.0	7.0	-17.9	P	L
CCV	A. Kalmbacher	5-1-17	1518	2702C47	2/19	7.0	7.06	-18.3	P	L
CCV										

Report pH with one decimal place; pH Acceptance criteria ±0.2 SU; mV pH7 Range 0±50; mV pH 4 Range +180±50;
mV pH 10 Range -180±50; Slope from 7 to 10 and 4 to 7 must be between 165 and 180 mV

Depth (Quarterly) Date of Last Depth Verification _____

Depth Sensor (Daily)	Name	Date	Time CT-ET	Zero the Sensor	ICV Value	Pass / Fail	Lab / Field
Pressure mode in air				0.000			

ICV acceptance criteria ±5 % or ±0.05m, whichever is greater

NF 5/11/17