

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: B-ace

RQ: 2022-04-18-18

Project: SMP Haultrix Creek SEI

- 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 2/3/22

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.	Bruce Davis	4/28/22	828	21.6	763.4	8.8	—	100.5	—	1.02	P/F	L/F
ICV	↓	↓	829	21.4	763.4	8.8	8.86	100.2	—	1.02	P/F	L/F
CCV	K. Villinger	↓	1625	21.7	763.2	8.8	8.82	100.3	—	1.02	P/F	L/F
CCV											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 μ hos/cm	Meter Reading μ hos/cm	Pass / Fail	Lab / Field
Calibr.	Bruce Davis	4/28/22	801	220225A	3/23	1000	1000	P/F	L/F
ICV	↓	↓	802	211122B	12/22	1413	1381	P/F	L/F
CCV	K. Villinger	↓	1628	210917A	9/22	100	100.1	P/F	L/F
CCV								P/F	L/F

Conductivity Acceptance criteria $\pm 5\%$

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.	Bruce Davis	4/28/22	813	2112819	12/23	7.01	21.9	7.01	-12.4	P/F	L/F
Calibr.	↓	↓	814	2201788	1/24	4.00	21.9	4.00	165.8	P/F	L/F
Calibr.	↓	↓	817	2202A63	7/23	10.03	21.5	10.03	-184.9	P/F	L/F
ICV	↓	↓	822	2201788	1/24	4.00	22.0	4.02	163.6	P/F	L/F
CCV	K. Villinger	↓	1630	2202A63	7/23	10.03	22.4	10.06	-187.9	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 $+180 \pm 50$;

mV pH 10 Range -180 ± 50 ;

If mV are recorded: slope from 7 to 10 172.5, slope from 4 to 7 178.2 (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: 2/3/22

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	Bruce Davis	4/28/22	831	0.00	0.00	P/F	L/F

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

COMMENTS:



al/Chemical Characterization Field Sheet

location: MOULTRIE CREEK @ CR 207

LATITUDE 29.08005

LONGITUDE -80.982549

SAMPLING AGENCY DEAR FLEP

DATE 4/28/22 TIME 1010

SITE NAME

FIELD ID/NAME RECEIVING BODY OF WATER ICW

RIPARIAN ZONE / STREAM FEATURES

Meter ID: Bruce

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 ☐ HeavyLocal Watershed NPS Pollution: ☒ No evidence ☐ Slight ☐ Moderate ☐ Heavy

Width of Riparian Vegetation (m) on Each Buffer Side

Left Bank: >18m Right Bank: >18m

Hydrologic Modification Score (per FT 3101)

High Water Mark: 0.3 + 0.2 = 0.5
(m) (above present water level) (present depth) (above bed)

Artificially Impounded

☐ Yes ☒ NoArtificially ☒ No ☐ Mostly recovered, more sinuousChannelized: ☐ Some recovery ☐ Recent, severe

Canopy Cover %

☐ Open☒ Heavily Shaded☐ Lightly Shaded (11-45%)☐ 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 ☐ BioReconINVERT PERI
% Coverage # Times Sampled # Times Sampled

Woody Debris (Snags) 4% 7

Undercut Banks / Roots 1.3% 7

Leaf Packs or Mat 51% 1

Aquatic Vegetation 51% 1

Rock or Shell Rubble..

Sand..... 93% 4

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: 0.05	21.7	6.55	6.13	70.0	215	0.1	0.11
Mid:							
Bottom:							

System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☐Water Odors Normal ☒ Petroleum ☐
Sewage ☐ Chemical ☐ Other ☐Water Sample Taken? ☒ Yes ☐ NoSample Preserved? ☒ Yes ☐ No

Lot Number: Exp:

Algae Sample Taken? ☐ Yes ☒ NoSample 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:

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, K Villinger

SIGNATURE

B Davis

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: <u>Mouth Creek @ CR 207</u>					County: <u>St. Johns</u>		Date: <u>4/28/22</u>		Investigators: <u>B. Davis, K. Villanueva</u>	
					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	N				2	N	/		
	3					3	X			
	4					4	X			
	5			96		5	N	/		
	6					6	N	/		
	7					7	X			
	8					8	X			
	9	V				9	X			
10	1	N	V		70	1	N	V		
	2	N				2				
	3					3				
	4					4				
	5			94		5			90	
	6					6				
	7					7				
	8					8				
	9	V				9	V			
20	1	N	V		80	1	N	V		
	2	N				2				
	3					3				
	4					4				
	5			91		5	X		92	
	6					6	X			
	7					7	N			
	8					8				
	9	V				9	V			
30	1	N	V		90	1	N	V		
	2	N				2				
	3					3				
	4					4				
	5			95		5	V		84	
	6					6	X			
	7					7	N			
	8					8				
	9	V				9	V			
40	1	N	V		100	1	N	V		
	2	N				2				
	3					3				
	4					4				
	5			93		5			87	
	6					6				
	7					7				
	8					8				
	9	V				9	V			
50	1	N	V		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%.					
	2									
	3									
	4									
	5			90						
	6									
	7									
	8									
	9	V								

Secchi depth 0.11
Estimated? No

points ranked 4-6 0
total points assessed 97
% 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 ☒

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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

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

SAMPLING AGENCY: FDEP DEAR		STOR
REMARKS:	COUNTY: St Johns	LOCA

WIN ID/Field ID:



27010188

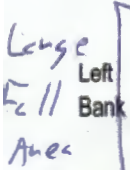
location: **MOULTRIE CREEK @ CR 207**

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>10</u>	20 19 18 17 16	15 14 13 12 11	<u>10</u> 9 8 7 6	5 4 3 2 1
Substrate Availability <u>6</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 8 7 <u>6</u>	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>16</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 <u>16</u>	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 <u>18</u> Primary Score <u>50</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 <u>18</u> 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 or straightening 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	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.	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 woody root zone with raw, eroded areas.
Right Bank <u>10</u> Left Bank <u>10</u>	<u>10</u> 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 <u>10</u> Left Bank <u>10</u>	<u>10</u> 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 <u>9</u> Left Bank <u>9</u> Secondary Score <u>78</u>	10 <u>9</u>	8 7 6	5 4	3 2 1

128

TOTAL SCORE

Date: <u>4/28/22</u>	Analyst: <u>Brian Davis, Kethia Villinger</u>	Signature: <u>B-D</u>
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$S = 12.4\% / 300 \quad 4\%$
 $R = 4.6\% / 300 \quad \sim 1\%$

[illegible]



DIVERSIFIED
ENVIRONMENTAL LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

Project Number:

(Lab Use Only)

3653 Regent Boulevard, Suite # 509
Jacksonville, FL 32224
P. (904) 807-9625 E. info@delilab.com
F. (904) 807-9627

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Company Name Florida Department of Environmental Protection									Container Information (Qty, Size, & Type)								Sample Matrix Codes:					
Address 8800 Baymeadows Way W									NPW	NPW	NPW							A. Air P. Petroleum B. Bulk S. Soil/Sludge W. Wipe O. Other _____ PW. Potable Water NPW. Non-Potable Water				
City Jax State FL Zip 32256																						
Attn. Jeremy Parrish																						
Tel. E-mail or Fax DEP-overflowmicro@dep.state.fl.us																						
Project Name SMP SCI Moultrie Creek @ CR207									Container Preservation Codes								Sample Kit or Container Lot #					
Project Number RQ-2022-04-18-18									6	6	6											
Project Location St Johns County									Parameters								Preservation Codes:					
Sampler Name/Signature Katrin Villinger									E. Coli - Quantitray	Enterococci - Quantitray	Coliform, Fecal - MF 3 Dilutions								0. None 5. Na2S2O3 1. H2SO4 6. Crushed Ice (4C) 2. HNO3 7. C6H8O6 3. HCl 8. NH4Cl 4. NaOH 9. Other: (List)			
Thermal Preservation:																						
In Crushed Ice? Yes / No																						
Cooler Temp: 0.8 °C																						
Sample Cont. Temp: 3.9 °C																						
Turnaround Requested:																						
☒ Standard (10 Business Days)																						
☐ Semi-Rush (3-5 Business Days)																						
☐ Rush (1-2 Business Days)																						
Turnaround times are estimated & subject to change. Surcharges apply for all Rush samples.																						
Billing Information:																						
☐ Invoice with Report																						
☐ Invoice to Accounting																						
Req. #: _____																						
P.O. #: _____																						

Transfer #	Sample # (Lab Use Only)	Sample Identification	Date Sampled	Time Sampled	Sample Matrix Code	Specific Cond. (Field)	Comp	Grab	E. Coli - Quantitray	Enterococci - Quantitray	Coliform, Fecal - MF 3 Dilutions								
1		27010188	4/28/22	1010	NPW	215		✓	1										
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
0																			

Special Instructions:		Transfer Numbers	Relinquished By	Date / Time	Received By	Date / Time
		1	Katrin Villinger	4/28/22 1540	DC VC	04/28/22 1540



Certification #E821059