



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION STRATEGIC MONITORING PROGRAM FIELD SHEET

January 2018

Data Qualified?

Yes / No

WIN Station Name: Steinhatchee River @ S Canal Rd

Date: 10/24/18
(mm/dd/yyyy)

WIN/ Field ID: G1TLHR0064

WBID: 3573A

Latitude: 29.830074

(Decimal Degrees)

County: Lafayette

ORG ID: 21FTLHR

Longitude: 83.308208

(Decimal Degrees)

Receiving Body of Water: Gulf of Mexico

RQ-2018- 08-20-58

Sampling Team Members						WQ Measurements	Sample Collection	Documentation	Preservation	Preservation Check	Sampling Equipment									
<u>M. J. Eckles</u> <u>T. C. Green</u>						☒	☒	☒	☒	☒	☒ Sample Container ☐ Van Dorn ☐ Pole									
						☐	☐	☐	☐	☐	☐ Carboy ☐ Syringe									
						☐	☐	☐	☐	☐	☐ Dipper ☐ Other									
Depth Measured with <u>Secchi</u>						Equipment ID					Collection Method									
											☐ Wading	☐ Canoe/Kayak								
											☒ From Shore	☐ Electric Motor								
											☐ Other	☐ Gasoline Motor								
Water Level: Dry/ Pooled/ Low / <u>Normal</u> / High / Flooded						Meter ID# <u>EXO 3</u>					Matrix: <u>Fresh</u> / Marine / DI									
Photos: Yes / <u>No</u>						Flow: No Flow / Intertidal / <u>Flowing</u> / NA					Tide: Rising/ Falling/ Slack/ <u>NA</u>					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 (µmhos/cm)	Temp. (C°)										
EST	<u>11:40</u>	<u>0.9</u>	<u>0.3</u>	<u>0.4</u>	<u>6.53</u>	<u>73.1</u>	<u>7.34</u>	<u>0.08</u>	<u>177.6</u>	<u>28.886</u>										
CEN																				
Biological Samples Collected: None <u>HA</u> <u>SCI</u> <u>RPS</u> <u>Algae ID</u> <u>LVS</u> <u>LVI</u> Other:																				
SBIO ID Numbers: SBIO-ID: <u>78957</u> HA-ID: <u>15443</u> RPS-ID: <u>9128</u> Macrophyte-ID: LIMS#:																				
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		<u>SA8197090</u>	<u>7/16/18</u>	☒ <2										
Metals		☐ W-ICPMS ☐ W-ICP				☐ Ice ☐ HNO3				☐ <2										
Filtered Nutrients		☒ W-PO4-F ☒ Field Filtered 0.45 µm Filter				☐ Ice														
Chlorophyll		☒ CHLSUITE-W				☒ Ice														
Physical/Aggregate (Fresh)		☒ Alkalinity / W-F / W-TSS / TURBIDITY / W-CH-IC / W-COLOR / W-SO4-IC / W-TDS				☒ 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 ☐ Enterococci				☒ Ice														
Molecular		☐ PCR-FILTER ☐ PCR-HF183 ☐ PCR-BacR ☐ PCR-GULL2 ☐ PCR-GFD				☐ Ice														
Tracers		☐ W-SUC-AA-R ☐ W-UHERB-AA ☐ W-AHERB-AA				☐ Ice														
Pesticides		☐ W-PSNP-TQ ☐ W-UHERB-AA ☐ W-AHERB-AA ☐ W-CARB-AA ☐ W-PCL-SQ-R ☐ W-PYR-AA-R ☐ W-GLYPH ☐ W-SUC-AA-R				☐ Ice ☐ Other														

Notes:

A-b

SMP1024018 FB

Field/WIN ID →



G1TLHR0064

Location ↓

Steinhatchee River @ S Canal Rd

Signature: [Signature]

Date: 10/24/18

Enter Field Parameters, Verify Station ID In LIMS DMT: 26 10-30-18

QC Station ID, Field Parameters In LIMS DMT:

Scan/Save Field Sheets

26 10-30-18
(Initials/Date)

Migrate Data to WIN:

(Initials/Date)

Verify Data In WIN:

(Initials/Date)

(Initials/Date)

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

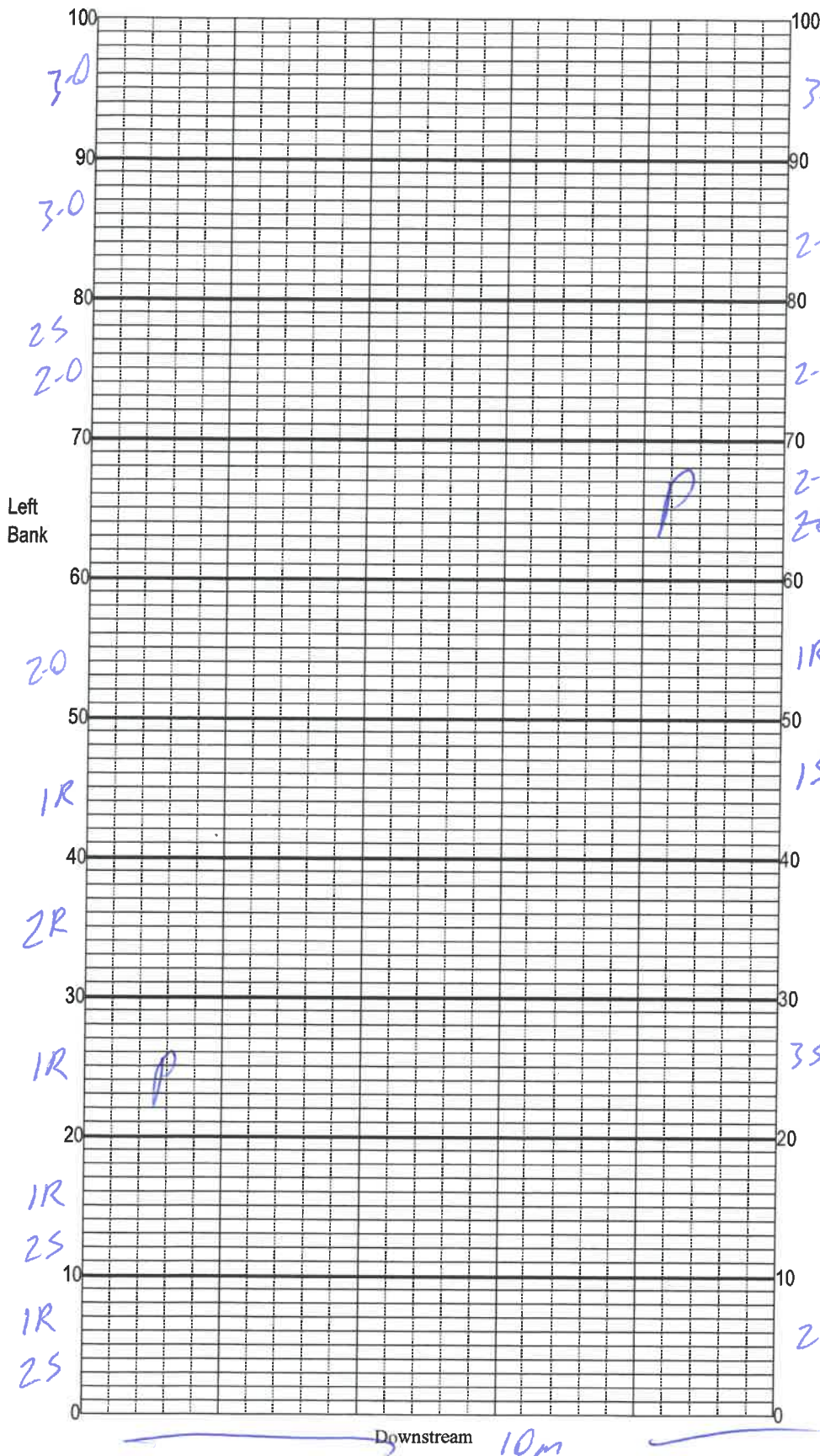
SAMPLING AGENCY: <u>8034</u>		STORET STATION NUMBER: <u>G1TLHRO064</u>	DATE (MM/DD/YYYY): <u>10-24-2018</u>	RECEIVING BODY OF WATER: <u>Gulf of Mexico</u>
REMARKS:	COUNTY: <u>Lafayette</u>	LOCATION: <u>Steinhatchee River to S Canal Rd.</u>	FIELD ID/NAME: <u>G1TLHRO036</u>	

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>15</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1
Substrate Availability <u>5/17</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 6	Less than 5% major productive habitat 5 4 3 2 1
Water Velocity <u>20</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 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>19</u> ----- Primary Score <u>59/71</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>	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 <u>9</u> Left Bank <u>9</u>	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 <u>10</u> Left Bank <u>9</u>	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 <u>10</u> Left Bank <u>9</u> ----- Secondary Score <u>76</u>	10 9	8 7 6	5 4	3 2 1

TOTAL SCORE

Date: <u>10-24-2018</u>	Analyst: <u>Chris Green</u>	Signature: <u>Chris Green</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: GILCHR0064
Steinhatchee River
Date: 10-24-2018
Sampler: Chris Green

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

Substrates: Code key, draw proportionate habitat abundance. %

S Snags 1.2

R Roots/undercut banks 0.7

L Leaf Packs (or mats) 0

A Aquatic Macrophytes 0

O Rock 1.9 50

P Pools total # observed = 2
range expected = 0-1

Average width 10 m
Average depth 0.9 m

Velocity measured at 50 meter mark. 3 sec

WQ & chemistry taken at 20 meter mark.

Habitat Smothering: Slight
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: > 118
Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes: water level
was high all summer
and dark in color

5-12
R-7
L-0
A-0
O-1.9

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

SAMPLE ID G1TLHR0064 ORG ID 21FLT2HR LATITUDE _____
 COUNTY Lafayette STORET # G1TLHR0064 LONGITUDE _____
 DATE 10-24-2018 TIME 14:20 SAMPLING AGENCY 8034
 SITE NAME Steinhatchee River @ S Canal Rd
 FIELD ID/NAME G1TLHR0064 RECEIVING BODY OF WATER Gulf of Mexico

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ <u>100</u> 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 <u>10</u> m wide			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: <u>718m</u> Right Bank: <u>718m</u>				Hydrologic Modification Score (per FT 3101) ☐		<u>.33</u> m/s <u>.33</u> m/s <u>.33</u> m/s			
High Water Mark: <u>2.0</u> + <u>0.9</u> = <u>2.9</u> (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☐ Yes ☒ No		<u>0.3</u> m deep <u>0.9</u> m deep <u>0.3</u> m deep			
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				WATER QUALITY							
Woody Debris (Snags) <u>1.2</u> Undercut Banks / Roots <u>0.7</u> Leaf Packs or Mat <u>0</u> Aquatic Vegetation <u>0</u> Rock or Shell Rubble.. <u>490</u> Sand <u>56.70</u> Mud / Muck / Silt <u>5.40</u> Other Other				Depth (M) <u>0.3</u> Temp. (°C) <u>20.89</u> pH (SU) <u>7.34</u> D.O. (MG/L) <u>6.53</u> D.O. Sat (%) <u>73.1</u> Cond. (UMHO/CM) <u>177.6</u> Salinity (PPT) <u>0.08</u> SECCHI (M) <u>0.4</u>		Invert # Times Sampled Peri # Times Sampled		Meter ID: <u>Exo 3</u> TOTAL DEPTH <u>0.9</u>			
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: _____			
Water Sample Taken? ☐ Yes ☒ No Sample Preserved? ☐ Yes ☒ No Lot Number: _____ Exp: _____				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: ☒ ☐ ☐ ☐				System Type: Stream ☒ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>River</u>			
AMBIENT FIELD CONDITIONS / NOTES: <u>Probably more rock than I mapped, it was hard to tell w/ the water dark</u> ☒ The antecedent hydrologic conditions have been met to my best knowledge.							

SAMPLING TEAM <u>Chris Green / Mike Eckles</u>		SIGNATURE: <u>Ch -</u>		DATE: <u>10-24-2018</u>	
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DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

Site: Steinhatchee River 65 Canal Rd County: Lafayette Date: 10-24-2018 Investigators: Chris Green

Transect (m) Point 1=right 9=left Algal Thickness Rank (N-6, X) Estimated Canopy Cover STORET Station Number: GITLHROO 64

0	1	N	✓		60	1				
	2		✓			2			✓	
	3					3				
	4					4				
	5					5				84
	6					6				
	7					7				
	8					8			✓	
	9		✓			9				

10	1		✓		70	1				
	2		✓			2			✓	
	3					3				
	4					4				
	5					5				93
	6					6				
	7					7				
	8		✓			8			✓	
	9		✓			9				

20	1		✓		80	1				
	2		✓			2			✓	
	3					3				
	4					4				
	5					5				91
	6					6				
	7					7				
	8		✓			8			✓	
	9		✓			9				

30	1		✓		90	1			✓	
	2					2				
	3					3				
	4					4				
	5					5				86
	6					6				
	7					7				
	8					8				
	9					9				

40	1				100	1				
	2					2				
	3					3				
	4					4				
	5					5				84
	6					6				
	7					7				
	8					8				
	9					9	N		✓	

50	1				50	1				
	2					2				
	3					3				
	4					4				
	5					5				89
	6					6				
	7					7				
	8					8				
	9					9			✓	

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

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

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

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

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

110	1				110	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

120	1				120	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

130	1				130	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

140	1				140	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

150	1				150	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

160	1				160	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

170	1				170	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

180	1				180	1				
	2					2				
	3					3				
	4					4				
	5					5				
	6					6				
	7					7				
	8					8				
	9					9				

62-160.800, F.A.C.

Revision Date: March 1, 2014

DEP FORM FD 9000-32: LINEAR VEGETATION SURVEY FIELD SHEET

Waterbody: Steinhatchee River

Date: 10-24-18

County: Lafayette

Storet Number: 61TLHR0064

Analyst: Chris Green

Signature: Chen

Comments: $\rightarrow Zm^2$ of V_{eq}

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.

[illegible]

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: EX03

RQ:

Project: SMP 2018

- 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 10/18

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.	Chris Green	10-24-18	8:00	20.9	760.2	8.93	8.94	100.0	1.85	1.01	P / F	L / F
ICV			8:25	19.8	—	9.12	9.05	99.3	—	—	P / F	L / F
CCV			16:50	21.8	—	8.77	8.69	99.0	—	—	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.	Chris Green	10-24-18	8:10	1800621L	7/19	1000	1000	P / F	L / F
ICV			8:23	1805F81	5/20	100	101	P / F	L / F
CCV			16:55	180221A	3/19	500	507	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.	Chris Green	10-24-18	8:13	180621E	1/20	7.02	20.0	7.17	51.2	P / F	L / F
Calibr.			8:16	180510B	5/19	4.00	19.1	3.94	122.2	P / F	L / F
Calibr.			8:19	180403D	10/19	10.07	18.9	10.03	211.1	P / F	L / F
ICV			8:21	11	11	10.00	18.8	10.02	—	P / F	L / F
CCV			16:58	180403B	5/19	4.00	19.9	3.99	—	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 10 159.9, slope from 4 to 7 173.4 (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:

If NO, what will be used? (circle one) Sonar Unique ID: #1; Date of last verification: 10/18

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						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:

Customer: TLH-ROC

Requester: **Michael Eckles**

Field Report Prepared By:

Ekles

Project ID: SMP

Collected By:

Sampling Agency:

8034

[illegible]